Feature licensing and the number interpretation of bare nominals in Wolof*

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Abstract

Crosslinguistically, bare nominals (BNs) are often number-neutral, i.e., their number interpretation does not imply any commitment to a singular or plural interpretation. I show that BNs in Wolof are singular, unless plural morphology is exponed within the nominal. I propose a version of Kalin's (2017; 2018; 2019) framework of nominal licensing whereby certain interpretable features require licensing by the operation Agree, i.e. they are "derivational time bombs" that must be "defused" by this operation. Specifically, I argue that the feature [+Num : PL] in Wolof nominals fall under this category. I assume that all nominals in Wolof, bare and full, can in principle be singular or plural. In the derivation of a sentence containing a BN in the object position, if the BN is [+Num : SG], it converges because there is no derivational time bomb to be defused. Conversely, if the BN is [+Num : PL], no probe can Agree with this feature, causing the derivation to crash because a derivational time bomb was defused. The BN is obligatorily singular because this is the only possible convergent derivation. However, if the BN merges with nominal structure that contains a number probe, [+Num : PL] can be defused, so that the corresponding construal can arise. This probe surfaces as an agreeing relative complementizer or possessum agreement. The singular interpretation of BNs in Wolof thus arises as a conspiracy between the need to license [+Num : PL] and the restrictions and resources available within the nominal a BN is embedded into. This analysis offers an analysis as to why BNs in Wolof do not follow the number-neutrality tendency found in other BN languages and it also provides support for the view that the licensing of interpretable features may be a driving force in the syntactic derivation.

Keywords: Wolof; bare nominal; number-neutrality; singular; feature licensing; derivational time bomb

1 Overview

Since Chomsky (2000, 2001), we conventionally understand Agree as an operation whereby an unvalued feature, i.e. a probe, receives a value from a matching Goal. More recently, Béjar & Rezac (2003, 2009) and Kalin (2017, 2018, 2019) have argued that Agree also plays a role in licensing valued, interpretable features. In this paper, I propose an extension to Kalin's nominal licensing system to the nominal domain and I argue that number features must also be licensed by Agree in Wolof. This proposal is empirically motivated by the number interpretation of bare nominals in this language.

Several languages allow for their nominals to occur in a bare form, i.e., without a determiner. Following De Swart (2021), I dub them 'bare nominals' (BNs), though I also use the term here to refer to nominals without overt number morphology, depending on language-specific properties. BNs in a few different languages are illustrated below.

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(1) a. BRAZILIAN PORTUGUESE (Müller 2002, (51))
Unicórnio tem **chifre**.
unicorn has horn
'Unicorns have (an unspecified number of) horns.'

b. MANDARIN CHINESE (Rullmann & You 2006, (1))
Zuotian wo mai le **shu**.
yesterday I buy ASP book
'Yesterday, I bought one or more books.'

c. HINDI (Dayal, 2011, (7b); adapted)
Anu **bacca** sambhaaltii hai.
Anu child look.after-IMP be-PRS
'Anu looks after (one or more) child(ren).'

Brazilian Portuguese has overt determiners and it distinguishes between bare singulars and bare plurals (Ferreira, 2021). Mandarin, on the other hand, does not have determiners nor a singular vs. plural distinction, being a classifier language instead (Cheng & Sybesma, 1999). Hindi, in turn, does have a singular vs. plural distinction, but bare nominals can be identified by the lack of *-ko* marking (Mohanan, 1995). This brief description of three languages that allow for BNs in some capacity give us a glimpse of the heterogeneity of BN languages.

Nonetheless, a property these language share lies in the number interpretation of the BN when it is in the object position. As can be gleaned from the translations, the BNs in (1), despite the differences mentioned above, have a **number-neutral** interpretation, that is, they lack a commitment to a singular or plural interpretation. This property is also known as "general number" (Corbett, 2000) and is documented in a series of unrelated languages, e.g. Kreyól (Déprez, 2005), Halkomelem Salish (Wiltschko, 2008), and Amharic (Kramer, 2017), to name just a few, besides the languages showcased in (1). It is also taken to be a signature property of BNs that are used in the context of pseudo noun incorporation. Indeed, incorporated and pseudo-incorporated nominals in e.g. Hungarian (Farkas & Swart, 2003), Sakha and Tamil (Baker, 2014) and in Niuean, investigated in Massam's (2001) seminal work, are consistent with either a singular or plural interpretation. As such, number-neutrality is often taken to be a defining property of different types of BNs.

However, Dayal (2011) and Rinaldi (2018) cast doubt on this generalization, showing data from Hindi (Dayal), Spanish, Catalan, Greek, and Norwegian (Rinaldi) which indicate that the BNs in these languages are in fact singular. In this paper, I will show that Wolof (Niger-Congo, Atlantic; Senegal) also challenges the generalization that BNs are always number-neutral. In (2), we can see some instances of BNs in Wolof.[1]

(2) a. Gis-na-a **ndoongo.daara** senegalee.
see-NA-1SG student Senegalese
'I saw a Senegalese student.'

b. Awa defar-na **oto**.
Awa fix-NA.3SG car
'Awa fixed a car.'

BNs in Wolof are exclusively singular. This property was first alluded to by Tamba *et al.* (2012), using the following data:

(3) (Tamba *et al.*, 2012, (33a), glosses adapted for uniformity)
Awa jàpp-na **sàcc**.
Awa catch-NA.3SG thief
'Awa caught a thief./*'Awa caught some thieves.'

[1]Regarding (2a) in particular, a consultant commented that this sentence is false if the speaker saw more than one Senegalese student, an informational preliminary indication of the number interpretation of BNs in Wolof.

As we will see in §3, this claim can be backed up by the behavior of BNs regarding, for instance, the saturation of collective predicates and the binding of plural anaphors. (4) offers a preview of the data to be examined. It shows that BNs in Wolof cannot be the object of a collective predicate like *dajale* 'gather'.

(4) * Jàngalekat b-i dajale-na **xale** ci bayaal b-i.
teacher CM.SG-DEF gather-NA.3SG child PREP park CM.SG-DEF
Literally: 'The teacher gathered child in the park.'

In contrast, number-neutral BNs in the languages mentioned above can saturate the same type of predicate.

(5) a. BRAZILIAN PORTUGUESE (personal knowledge)
A professora agrupou **aluno** no parque.
the teacher grouped.together student in.the park
'The teacher gathered students in the park.'

b. MANDARIN (F. Chen, p.c.)
Laoshi zai gongyuan-li jihe-le **xuesheng**.
teacher at park-in gather-PERF student
'The teacher gathered the students in the park.'

c. HINDI (Dayal, 2011, (31))
anu **botal** ikaTThaa kartii hai.
Anu bottle collect do-IMP be-PRS
'Any collects bottles.'

Nonetheless, when a BN in Wolof is modified by a relative clause with plural morphology, it behaves as if it is a plural nominal. That the relative clause is plural can be inferred from the fact that it contains a plural class marker *y* prefixed to the relative complementizer *u* (both italicized in (6)). A BN thus modified is able to be the object of a collective predicate.

(6) Jàngalekat b-i dajale-na **xale** [*y-u* Samba xam] ci bayaal b-i.
teacher CM.SG-DEF gather-NA.3SG child [CM.PL-COMP Samba know] PREP park CM.SG-DEF
'The teacher gathered some children who Samba knows in the park.'

Not every nominal modifier, however, has the same effect in the number interpretation of a Wolof BN. In particular, if a BN is merged with a modifier that does not have any number morphology, it still behaves as if it were singular (7). This is evidenced by the fact that it cannot be the object of a collective predicate.

(7) * Roxaya dajale-na **fecckat** brezilien.
Roxaya gather-NA.3SG dancer Brazilian
Literally: 'Roxaya gathered Brazilian dancer.'

One of the differences between (6) and (7) lies in whether there is plural morphology in the modifier or not. The same difference regarding the presence or absence of a plural exponent will be shown to arise in two types of possessive constructions, one that has number morphology and one which does not. In view of this distinction, this paper aims at addressing the following questions:

(8) a. How can we account for the exclusively singular interpretation (and not number-neutral) interpretation of unmodified BNs in Wolof?

b. Why does a BN without any plural morphology behave as if it were singular, while a BN merged with a modifier that contains plural agreement morphology behaves as if it were plural?

In order to answer these questions, I propose that the interpretable number feature [+Num : PL] needs to be licensed by the operation Agree. In Kalin's (2017; 2018; 2019) terms, this means that [+Num : PL] is a derivational time bomb that must be defused and the failure to do so causes the derivation to crash. This is only possible when the nominal spine has enough structure to host a number probe [Num : __]. The presence of such a feature can be diagnosed by the occurrence of morphemes that express number

agreement morphology, including relative complementizer agreement in relative clauses (*y* in (6)) and possessum agreement. In the absence of a number probe in the nominal structure, only a [+Num : SG] BN will allow the derivation to converge, as this feature does not need licensing (i.e. is not a derivational time bomb).

This paper is structured as follows. In §2, I lay out some properties of Wolof, with a focus on the structure I propose for the full nominals in that language. With this background in place, in §3, I propose a truncated structure for BNs in Wolof. We then focus on the interpretation of BNs in Wolof. First, we examine data that indicate that they are narrow scope indefinites and then we examine comprehensive data that indicates that unmodified BNs in Wolof are not number-neutral but rather singular. In §4, in turn, we substantiate the claim that BNs in Wolof can have a plural interpretation, as long as a modifier is added that can have plural morphology. In §5, I propose an analysis that is based on derivational time-bombs (Kalin, 2017, 2018, 2019): [+Num : PL] is a feature that must be licensed via Agree, but BNs, due to their truncated structure, cannot license such a feature, unless a number probe [Num : __] is added via the introduction of an appropriate modifier. §6 concludes.

2 Basics of Wolof

Wolof is well-known for its rich system of sentential particles, i.e., morphemes that encode, among other things, information structure (Robert 1991; Zribi-Hertz & Diagne 2002; Torrence 2013; a.o.). Specifically, these are morphemes which are sensitive as to whether a constituent to its left is topical or focal, or if the whole sentence is new information, among other things. In (9) – and in most sentences in this paper –, we see the morpheme for neutral sentences, *na*. To the sentential particle is attached a morpheme that cross-references the ϕ-features of the subject, e.g. *-ñu* in (9b). This cross-referencing follows a nominative-accusative alignment: the subject of both transitive (9) and intransitive (10) verbs is cross-referenced.

(9) a. Jàngakat b-i lekk-na ceeb-u jën.
student CM.SG-DEF eat-NA.3SG rice-LNK.SG fish
'The student ate ceebu jen (lit. rice and fish).'

b. Jàngakat y-i lekk-na-ñu ceeb-u jën.
student CM.PL-DEF eat-NA-3PL rice-LNK.SG fish
'The students ate ceebu jen.'

(10) a. A-b paket agsi-na.
INDEF-CM.SG package arrive-NA.3SG
'A package arrived.'

b. A-y paket agsi-na-ñu.
INDEF-CM.PL package arrive-NA-3PL
'Some packages arrived.'

Wolof is also characterized by rich nominal morphology. It contains an array of different determiners (italicized in (11)), which can be pre- or post-nominal. For recent literature, see Tamba *et al.* 2012; Torrence 2013; Harris 2015; Martinović 2015, 2017; Martinović 2019; Jordanoska 2020, a.o.).

(11) (Tamba *et al.*, 2012, (2a), (32a), (33b), fn.30, glosses adapted for uniformity)

a. Xale *y-i* lekk-na-ñu gato *b-i*.
child CM.PL-DEF eat-NA-3PL cake CM.SG-DEF
'The children ate the cake.'

b. Xadi gis-na *a-b* sàcc.
Xadi see-NA.3SG INDEF-CM.SG thief
'Xadi saw a thief.'

c. Awa jàpp-na *a-y* sàcc.
Awa catch-NA.3SG INDEF-CM.PL thief
'Awa caught some thieves.'

d. *B-enn* xale b-u Samba xam jànga-na *a-b* taalif.
CM.SG-one child CM.SG-COMP Samba know write-NA.3SG INDEF-CM.SG poem
'A child who Samba knows wrote a poem.'

e. Am-na *y-enn* góór [y-u njool ci arme *b-i*].
have-NA.3SG CM.PL-one man [CM.PL-COMP be.tall PREP army CM.SG-DEF]
'There are some tall men in the army.'

In addition, these determiners contain a class marker (glossed as 'CM' and also italicized in (11)) affixed to them (Babou & Loporcaro, 2016). Besides the class a noun belongs to, the class marker encodes number information (singular or plural). For instance, *sàcc* 'thief' remains constant in (11b) and (11c); whether the DP it heads is interpreted as singular or plural is correlated with the class marker used, *b* and *y*, respectively. The class markers in Wolof are listed below:[2]

(12) (Tamba *et al.*, 2012, tab. 17.2; adapted)

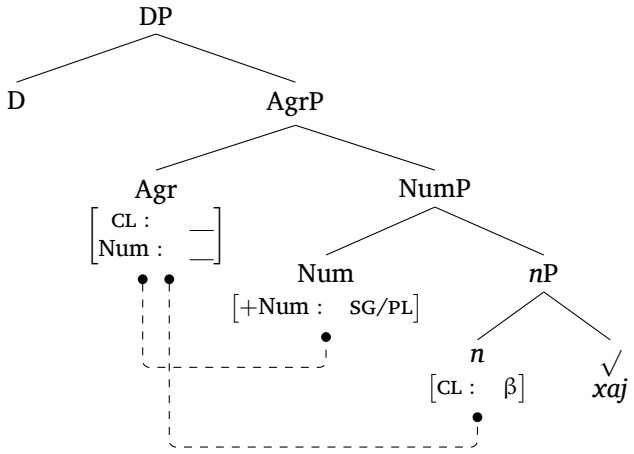
Number	Noun	CM-DEF	Gloss
Singular	yàmbaa	j-i	'marijuana CM.SG-DEF'
	nit	k-i	'person CM.SG-DEF'
	xaj	b-i	'dog CM.SG-DEF'
	nit	k-i	'person CM.SG-DEF'
	mbagg	m-i	'shoulder CM.SG-DEF'
	weñ	w-i	'metal CM.SG-DEF'
	suuf	s-i	'ground CM.SG-DEF'
	ndap	l-i	'pot CM.SG-DEF'
	góór	g-i	'man CM.SG-DEF'
Plural	xaj	y-i	'dog CM.PL-DEF'
	góór	ñ-i	'man CM.PL-DEF'

Assuming a realizational framework of the grammar like Distributed Morphology (Halle & Marantz, 1993, 1994), a straightforward account of these class markers would be to assume that each corresponds to a different underlying Vocabulary Item. However, one may wonder about the asymmetry between the amount of singular and plural class markers – clearly, the former outnumber the latter. In addition, *y* can be described as a default plural marker, since it is used with most nouns; *ñ* is used with a small set of nouns denoting human individuals, the singular counterpart of which is *g* (Tamba *et al.*, 2012, p. 895).

In view of these facts, I propose, instead, an analysis that is based on underspecified Vocabulary Items, still assuming a realizational framework. Specifically, I follow Kihm (2005), Acquaviva (2009), Kramer (2015), and Fuchs & van der Wal (2022) in assuming that gender and other root-specific properties are encoded in the categorizer that merges with the root. As such, I propose that the class a Wolof noun belongs to is a feature which is a specification of *n*, much like gender in e.g. Romance languages. Furthermore, I postulate a single head (AgrP; see more details in §5) that probes for a class marker and a number feature. It is this single head (Agr), I contend, that is exponed as the class marker morpheme in (12); this is a straightforward way to capture the fact that a single morpheme encodes both class and number information.

(13) STRUCTURE OF FULL NOMINALS IN WOLOF

[2]Unlike what happens in Bantu languages, the class markers in Wolof do not occur in singular/plural pairs. Rather, there are several class markers for singular nouns, which are then collapsed into only two plural class markers (Babou & Loporcaro, 2016).



The Vocabulary Items that I propose for class markers (to reiterate, analyzed here as a single head that probes for a class marker feature, as well as number) are in (14). For concreteness, I represent the class feature with a Greek letter that corresponds to the singular class marker exponent.

(14) VOCABULARY ITEMS FOR AGR

a. [CL] ↔ */b/*
b. [CL : κ] ↔ */k/*
c. [CL : μ] ↔ */m/*
d. [CL : γ] ↔ */g/*

…

e. [Num: PL] ↔ */y/*
f. [CL : γ; Num: PL] ↔ */ñ/*

With this background in place, in section §3, we move on to the main focus of this paper. We will see that BNs in Wolof are narrow scope indefinites that have an exclusively singular interpretation when unmodified.

2.1 Methodology

Uncited Wolof data is due to the author's elicitation with two native speaker consultants. They were asked to judge sentences in Wolof constructed by the author or to translate English prompts into Wolof. When the semantic properties of a particular sentence were at issue, a context was provided and the consultants were asked whether the given sentence was true or false in that scenario. One of the consultants is a male from Kaolack in his late forties, with whom in-person interviews were conducted in Cambridge (Massachusetts, USA). The second consultant was a male in his mid-twenties from Dakar, who I communicated with virtually.

3 Bare Nominals in Wolof

3.1 Structure and Distribution

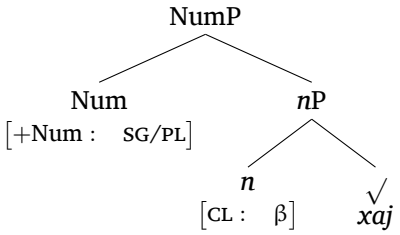
Even though Wolof has determiners, it also allows for its nominals to occur in a bare form (represented in boldface throughout this paper). For Wolof, then, the term 'bare nominal' refers to nominals that occur without an overt determiner which lack a class marker morpheme that also expones number. This paper is concerned with the number interpretation of such nominals when they are in object position.

(15) Awa defar-na { oto b-i / oto y-i / a-y oto / **oto** }.
Awa fix-NA.3SG car CM.SG-DEF / car CM.PL-DEF / INDEF-CM.PL car / car
'Awa fixed the car/the cars/some cars/a car.'

(16) Xale y-i jënd-na-ñu { a-b téere / **téere** }.
child CM.PL-DEF buy-NA-3PL INDEF-CM.SG book / book
'The children bought a book.'

In (13), I proposed a structure for full nominals. I now present a corresponding structure for their bare counterpart. Following Massam (2001), a.o., I assume that BNs have a truncated structure. Specifically, I propose that BNs in Wolof lack an AgrP layer, since they lack a class marker, which I proposed above to be the exponent of the head of the nominal projection AgrP. NumP is retained under the assumption that this is the only locus of number interpretation (Ritter 1991, 1992; Harbour 2011; see a brief overview in Danon 2011). I am agnostic as to whether or not a DP layer is projected in Wolof BNs. In any case, the projection of a DP layer or lack thereof is orthogonal to the main topic of this paper, the singular (as opposed to number-neutral) interpretation of BNs in Wolof.

(17) STRUCTURE OF BARE NOMINALS IN WOLOF



In all Wolof BN examples so far (viz. (15) and (16), as well as the examples in §1), the BN occurs in object. In fact, BNs in this language are restricted to this position in neutral *na* clauses; they cannot occur in the subject position in the same type of clause:

(18) * **Saasfaam** fàtte-na téj palanteer=am.
nurse forget-NA.3SG close window=POSS.3SG
Intended: 'A nurse forgot to close his/her window.'

This observation was first made by Tamba *et al.* (2012):

(19) (Tamba *et al.*, 2012, (36b), glosses adapted for uniformity)
* **Xale** jàng-na tééré b-i.
child read-NA.3SG book CM.SG-DEF
Intended: 'A child read the book.'

This is not an uncommon distribution for BNs. In fact, I argue in Fong (To Appear) that the syntactic distribution of BNs in Wolof is appropriately explained in terms of pseudo noun incorporation, which typically (though not universally) target internal arguments only (Massam, 2009). The current paper is concerned with the number interpretation of BNs in the object position of episodic *na* clauses. [3]

[3]Ferreira (2021) remarks that bare singulars in Brazilian Portuguese are allowed in the subject position of generic sentences; if the sentence is episodic, a bare singular is not allowed in the subject position.

(i) BRAZILIAN PORTUGUESE (Ferreira, 2021, (12) and (16))
a. **Cachorro** late (quando está bravo).
dog barks (when is angry)
'Dogs bark when they are angry.'
b. * **Cachorro** está latindo na frente da minha casa.
dog is barking in.the front of.the my house
Intended: 'Dogs are barking in front of my house.'

It seems, thus, that episodic predicates impose an independent restriction on the distribution of BNs.
Indeed, if such restriction is eliminated, BNs in Wolof can occur in the subject position of generic sentences:

(ii) (Tamba *et al.*, 2012, (43a), (42a), (190a); glosses adapted for uniformity)

The crucial difference in the structure of full (13) and bare (17) nominals is the absence of an AgrP in the latter. As mentioned, this postulation is grounded in the empirical fact that BNs do not have a class marker, which I proposed earlier to be the exponent of Agr. This proposal will be critical in the analysis of why BNs in Wolof are singular (and not number-neutral) when unmodified, which we will turn to in §5).

3.2 Interpretation

Like BNs in other languages Massam (cf. e.g. 2009), BNs in Wolof are narrow scope indefinites. They can be licensed in an existential construction, which displays definiteness effects. (20a) shows that a singular or plural indefinite full nominal can be used in an existential construction. This possibility contrasts with what is witnessed in (20b), where a definite full nominal cannot be used. Finally, (20c) shows that a BN can be used in the same structure where an indefinite nominal can be licensed.[4]

(20) a. Am-na { a-b / a-y xaj } ci biti.
have-NA.3SG INDEF-CM.SG / INDEF-CM.PL dog PREP outside
'There is/are a/some dog(s) outside.'

b. * Am-na xaj b-i ci biti.
have-NA.3SG dog CM.SG-DEF PREP outside
Literally: 'There is the dog outside.'

c. Am-na **xaj** ci tool b-i.
have-NA.3SG dog PREP garden CM.SG-DEF
'There is a dog in the garden.'

In addition, whenever there is another operator in the same sentence, the BN has to take scope under it. For example, it must take narrow scope with respect to *again*:

(21) Mareem séy-aat-na ak **fecckat**.
Mareem marry-ITER-NA.3SG with dancer
'Mareem married a dancer again.'

a. ✓ Context: Mareem has a very specific preference and she has married several, different dancers.

b. # Context: Mareem married the same dancer several times (e.g. marriage, followed by divorce, followed by another marriage).

(22) shows tha a BN must also scopes below *fàtte* 'forget'.

(22) Isaa fàtte-na jënd **fowekaay**.
Isaa forget-NA.3SG buy toy
'Isaa forgot to a buy a toy.'

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a. **Xaj** di-na lekk yàpp
dog IMPERF-NA.3SG eat meat
'Dogs eat meat.'

b. **Xaj** d-u lekk màngo.
dog IMPERF-NEG.3SG eat mango
'Dogs don't eat mangoes.'

c. **Góór** d-u tox.
man IMPERF-NEG.3SG smoke
'Men don't smoke.'

Tamba *et al.* (2012, p. 929) observe that only singular agreement is possible in such cases. There could be independent restrictions imposed on generic sentences that regulate the interpretation and distribution of BNs in such sentence. I leave this important issue for future research, since it will involve not only a discussion of number interpretation, which this paper is concerned with, but also of genericity, which is beyond the scope of the paper.

[4] A speaker commented that (20c) cannot mean 'There are dogs in the garden', another early indication that these nouns are not number-neutral.

a. # Context: Isaa is going to a store and I gave him a list of toys that I want him to buy for my dogs. He suceeded in buying all toys, except for one (i.e. there is one toy that Isaa did not buy).

b. ✓ Context: Isaa is going to a store and I gave him a list of toys that I want him to buy for my dogs. He ended up not buying any toy at all.

Finally, BNs must also scope below negation:

(23) (Tamba *et al.*, 2012, (49a), glosses adapted for uniformity)

Jàng-u-ma **tééré**.
read-NEG.1SG book
'I read no book./I did not read any book.'

Narrow scope is a property that BNs in other languages share, along with number-neutrality (i.e. the lack of commitment to a singular or plural interpretation). However, BNs in Wolof lack the second property.

3.3 Bare Nominals in Wolof Are Singular

That BNs in Wolof are exclusively singular can be demonstrated by looking at the following diagnostics:

(24)
- Collective predicate
- Plural discourse anaphora
- Plural pronoun in sluicing context
- Binding of reciprocal
- Binding of plural reflexive
- 'How many' follow-up
- 'All of them' follow-up

In the remainder of this section, we will investigate each of these properties by first looking at the behavior of full nominals. This will establish a baseline we can compare BNs with. We will see that BNs behave like their singular full nominal counterparts.

(25a) and (25b) show that the verbs *dajale* 'gather' and *boole* 'put together' require a plural object. In other words, they are collective predicates.

(25) a. Jàngalekat b-i dajale-na { *a-b xale / a-y xale } ci
teacher CM.SG-DEF gather-NA.3SG *INDEF-CM.SG child / INDEF-CM.PL child PREP
bayaal b-i.
park CM.SG-DEF
'The teacher gathered some students in the park.'

b. Roxaya boole-na { *a-b butéel / a-y butéel } ci waañ
Roxaya put.together-NA.3SG *INDEF-CM.SG bottle / INDEF-CM.PL bottle PREP kitchen
w-i.
CM.SG-DEF
'Roxaya collected some bottles in the kitchen.'

(26a) and (26b) show that a BN cannot be the object of these collective predicates, mimicking the behavior of singular full nominals.

(26) a. * Jàngalekat b-i dajale-na **xale** ci bayaal b-i.
teacher CM.SG-DEF gather-NA.3SG child PREP park CM.SG-DEF
Literally: 'The teacher gathered student in the park.'

b. * Roxaya boole-na **butéel** ci waañ w-i.
Roxaya put.together-NA.3SG bottle PREP kitchen CM.SG-DEF
Literally: 'Roxaya collected bottle in the kitchen.'

A singular full nominal can only be the object of a collective predicate if it is coordinated with another nominal.

(27) Faatu dajale-na a-b fecckat ak a-b woykat.
Faatu gather-NA.3SG INDEF-CM.PL dancer with INDEF-CM.SG singer
'Faatu gathered a dancer and a singer.'

The same effect arises when the core argument of the collective predicate is a BN (28). In other words, again, a BN behaves in the same way as its singular full nominal counterpart.

(28) Faatu dajale-na **fecckat** ak { **woykat** / a-b woykat }.
Faatu gather-NA.3SG dancer with singer / INDEF-CM.SG singer
'Faatu gathered a dancer and a singer.'

The same general profile can be seen in the behavior of nominals with respect to pronouns that are used to be referred back to them. (29a) shows that a singular nominal (*ab jàngalekat* 'a teacher') must be referred back to with a singular pronoun – a plural pronoun cannot be used. Conversely, if the antecedent is plural (*ay jàngalekat* 'some teachers'), only a plural pronoun is possible.[5]

(29) a. Gis-na-a a-b jàngalekat. Maymuna bëgg-na { ko / *leen }.
see-NA-1SG INDEF-CM.SG teacher Maymuna like-NA.3SG OBJ.3SG / *OBJ.3PL
'I saw a teacher yesterday. Maymuna admires her/*them.'

b. Gis-na-a a-y jàngalekat. Maymuna bëgg-na { *ko / leen }.
see-NA-1SG INDEF-CM.PL teacher Maymuna like-NA.3SG *OBJ.3SG / OBJ.3PL
'I saw some teachers yesterday. Maymuna admires *her/them.'

With this background in place, consider what happens when the antecedent is a BN. (30) shows that the pronoun that refers back to it must be singular. Once again, this was also the behavior that a singular full nominal exhibits.

(30) Gis-na-a **jàngalekat**. Maymuna bëgg-na { ko / *leen }.
see-NA-1SG teacher Maymuna like-NA.3SG OBJ.3SG / *OBJ.3PL
'I saw a teacher yesterday. Maymuna admires her.'

This pattern can be reproduced with interrogative pronouns, which can be used, for instance, in sluicing. In Wolof, interrogative pronouns are prefixed by a class marker, which, as mentioned above, exhibits number features. Identically to the discourse anaphora data above, the antecedent and the interrogative pronoun have to match in number, which is encoded in the choice of a singular or a plural class marker.[6]

(31) a. Jàngalekat b-i seet-na a-b ndoongo.daara, waaye xa-w-ma {
teacher CM.SG-DEF visit-NA.3SG INDEF-CM.SG student but know-NEG-1SG
k-an la / *y-an la }.
CM.SG-which COP.3SG / *CM.PL-which COP.3SG
'The teacher visited a student, but I do not know which one/*which ones.'

b. Jàngalekat b-i seet-na a-y ndoongo.daara, waaye xa-w-ma {
teacher CM.SG-DEF visit-NA.3SG INDEF-CM.PL student but know-NEG-1SG
*k-an la / y-an la }.
*CM.SG-which COP.3SG / CM.PL-which COP.3SG
'The teacher visited some students, but I do not know which ones/*which one.'

Following the pattern so far, a BN can only be questioned with a singular interrogative pronoun.

[5]A similar argument can be provided by a pronoun that appears in an object control-like structures, where said pronoun tracks the properties of a controller. The latter can be a BN, in which case the pronoun must be singular. The data can be found in Fong (2021).

[6]In (31) and throughout this paper, *xa-w-ma* is a contraction of *xam-u-ma* 'know-NEG-1SG'.

(32) Jàngalekat b-i seet-na **ndoongo.daara**, waaye xa-w-ma { k-an
teacher CM.SG-DEF visit-NA.3SG student but know-NEG-1SG CM.SG-which
la / *y-an la }.
COP.3SG / *CM.PL-which COP.3SG
'The teacher visited a student, but I do not know which one/*which ones.'

Turning now to binding, we will see that BNs cannot bind plural anaphors. (33a) shows that a plural full nominal like *ay ndoongo.daara* 'some students' can be used in a clause where a verb (*xam* 'know') has a reciprocal morpheme (*-ante*) affixed to it. (33b) in turn shows that a singular antecedent like *ab ndoongo.daara* 'a student' renders the sentence ungrammatical.[7]

(33) a. Jàngalekat b-i wonale-na a-y ndoongo.daara ñu xam-ante.
teacher CM.SG-DEF introduce-NA.3SG INDEF-CM.PL student 3PL know-RECP
'The teacher introduced some students to each other.'

b. * Jàngalekat b-i wonale-na a-b ndoongo.daara mu xam-ante.
teacher CM.SG-DEF introduce-NA.3SG INDEF-CM.SG student 3SG know-RECP
Literally: 'The teacher introduced a student to each other.'

In (34) are the BN versions of these sentences. These data show that a BN can simply not be used in a sentence with a reciprocalizer morpheme.

(34) * Jàngalekat b-i wonale-na **ndoongo.daara** { mu / ñu } xam-ante.
teacher CM.SG-DEF introduce-NA.3SG student 3SG / 3PL know-RECP
Literally: 'The teacher introduced student to each other.'

We see the same behavior when we examine plural reflexives. (35) shows the expected behavior of singular and plural reflexives in Wolof. (35a) and (35b) show that a plural full nominal (*xale yi* 'the children') can be the antecedent of a plural reflexive, though not of a singular one. (35c) and (35d) show the reverse pattern with a singular full nominal antecedent (*xale bi* 'the child').

(35) a. Kadeer sang-u-loo-na xale y-i seen bopp.
Kadeer wash-REFL-CAUS-NA.3SG child CM.PL-DEF POSS.3PL head
'Kadeer made the children wash themselves.'

b. * Kadeer sang-u-loo-na xale y-i bopp=am.
Kadeer wash-REFL-CAUS-NA.3SG child CM.PL-DEF head=POSS.3SG
Literally: 'Kadeer made the children wash himself/herself.'

c. Kadeer sang-u-loo-na xale b-i bopp=am.
Kadeer wash-REFL-CAUS-NA.3SG child CM.SG-DEF head=POSS.3SG
'Kadeer made the child wash himself/herself.'

d. * Kadeer sang-u-loo-na xale b-i seen bopp.
Kadeer wash-REFL-CAUS-NA.3SG child CM.SG-DEF POSS.3PL head
Literally: 'Kadeer made the child wash themselves.'

In accordance with the pattern we have seen so far, (36a) shows that a BN cannot be the antecedent of a plural reflexive. It can nevertheless be the antecedent of a singular reflexive (36b). This is once again the same behavior exhibitted by a singular full nominal.

(36) a. * Jàngalekat b-i sang-u-loo-na **ndoongo.daara** seen bopp.
teacher CM.SG-DEF wash-REFL-CAUS-NA.3SG student POSS.3PL head
Literally: 'The teacher made student wash themselves.'

[7] I do not have an analysis of all morphemes that make up the sentence. For instance, I do not know the role played by *mu* and *ñu*, which Zribi-Hertz & Diagne (2002) argue to be a pronoun – rather than a person agreement affix. In any case, we will see in (34) that the BN counterpart of these sentences is ungrammatical irrespective of the number of the pronoun used.

b. Jàngalekat b-i sang-u-loo-na **ndoongo.daara** bopp=am.
teacher CM.SG-DEF wash-REFL-CAUS-NA.3SG student head=POSS.3SG
'The teacher made some student wash himself/herself.'

(36b) is also relevant in evincing that BNs in Wolof are able to be antecedents, which defuses an alternative analysis which attributes the ill-formedness of the sentences in (34) and (36a) to a potential inability to serve as an antecedent for binding.

The exclusively singular interpretation of BNs in Wolof can be likewise inferred by their behavior regarding the possibility of targeting their reference with a 'how many' question. (37) shows that a plural full nominal such as *ay neexal* 'some gifts' can be felicitously targeted by a 'how many' question. (38) shows that this is not the case when the full nominal is singular.[8]

(37) A. Kadeer jot-na a-y neexal.
Kadeer receive-NA.3SG INDEF-CM.PL gift
'Kadeer received some gifts.'
B. Ñaata neexal la Kadeer jot?
how.many gift COP.3SG Kadeer receive
'How many gifts did Kadeer receive?'

(38) A. Kadeer jot-na b-enn neexal.
Kadeer receive-NA.3SG CM.SG-one gift
'Kadeer received one gift.'
B. # Ñaata neexal la Kadeer jot?
how.many gift COP.3SG Kadeer receive
'How many gifts did Kadeer receive?'

(39) shows that this follow-up question is not felicitous either when it targets a BN. Once more, the BN behaves just like its singular full nominal counterpart.

(39) A. Kadeer jot-na **neexal**.
Kadeer receive-NA.3SG gift
'Kadeer received a gift.'
B. # Ñaata neexal la Kadeer jot?
how.many gift COP.3SG Kadeer receive
'How many gifts did Kadeer receive?'

Finally and relatedly, BNs cannot be followed up by *all of them*.

(40) a. *? Gis-na-a a-b xaj ci bayaal b-i démb. Y-ëpp
see-NA-1SG INDEF-CM.SG dog PREP field CM.SG-DEF yesterday CM.PL-every
sokola-na-ñu.
brown-NA-3PL
Literally: 'I saw a dog in the field yesterday. All of them were brown.'[9]
b. Gis-na-a a-y xaj ci bayaal b-i démb. Y-ëpp
see-NA-1SG INDEF-CM.PL dog PREP field CM.SG-DEF yesterday CM.PL-every
sokola-na-ñu.
brown-NA-3PL
'I saw some dogs in the field yesterday. All of them were brown.'

[8]Regrettably, the data is not as minimal as possible, since they differ in the choice of class marker (i.e. *a-y* vs. *b-enn*). Nonethless, Tamba *et al.* (2012) remark that *a-CM* and *CM-enn* indefinites have similar distribution and have different scope properties (e.g. *a-CM* indefinites have narrow scope with respect to a conditional and wide scope with respect to negation, while *CM-enn* indefinites have exactly the opposite behavior). Because the *how many* question discussed here targets the number interpretation of these indefinites, it is possible that the fact that the sentences in (37) and (38) do not form a minimal pair is not consequential to the discussion of number interpretation of nominals in Wolof.

[9]A *Glossa* reviewer remarks that *Y-ëpp sokola-na-ñu* 'CM.PL-every brown-NA-3PL' is pragmatically odd and suggests instead *Y-ëpp da-ñu sokola* 'CM.PL-every do-3PL brown'. The original data was accepted by both consultants.

(41) ?? Gis-na-a **xaj** ci bayaal b-i démb. Y-ëpp sokola-na-ñu.
see-NA-1SG dog PREP field CM.SG-DEF yesterday CM.PL-every brown-NA-3PL
Literally: 'I saw dog in the field yesterday. All of them were brown.'

In brief, the generalization we arrive at from the data examined in this section is that BNs in Wolof are singular. These data are summarized in (42), which show in table form that BNs and singular full nominals in Wolof exhibit the same behavior.

(42)

	Full Nominal		Bare Nominal
	Singular	Plural	
Collective predicate	*	✓	*
Discourse anaphora	SG	PL	SG
Pronoun (sluicing)	SG	PL	SG
Reciprocal	*	✓	*
Plural reflexive	*	✓	*
'How many' follow-up	#	✓	#
'All of them' follow-up	#	✓	??

With this generalization in mind, let us consider the behavior of BNs in Mandarin regarding roughly the same diagnostics. Rullmann & You (2006), among others, remark that BNs in this language receive a number-neutral interpretation. (43) shows that Mandarin has the opposite behavior of that showcased by Wolof regarding most properties considered above.

(43) MANDARIN

a. ✓ COLLECTIVE PREDICATE (F. Chen, p.c.)
Laoshi zai gongyuan-li jihe-le **xuesheng**.
teacher at park-in gather-PERF student
'The teacher gathered the students in the park.'

b. ✓ SG OR PL DISCOURSE ANAPHORA (Rullmann & You, 2006)
Zuotian wo mai le **shu**. Wo ba { ta / tamen } dai hui jia le.
yesterday I buy ASP book. I BA it / them bring back home ASP
'Yesterday, I bought one or more books. I brought it/them home.'

c. ✓ PLURAL REFLEXIVE (F. Chen, p.c.)
Wo rang **xuesheng** hua-le ta-men ziji.
I let student draw-PERF 3-PL SELF
'I let student draw themselves.'

d. ✓ 'HOW MANY' FOLLOW-UP (F. Chen, p.c.)
A. Zuotian, wo zai xin xuexiao li yujian-le **lao tongxue**.
Yesterday I at new school in meet-PERF old classmate
'Yesterday, I met old classmate at the new school.'
B. Ni yujian-le ji-ge lao tongxue?
You meet-PERF how.many-CL old classmate
'How many old classmates did you meet?'

An exception however is the near impossibility a BN in Mandarin to license a reciprocal. I leave this divergence unaccounted for here.

(44) (F. Chen, p.c.)
Wo jieshao-le **xuesheng** gei bici.
I introduce-PERF student to each.other
'I introduced student to each other.

One may object that the comparison between BNs in Wolof and Mandarin is not adequate, given the differences between the two languages. For one, BNs in Mandarin can receive a definite interpretation, as this language lacks definite determiners (for a recent discussion and analysis, see Jenks 2018). At this point, we may turn to Brazilian Portuguese, a language that has definite and indefinite determiners, but which also allows for nominals to occur in a bare form, just like Wolof. Relevantly for the comparison at hand, BNs in Brazilian Portuguese do not seem to have a definite interpretation. Nevertheless, BNs in Brazilian Portuguese are similar to those in Mandarin: both exhibit the opposite behavior regarding the properties discussed above that indicate that BNs in Wolof are exclusively singular.

(45) BRAZILIAN PORTUGUESE

a. ✓ COLLECTIVE PREDICATE (personal knowledge)

A Adriana juntou **criança** na quadra.
the Adriana gathered child in.the court
'Adriana gathered children in the playground.'

b. ✓ SG OR PL DISCOURSE ANAPHORA (Schmitt & Munn, 1999, (31a); glosses and translation added)

Tem **criança** na sala. E { ela está / elas estão } ouvindo.
has child in.the room and { she is / they are } listening
'There is a child/some children in the room. And (s)he is/they are listening.'

c. ✓ PLURAL INTERROGATIVE PRONOUN (personal knowledge)

A Ângela fica me recomendando **livro**, mas eu nunca lembro quais.
the Ângela keeps me recommending book but I never remember which.PL
'Ângela keeps recommending books for me, but I never remember which ones.'

d. ✓ BINDING OF RECIPROCAL (personal knowledge)

Criança aqui costuma se juntar na rua e desafiar uma a outra em
child here is.used.to SELF gather.INF in.the street and challenge.INF each.other in
várias competições bobas.
several competitions silly
'Children here are used to gathering in the street and challenging each other in several silly competitions.'

e. ✓ BINDING OF PLURAL REFLEXIVE (personal knowledge)

A Soraia viu **criança** se lavando no riacho.
the Soraia saw child SELF washing in.the stream
'Soraia saw a child/some children washing herself/themselves in the stream.'

f. ✓ 'HOW MANY' FOLLOW-UP (personal knowledge)

A. A Renata foi comprar **caneca** ontem.
the Renata went buy.INF mug yesterday
'Renata bought one or more mugs yesterday.'

B. Quantas (canecas ela comprou)?
how.many (mugs she bought)
'How many (mugs did she buy)?'

In view of the data summarized in (42) and its comparison with BNs in two other languages, we may ask the following question:

(46) How can we account for the exclusively singular interpretation (and not number-neutral) of BNs in Wolof?

I will propose in §5 that the singular interpretation of BNs in Wolof can be modeled as a consequence of a derivation that can only converge if NumP is singular. However, before we get to an answer to (46), we must look at additional data to arrive at a complete picture of the number interpretation of BNs in Wolof. In the data that we have investigated so far, the BN is unmodified. It turns out that, when the BN combines

with modifiers, it can either retain a singular interpretation (as that seen in the present section) or have a plural construal. We turn to modifier data in the next section.

4 Adding a modifier: relative clauses vs. plain modifiers

In this section, we return to the number interpretation diagnostics employed earlier, but this time focusing on BNs that are modified. The generalization we arrived at in the previous section is that BNs in Wolof are singular and not number-neutral, unlike BNs in other languages. However, this generalization holds only if the BN is unmodified. In this section, we add relative clauses and adjectives to the BN. The former differ from the latter in the that only relative clauses contain a class marker, which is prefixed to the relative complementizer. Importantly, as we saw earlier, class markers in Wolof encode number properties. Adjectives, on the other hand, do not expone number features at all and so I call them 'plain modifiers'. The broader generalization that we will arrive at is that BNs in Wolof are exclusively singular, unless they are modified by a nominal element that is able to expone number morphology. In that case, it can have a plural interpretation.

4.1 Relative clause

Relative clauses in Wolof contain a class marker prefixed to the relative complementizer *u*. The class marker cross-references the class and number of the head of the relative (*palanteer* 'window' in (47)).

(47) a. Samba tëj-na palanteer [b-u tilim] b-i.
Samba close-NA.3SG window [CM.SG-COMP dirty] CM.SG-DEF
'Samba closed the window that is dirty.'

b. Samba tëj-na palanteer [y-u tilim] y-i.
Samba close-NA.3SG window [CM.PL-COMP dirty] CM.PL-DEF
'Samba closed the windows that are dirty.'

Relative clauses are a widely utilized type of nominal modifier. Predicates like *tilim* 'dirty' occur inside relative clauses in the same position as verbs do – examples of the latter can be found below. For more on nominal modification on Wolof, see McLaughlin (2004). The only type of nominal modifier that does not have the syntax of a relative clause found in my data set are what I call 'plain modifiers', discussed below.

According to Torrence (2013), a.o., the complementizer in relative clauses in Wolof can encode meanings otherwise encoded by determiners, such as definiteness and proximity. While this type of relative clause indeed occurs in my consultants' dialects, the relative clauses I investigate in this paper uniformily contain the complementizer *-u*. This complementizer does not encode definiteness or proximity, as it can occur withing definite (47), indefinite (48a/48b), and demonstrative (48c) DPs, irrespective of proximity. The choice is motivated by the fact that *-u* is the complementizer that occurs with BNs.

(48) a. Roxaya xam-na a-b jàngalekat [b-u Maymuna bëgg].
Roxaya know-NA.3SG INDEF-CM.SG teacher [CM.SG-COMP Maymuna like]
'Roxaya knows a teacher that Maymuna admires.'

b. Dimbali-na-a a-y xale [y-u jàng téere b-i].
help-NA-1SG INDEF-CM.PL child [CM.PL-COMP read book CM.SG-DEF]
'I helped some children who read the book.

c. Muus b-i daxee-na xaj [b-u sokola] b-ee.
cat CM.SG-DEF chase-NA.3SG dog [CM.SG-COMP brown] CM.SG-DEM.DIST
'The cat chased that brown dog (over there).'

Assuming a raising analysis of relative clauses (see overview in Bhatt 2002, a.o.) for Wolof, Torrence (2013) analyzes the occurrence of the class marker prefixed to the relative complementizer as an instance of complementizer agreement. More precisely, in a relative clause like that in (48a), *jàngalekat* 'teacher' is base-generated inside the relative clause CP. That class markers are the exponent of Agree is further

suggested by the fact that more than one class marker can occur in the same nominal (cf. Kramer's 2009 analysis of multiple determiners in Amharic in terms of Agree). Examples of multiple occurrences of class markers in the same nominal can be found in (47) and (48) above, where the relative complementizer agrees in class with the head of the relative, and so does the determiner outside of it. Moreover, notice that the class markers in the determiner and in the relative complementizer must match (49). This is a property that can be attributed to multiple Agree with the same goal.

(49) a. Samba tëj-na palanteer [b-u tilim] { b-i / *y-i }.
Samba close-NA.3SG window [CM.SG-COMP dirty] CM.SG-DEF / *CM.PL-DEF
'Samba closed the window that is dirty.'

b. Samba tëj-na palanteer [y-u tilim] { y-i / *b-i }.
Samba close-NA.3SG window [CM.PL-COMP dirty] CM.PL-DEF / *CM.SG-DEF
'Samba closed the windows that are dirty.'

If the BN is modified by a relative clause, it receives an indefinite interpretation, as can be inferred by the fact that it can be licensed in an existential construction:

(50) Am-na **xaj** [b-u sokola] ci tool b-i.
have-NA.3SG dog [CM.SG-COMP brown] PREP garden CL.SG-DEF
'There is a brown dog in the garden.'

This is the same behavior of unmodified BN (cf. (20c)).

By the same token, recall that BNs are narrow scope indefinites (§3). This characterization persists if the BN is modified by a relative clause. This claim is motivated by the comparison between a full indefinite modified a relative clause and its BN counterpart. In (51), where the indefinite determiner *a-b* 'INDEF-CM.SG' is used, the indefinite modified by a relative clause can scope above or below the intensional predicate *bëgg* 'want'.

(51) a. $\exists >$ WANT
Sama doom bëgg-na jàng a-b téere [b-u Mariama Ba bind],
POSS.1SG child want-NA.3SG read INDEF-CM.SG book [CM.SG-COMP Mariama Ba write]
Une si longue lettre la tuddu.
Une si longue lettre COP-3SG name
'My child wants to read a book that Mariama Ba wrote. Its title is *So long a letter*.'

b. WANT $> \exists$
Sama doom bëgg-na jàng a-b téere [b-u Mariama Ba bind],
POSS.1SG child want-NA.3SG read INDEF-CM.SG book [CM.SG-COMP Mariama Ba write]
waaye bu mu am baax-na.
but BU 3SG have good-NA.3SG
'My child wants to read a book that Mariama Ba wrote, but it does not matter which.'

In contrast, in (52), what the relative clause modifies is a BN. In that case, only a narrow scope reading is available (52b).

(52) a. $\exists >$ WANT
Roxaya bëgg-na gisee **woykat** [b-u dëkk Senegal]. # Wally Seck la
Roxaya want-NA.3SG meet singer [CM.SG-COMP from Senegal] # Wally Seck COP.3SG
tuddu.
name
'Roxaya wants to meet a singer who is from Senegal. # His name is Wally Seck.'

b. WANT $> \exists$
Mary bëgg-na gisee **woykat** [b-u dëkk Senegal], waaye bu mu am
Mary want-NA.3SG meet singer [CM.SG-COMP from Senegal] but BU 3SG meet
baax-na.
good-NA.3SG
'Mary wants to meet a singer who is from Senegal, and any will be good.'

Something along these lines can also be said of the comparison between BNs and full indefinites headed by *b-enn* 'CM.SG-one'. In (53), we see that a *b-enn* full nominal can have a wide scope interpretation with respect to the intensional predicate *seet* 'look for', which is not the case for a BN. (54) in turn shows that a *b-enn* full nominal can also narrow scope with respect to the synonymous predicate *wut* 'look for', which is the only possibility for the BN counterpart.

(53) a. Roxaya seet-na b-enn xaj [b-u sokola]. Kumba la tuddu.
Roxaya look.for-NA.3SG CM.SG-one dog [CM.SG-COMP brown] Kumba COP.3SG name
'Roxaya looked for a dog who is brown. Kumba is his name.'

b. Roxaya seet-na **xaj** [b-u sokola]. # Kumba la tuddu.
Roxaya look.for-NA.3SG dog [CM.SG-COMP brown] # Kumba COP.3SG name
'Roxaya looked for a dog who is brown. Kumba is his name.'

(54) a. Roxaya mingi wut b-enn xaj [b-u sokola], waaye bu mu am
Roxaya PROG.3SG look.for CM.SG-one dog [CM.SG-COMP brown] but BU 3SG have
baax-na.
good-NA.3SG
'Roxaya is looking for a dog who is brown, but she does not care which (all is good/anything goes).'

b. Roxaya mingi wut **xaj** [b-u sokola], waaye bu mu am baax-na.
Roxaya PROG.3SG look.for dog [CM.SG-COMP brown] but BU 3SG have good-NA.3SG
'Roxaya is looking for a dog who is brown, but she does not care which (all is good/anything goes).'

Having examined the scope properties of BNs modified by relative clauses, we can turn to their number interpretation, the focus of this section. Because Wolof relative clauses contain a class marker, which encodes number properties, we may wonder then if BNs modified by a plural relative clause may behave like plural full nominals. In this section, we will go back to the properties investigated above and conclude that the answer to this question is positive.

First, the previous section showed that a BN cannot be the object of a collective predicate like *dajale* 'gather'. Adding a singular relative clause (i.e. a relative with a singular class marker like *b*) does not change this behavior (55a). On the other hand, if the relative clause has a plural class marker affixed to the complementizer (55b), a BN can now saturate a collective predicate.

(55) a. * Jàngalekat b-i dajale-na **xale** [b-u Samba xam] ci bayaal
teacher CM.SG-DEF gather-NA.3SG child [CM.SG-COMP Samba know] PREP park
b-i.
CM.SG-DEF
Literally: 'The teacher gathered child who Samba knows in the park.'

b. Jàngalekat b-i dajale-na **xale** [y-u Samba xam] ci bayaal
teacher CM.SG-DEF gather-NA.3SG child [CM.PL-COMP Samba know] PREP park
b-i.
CM.SG-DEF
'The teacher gathered some children who Samba knows in the park.'

Second, a singular relative clause does not change the singular behavior exhibitted by an unmodified BN regarding discourse anaphora: in both cases, the pronoun used to refer back to the nominal is singular (56a). Conversely, if the relative clause is plural (56a), discourse anaphora must now be plural.

(56) a. Gis-na-a **jàngalekat** [b-u Roxaya xam]. Maymuna bëgg-na { ko / see-NA-1SG teacher [CM.SG-COMP Roxaya know] Maymuna like-NA.3SG OBJ.3SG /
*leen }.
*OBJ.3PL
'I saw a teacher who Roxaya knows. Maymuna admires her.'

b. Gis-na-a **jàngalekat** [y-u Roxaya xam]. Maymuna bëgg-na { *ko / see-NA-1SG teacher [CM.PL-COMP Roxaya know] Maymuna like-NA.3SG *OBJ.3SG / leen }.
OBJ.3PL
'I saw some teachers who Roxaya knows. Maymuna admires them.'

The same pattern can be seen in the sluicing sentences in (57), where the interrogative pronoun tracks the number of the BN's referent depending on whether it is modified by a singular or a plural relative clause.

(57) a. Jàngalekat b-i seet-na **bindakat** [b-u Maymuna bëgg], waaye
teacher CM.SG-DEF visit-NA.3SG writer [CM.SG-COMP Maymuna like] but
xa-w-ma { k-an la / *y-an la }.
know-NEG-1SG CM.SG-which COP.3SG / *CM.PL-which COP.3SG
'The teacher visited a writer who Maymuna likes, but I do not know which one.'

b. Jàngalekat b-i seet-na **bindakat** [y-u Maymuna bëgg], waaye
teacher CM.SG-DEF visit-NA.3SG writer [CM.PL-COMP Maymuna like] but
xa-w-ma { *k-an la / y-an la }.
know-NEG-1SG *CM.SG-which COP.3SG / CM.PL-whch COP.3SG
'The teacher visited some writers who Maymuna likes, but I do not know which ones.'

Fourth, while a singular relative clause does not render a BN an appropriate binder for a reciprocal (58a), its plural counterpart does (58b).

(58) a. * Jàngalekat b-i wonale-na **ndoongo.daara** [b-u Mareem xam]
teacher CM.SG-DEF introduce-NA.3SG student [CM.SG-COMP Mareem know]
ñu xam-ante.
3PL know-RECP
Literally: 'The teacher introduced student that Mareem knows to each other.'

b. Jàngalekat b-i wonale-na **ndoongo.daara** [y-u Mareem xam]
teacher CM.SG-DEF introduce-NA.3SG student [CM.PL-COMP Mareem know]
ñu xam-ante.
3PL know-RECP
'The teacher introduced some students that Mareem knows to each other.'

Likewise, a BN modified by a plural relative clause is now a possible antecedent for a plural reflexive:

(59) a. * Jàngalekat b-i sang-u-loo-na **ndoongo.daara** [b-u njool]
teacher CM.SG-DEF wash-REFL-CAUS-NA.3SG student [CM.SG-COMP tall]
seen bopp.
POSS.3PL head
Literally: 'The teacher made student who is tall wash themselves.'

b. Jàngalekat b-i sang-u-loo-na **ndoongo.daara** [y-u njool]
teacher CM.SG-DEF wash-REFL-CAUS-NA.3SG student [CM.PL-COMP tall]
seen bopp.
POSS.3PL head
'The teacher made some tall students wash themselves.'

The same conditions allow for a BN to be felicitously targeted by the question 'how many':

(60) A. Mareem jàng-na **téere** [y-u Mariama Ba bind].
Mareem read-NA.3SG book [CM.PL-COMP Mariama Ba write]
'Mareem read some books that Mariama Ba wrote.'

B. Ñaata téere [y-u Mariama Ba bind] la Mareem jàng?
how.many book [CM.PL-COMP Mariama Ba write] COP.3SG Mareem read
'How many books that Mariama Ba wrote did Mareem read?'

Finally, a BN modified by a singular relative clause cannot be followed-up with *all of them*, but a BN with a plural relative clause can.

(61) a. Jënd-na-a **téere** [b-u Mariama Ba bind-oon daaw]. Jàng-na-a y-ëpp.
buy-NA-1SG book [CM.SG-COMP Mariama Ba write-PST last.year] read-NA-1SG CM.PL-all
i. 'I bought a book that Mariama Ba wrote last year. I read all of it yesterday.'
ii. # 'I bought a book that Mariama Ba wrote last year. I read all of them yesterday.'

b. Jënd-na-a **téere** [y-u Mariama Ba bind-oon daaw]. Jàng-na-a y-ëpp.
buy-NA-1SG book [CM.PL-COMP Mariama Ba write-PST last.year] read-NA-1SG CM.PL-every
i. # 'I bought some books that Mariama Ba wrote last year. I read all of it yesterday.'
ii. 'I bought some books that Mariama Ba wrote last year. I read all of them yesterday.'

c. Jënd-na-a **téere** [y-u Mariama Ba bind]. Jàng-na-a y-ëpp démb.
buy-NA-1SG book [CM.PL Mariama Ba write] read-NA-1SG all yesterday.
'I bought some books that Mariama Ba wrote. I read all of them yesterday.'

In §3, we had concluded that BNs in Wolof behave as if they were singular. The data examined in this section, however, lead us to conclude that this generalization has to be restricted to unmodified BNs only, since BNs modified by a plural relative clause behave as if they were plural. In the next section we will add to this data and see that BNs with modifiers that do not have a plural morpheme retain an exclusively singular interpretation).

4.2 Plain (Numberless) Nominal Modifiers

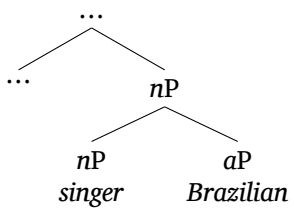
In Wolof, nominal modifiers are usually relative clauses (see, for instance, *b-u/y-u njool* 'which is/are tall' in (59b)). Nonetheless, expressions for nationality occur without the syntax of a relative clause. For convenience, I dub these expressions 'plain modifiers'.

(62) a. Mareem dajale-na a-y woykat brezilien.
Mareem gather-NA.3SG INDEF-CM.PL singer Brazilian
'Mareem gathered some Brazilian singers.'

b. Samba bëgg-na tew/ataaya angale.
Samba like-NA.3SG tea/tea English
'Samba likes English tea.'

I assume that plain modifiers are APs adjoined to the nominal they modify:

(63)



This analysis is suggested by the fact that plain modifiers have to be adjacent to the noun they modify: they cannot merge outside a relative clause.

(64) a. Gis-na-a **ndoongo.daara** brezilien [$_{RC}$ b-u Samba xam].
see-NA-1SG student Brazilian [CM.SG-COMP Samba know]
'I saw a Brazilian student who Samba knows.'

b. * Gis-na-a **ndoongo.daara** [$_{RC}$ b-u Samba xam] brezilien.
see-NA-1SG student [CM.SG-COMP Samba know] Brazilian
Intended: 'I saw a Brazilian student who Samba knows.'

Another analysis that is consistent with the data above is that the purported nationality adjectives in fact form a compound with the nominal. Under this alternative, the adjacency effect in (64) would be a consequence of mismatching requirements: relative clauses would require at least an *n*P/NP to merge with the nominal, while the second member of the purported compound would require a smaller structure, perhaps something as small as a root. These requirements can only be satisfied simultaneously if the "adjective" is merged inside the relative clause (64a). If the members of the purported compound do not include number projections (e.g. if they form a root-root compound), the analysis developed below can be restated without detriment to the claim that "adjectives" like *brezilien* 'Brazilian' or *angale* 'English' do not affect the number interpretation of BNs in Wolof.

Unlike what happens with plural relative clauses, plain modifiers do not have a "pluralizing" effect in the number interpretation of BN. A BN combined with a plain modifier still cannot be the object of a collective predicate (65), it must be referred back to with singular discourse anaphora (66) and a singular interrogative pronoun (67), it cannot be the antecedent of a reciprocal (68) or of a plural reflexive (69), and, finally, it cannot be resumed by 'all of them' (70). (Regrettably, the plain modifier counterpart of the 'how many' folow-up diagnostic is missing in my data.)

(65) a. * Roxaya dajale-na **fecckat** brezilien.
Roxaya gather-NA.3SG dancer Brazilian
Literally: 'Roxaya gathered Brazilian dancer.'

b. * Jàngalekat b-i dajale-na **ndoongo.daara** angale ci bayaal b-i.
teacher CM.SG-DEF gather-NA.3SG student English PREP park CM.SG-DEF
Literally: 'The teacher gathered English student in the park.'

(66) Gis-na-a **woykat** brezilien. Maymuna bëgg-na { ko / *leen }.
see-NA-1SG singer Brazilian Maymuna like-NA.3SG OBJ.3SG / *OBJ.3PL
'I saw a Brazilian singer. Maymuna admires her/*them.

(67) Jàngalekat b-i gis-na **ndoongo.daara** brezilien, waaye xa-w-ma {
teacher CM.SG-DEF see-NA.3SG student Brazilian but know-NEG-1SG
?k-an la / *y-an la }.
?CM.SG-which COP.3SG / *CM.PL-which COP.3SG
'The teacher saw a student, but I do not know which.'

(68) * Jàngalekat b-i desin-ante-loo-na **ndoongo.daara** brezilien.
teacher CM.SG-DEF draw-RECP-CAUS-NA.3SG student Brazilian
Literally: 'The teacher made student draw each other.'

(69) ?? Jàngalekat b-i nataal-oo-na **ndoongo.daara** angale seen bopp.
teacher CM.SG-DEF draw-CAUS-NA.3SG student English POSS.3PL head
Literally: 'The teacher made English student draw themselves.'

(70) ?? Jënd-na-a **téere** angale démb. Y-ëpp baax-na-ñu.
buy-NA-1SG book English yesterday CM.PL-every nice-NA-3PL
Literally: 'I bought English book yesterday. They are all nice.'

The data above suggest that there is a contrast between relative clauses and plain modifiers. The former have number morphology, why the latter do not. A further property correlated with the presence or absence of a class marker is the number interpretation of the BN merged with these modifiers. A BN modified by a plural relative clause can receive a plural interpretation, while a BN combined with a plain modifier retains its exclusively singular interpretation. Importantly, (62a) above demonstrates that a plain modifier

like *brezilien* 'Brazilian' can in principle combine with a plural nominal. As such, the retention of the singular in BNs combined with them cannot be due to an independent restriction imposed by such modifiers.[10]

In view of this contrast, in addition to (46), repeated below as (71a), we may also ask the question (71b):

(71) a. How can we account for the exclusively singular interpretation (and not number-neutral) interpretation of BNs in Wolof?

b. Why does a BN without any plural morphology behave as if it were singular, while a BN merged with a modifier that contains plural morphology behaves as if it were plural?

The contrast between singular relative clauses in e.g. (55a) and plain modifiers (65a), on the one hand, and plural relative clauses in (55b), on the other, suggests that what is relevant is the occurrence of some morphology that expones a plural feature. Further support for this generalization is furnished by the contrast between two types of possessive constructions, which are described in the Appendix.

Given the data surveyed so far, we arrive at the following generalization:

(72) BNs in Wolof are singular, unless there is some nominal-internal plural morphology.

I will propose an analysis to account for this generalization in the next section. The proposal will be grounded on a condition that requires the licensing of a marked number feature via Agree.

5 Analysis

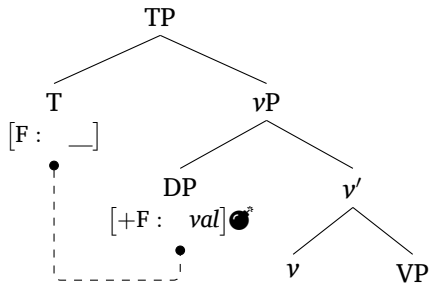
Kalin (2017, 2018, 2019) proposes a theory of nominal licensing that is driven by the need of certain interpretable features to undergo Agree. Here, I assume Kalin's (2019) formalization, which assumes the following typology of features:

(73) FEATURE TYPES (Kalin, 2019, (12), adapted)

a. [±F : __] probe
b. [+F : *val*] potential goal
c. [+F : *val*]💣 derivational time bomb

Derivational time bombs are those interpretable features that, despite being interpretable, need to be Agreed with in order for the derivation not to crash. In other words, Agree "defuses" these features. This is illustrated in (74), where T bears a feature *F* to be valued (i.e. a probe). This feature Agrees with a matching feature in its c-command domain. This feature is, furthermore, marked as a derivational time bomb. Agree suffices to defuse this feature, thereby allowing the derivation to converge.

(74) (Kalin, 2019, (13); adapted)



According to Kalin (2017, 2018, 2019), languages may differ in which features are derivational time bombs. Another point of variation is the range of licensers available in a given language. Licensers are additionally divided into two categories, primary and secondary. Primary licensers are [F : __] probes merged in every clause. Secondary licensers are probes that enter the derivation only when the derivation would crash otherwise. The occurrence of secondary licensers are regulated by the following principle:

[10] Thank you to Michael Yoshitaka Erlewine for this observation.

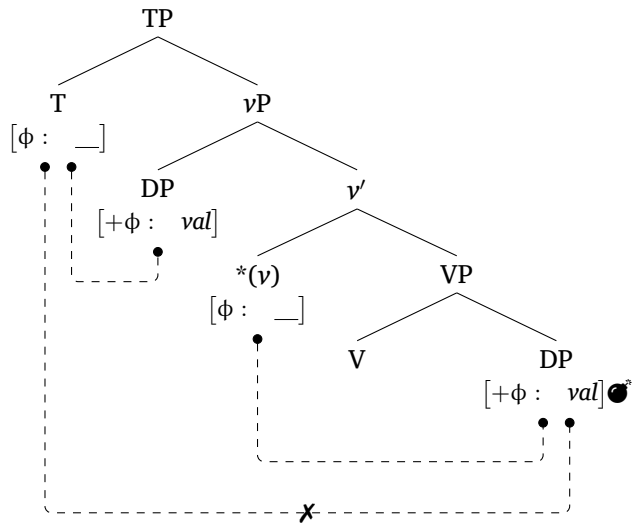
(75) LICENSING ECONOMY PRINCIPLE (Kalin, 2018, (36))

A secondary licenser is activated iff the derivation will otherwise not converge.

The empirical basis for this view of nominal licensing is provided by DOM (Differential Object Marking, Kalin 2018) and by the PCC (Person–Case Constraint), which Kalin (2017, 2019) shows to share a number of similarities. The phenomena arise when interpretable features like [+PARTICIPANT] (PCC) and [+DEFINITENESS] or [+ANIMACY] (DOM) are derivational time bombs. To be more precise, under this framework, DOM and the PCC are the byproduct of the occurrence of a secondary licenser triggered by the need of an interpretable feature to be licensed. A primary licenser cannot Agree with these derivational time bombs due to the presence of an intervening nominal that the primary licenser can Agree with and thus cannot skip over. Furthermore, as alluded to above, there may be different secondary licensers made available for different languages. For instance, in DOM languages where the differentially marked DP bears accusative case, *v* may be a secondary licenser. In languages where the differentially marked DP bears dative case, Appl may play this role (cf. Kalin 2018).

A toy example (from Kalin 2018) is provided by a DOM language where [+ANIMATE] objects are differently marked and T is a primary licenser, while *v* is a secondary licenser. In (76), the probe in T Agrees with the closest goal, the matching feature in the subject in Spec-*v*P. T cannot Agree with the lower object. A *v* that is able to Agree with the object must occur in the derivation as a secondary licenser because, otherwise, the interpretable feature in the object, a derivational time bomb, would not be defused, which would then cause the derivation to crash.

(76) (Kalin, 2018, (24); adapted)



In this paper, I propose to extend this theory of nominal licensing from the clausal to the nominal domain. Specifically, I propose that the interpretable feature [+Num : PL] is a derivational time bomb in Wolof that needs to be Agreed with in order to be licensed.

One may wonder why [+Num : PL] and not [+Num : SG] is the number value that requires licensing via Agree. Crosslinguistically, it is not in fact uncommon for the feature [+Num : PL] to behave differently from [+Num : SG] (Nevins, 2011).[11] For instance, in past participle agreement in Abruzzese (D'alessandro & Roberts, 2008; D'Alessandro & Roberts, 2010; Longenbaugh, 2019), only [+Num : PL] triggers omnivorous agreement. In (77), the participle *pittate* 'painted' obligatorily agrees with a plural DP, irrespective of whether it is an object (77b) or subject (77c). The feature [+Num : SG] does not participate in this pattern.

(77) PAST PARTICIPLE AGREEMENT IN ABRUZZESE (D'Alessandro & Roberts, 2010, (2); adapted)

[11] It must be noted, however, that recent work challenges this generalization. Raghotham (2020, 2021), Murugesan (2021), and Kumaran (2023) demonstrate that Telugu, Mundari, and Sahel Ketama Berber, respectively, there exists a singular-preferring probe. I thank Michael Yoshitaka Erlewine for bringing this work to my attention.

a. Giuwanne a pittate nu mure.
John have.3 painted.SG a wall
'John has painted a wall.'

b. Giuwanne a pittite **ddu mure**.
John have.3 painted.PL two walls
'John has painted two walls.'

c. **Giuwanne e Mmarije** a *pittate/pittite nu mure.
John and Mary have.3 *painted.SG/painted.PL a wall
'John and Mary have painted a wall.'

d. Giuwanne e Mmarije a *pittate/pittite ddu mure.
John and Mary have.3 *painted.SG/painted.PL two walls
'John and Mary have painted two walls.'

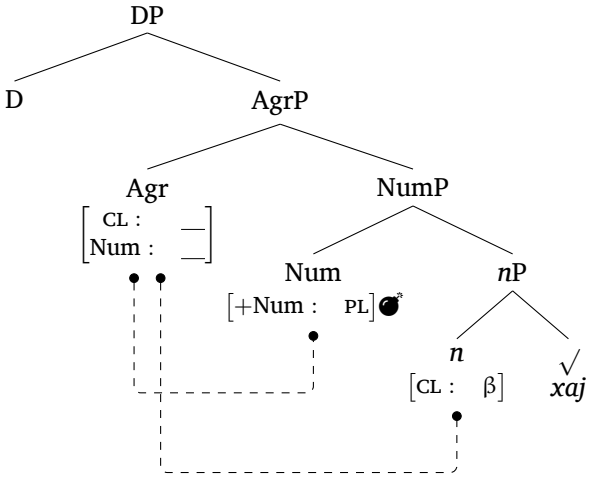
Indeed, Harley & Ritter (2002), a.o. argue that grammatical number is best syntactically represented as a privative feature [+Num : PL], with a singular interpretation arising as the consequence of the absence of such a feature. While the present paper does not allow us to distinguish between bivalence and privativity, I take data like (77) to suggest that the feature [+Num : PL], as opposed to [+Num : SG], have some syntactic "prominence", so that only the former may require licensing.

Going back to Wolof nominals, I assume that the [+Num : PL] in the nominals in this language are licensed by the number probe that is hosted by the following projections:

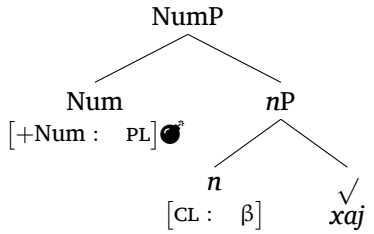
(78) a. Agr (cf. full nominals in (13) and relative clauses)
b. Poss (cf. (101) in Appendix A)

Furthermore, instead of drawing a distinction between primary and secondary licensers and assuming that their occurrence is regulated by the economy principle (75), I assume that the licensers in (78) are all that is available in the Wolof nominal domain and, additionally, I hypothesize that the occurrence of these licensers is regulated by restrictions imposed by the nominal spine in Wolof. More precisely, my proposal is that the action of an economy principle like (75) cannot be seen due to the restrictions imposed by the structure of nominals in Wolof, schematized in (13) and (17) above and repeated below for convenience. In these representations, I focus on [+Num : PL] features at the full and bare nominal's NumP, though I assume, as a null hypothesis, that both full and bare nominals in Wolof may in principle be singular or plural.

(79) STRUCTURE OF FULL NOMINAL: [+PL] DEFUSED BY AGREE WITH AGR, ALLOWING DERIVATION TO CONVERGE



(80) STRUCTURE OF BARE NOMINAL: [+PL] NOT DEFUSED BY AGREE, CAUSING DERIVATION TO CRASH



With this system in place, we can turn to an explanation as to why BNs in Wolof are singular when unmodified, but plural only when merged with nominal elements that can expone number. A fact that must be reckoned with is that full nominals in Wolof can be either singular or plural, as see in the DPs that occupy the subject and object position of a sentence like (11a), repeated below.

(81) Xale y-i lekk-na-ñu gato b-i.
child CM.PL-DEF eat-NA-3PL cake CM.SG-DEF
'The children ate the cake.'

All things equal, the same values for the number feature should be available for BNs as well. In the full nominal (13), the interpretable number feature in NumP is always Agreed with by Agr, which probes for both number and class. The need for the feature [+Num : PL] to be licensed by Agree (i.e. defused) can thus be satisfied. Conversely, in the BN in (17), there is no number probe. As such, if the numeration contains a plural Num, the derivation crashes because [+Num : PL] is not defused. Because no such requirement is imposed on [+Num : SG], the derivation converges. We have now arrived at an explanation as to why BNs in Wolof are exclusively singular when unmodified: of the two logically available derivations (one with a singular Num and one with a plural Num), only the one with a singular BN leads to a convergent derivation.

For this analysis to go through, we must assume that BNs in Wolof project NumP, which I assume, furthermore, to be either singular or plural, as a null hypothesis. It is the presence of a [+Num : PL] Num that triggers the need for licensing via Agree. However, a reasonable alternative is that BNs in Wolof, being truncated nominals, simply lack a NumP, in which case, another explanation would have to be provided for their singular interpretation. Nonetheless, I believe that assuming that Wolof BNs do not have a NumP may not be compatible with certain facts about the behavior of BNs when they are coordinated.[12]

A suggestion that BNs may have number is provided by the fact that they can trigger plural morphology in the verb when coordinated in the subject position. This pattern is dubbed 'agreement resolution' (Corbett, 2006). (82a) shows that coordination of singular nominals trigger plural agreement necessarily. (82b) and 82c) show that this restriction also holds when the coordinated nominals are bare.

(82) a. A-b xale ak a-b jàngalekat woy-na*(-*ñu*) ci daara j-i.
INDEF-CM.SG child with INDEF-CM.SG teacher sing-NA*(-3PL) PREP school CM.SG-DEF
'A child and a teacher sang in the school.'

b. **Xale** ak **jàngalekat** woy-na-*(ñu) ci daara j-i.
child with teacher sing-NA-*(3PL) PREP school CM.SG-DEF
'A child and a teacher sang in the school.'

c. **Xale** ak a-b jàngalekat woy-na-ñu ci daara j-i.
child with INDEF-CM.SG teacher sing-NA-3PL PREP school CM.SG-DEF
'A child and a teacher sang in the school.'

[12] A brief comparison with previous literature on number-neutral BNs may give the retention of NumP in Wolof BNs some plausibility. Rullmann & You (2006), Müller (2002), and Kramer (2017), for example, investigate BNs in Mandarin, Brazilian Portuguese, and Amharic, respectively. In these languages, BNs are number-neutral. Rullmann & You, Müller, and Kramer capture this semantic property by proposing that BNs in these languages lack a NumP projection. They assume that entities of type e denote singleton sets (atoms) and all their sums. What NumP does is restrict that denotation to only singleton sets (singular) or pluralities (plural). Under this view, number-neutrality in BNs emerges as a consequence of the absence of a restriction that picks out just atoms or pluralities, so that both possibilities are available. In other words, the NumP-less nominal ends up number-neutral. As I tried to argue above, this characterization does not fit Wolof BNs, which have a singular construal, exclusively. Hence, I keep NumP.

A similar effect is found in French.[13] (83) is a baseline example that shows that coordinated DPs require plural agreement in the verb.

(83) FRENCH: COORDINATED NOMINALS REQUIRE PLURAL AGREEMENT

Sur le moment, *Le Monde* et *Libération* *m'a semblé / m'ont semblé
on the moment *Le Monde* and *Libération* *1ST.DAT=had.3SG seemed / 1ST.DAT=had.3PL seemed
être d'excellents journaux.
be.INF INDEF=excellent newspapers
'In the moment, Le Monde and Libération seemed to me to be excellent newspapers.'

(84) in turn shows that coordinated infinitival clauses obey the same constraint.

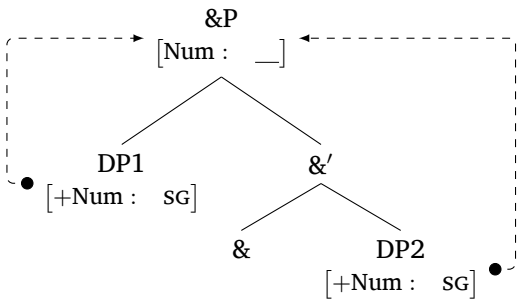
(84) FRENCH: COORDINATED INFINITIVAL CLAUSES REQUIRE AGREEMENT (modeled after Davies & Dubinsky 2001, p. 260)

[Séjourner dans les montagnes] et [longer la côte] me *paraît / paraissent
[stay.INF in the mountains] and [go.along the coast] 1SG.DAT *seem.3SG / seem.3PL
des façons admirables de connaître la vraie France.
INDEF.PL ways admirable for get.to.know.INF the true France
'Traveling through the mountains and going along the coast appear to me an admirable way to get to know the real France.'

Following Davies & Dubinsky (2001), we can conclude that sentences like (84) indicate that subject agreement provides evidence for the hidden number properties of the element that occupies the subject position – in this case, coordinated infinitival clauses. By analogy, the Wolof sentences (82b) and (82c) would be indicative that coordinated BNs have number properties as well.

Additionally, I assume that &P is ϕ-deficient and that these features are provided by the conjuncts, common assumptions in one at least one camp of agreement with and within coordinated phrases (Nevins & Weisser 2019, p. 11f; see also É. Kiss 2012), so that these features are "projected" (or "computed from", Bhatt & Walkow 2013) from its conjuncts. For concreteness, the "percolation" of the the conjoined singular DPs into the &P is schematized below (based on Bhatt & Walkow 2013, fig. 1; see also Grosz's 2015 Multidominance analysis). The precise mechanism through which the "percolation" of singular features from the conjuncts results in a plural feature in the dominating &P is beyond the scope of this paper.

(85)



If this analysis can be extended to Wolof, this would imply that BNs like those in (82b) and (82c) have number features. Given the interpretation of these sentences, the number feature of the BN is, more precisely, singular.

In addition, recall that coordinating singular full nominals (86) allows them to saturate a collective predicate and, additionally, that the same holds of BNs (87):

(86) Faatu dajale-na a-b fecckat ak a-b woykat.
Faatu gather-NA.3SG INDEF-CM.PL dancer with INDEF-CM.SG singer
'Faatu gathered a dancer and a singer.'

[13] I thank K. Chatain and A. Mortier for the French data and for useful discussion.

(87) Faatu dajale-na **fecckat** ak **woykat**.
Faatu gather-NA.3SG dancer with singer
'Faatu gathered a dancer and a singer.'

The result of the "feature percolation" in (85) is a plural &P that can satisfy the number requirement imposed by the collective predicate. If this analysis of agreement resolution is correct, this implies that both full nominals (86) and BNs (87) are singular.

Moreover, when one of the conjuncts is in the first or second person, the morphology cross-referencing a &P in subject position is in the 1st person plural or 2nd person plural, respectively:

(88) (Web examples; glosses and translations added)

a. Man ak samay xarit nu-ngi-jàng-andoo.
1SG.OBL with POSS.1PL friend 1PL-PROGR-read-together
'My friends and I are studying together.'

b. Man ak sama xeet di-nu-jàpp.
1SG.OBL with relatives POSS.1SG PROG-1PL-make.ablutions
'My relatives and I are performing ablutions.'

c. Ya-ak Aminata Daramaan Taraawore jot-ngeen a bind a-b téere
2SG-with Aminata Daramaan Taraawore make.time-2PL INF write INDEF-CM.SG book
b-u tudd *La Gloire des Imposteurs*.
CM.SG-REL name *La Gloire des Imposteurs*
'You and Aminata Daramaan Taraawore made time to write a book that is called *La Gloire des Imposteurs*.'

Assuming that ϕ-features are represented in a hierarchical structural within the nominal (Harley & Ritter, 2002) and, additionally, that the [PERSON] feature is located lower than the [NUMBER] feature (Harbour, 2016), the fact that a person feature is percolated to &P suggests that so is a number feature. The reason is that, if [PERSON] (e.g. [1] and [2]) is dominated by [NUMBER], then the former entails the latter.

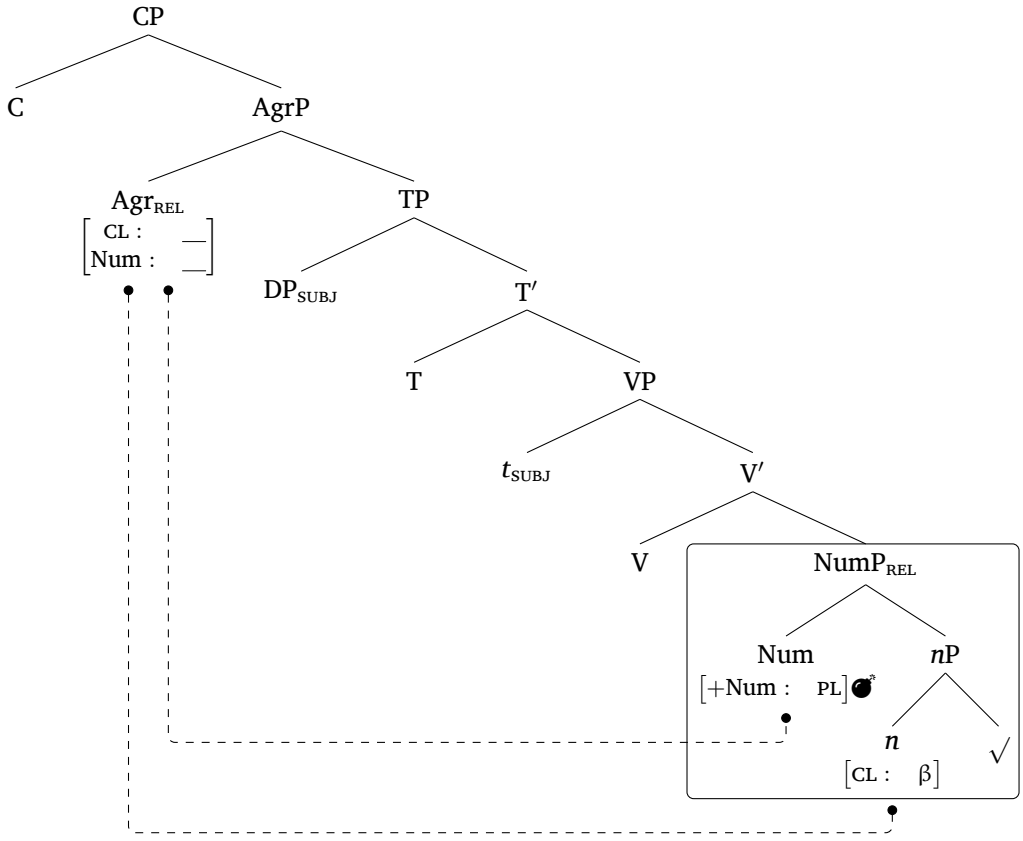
To summarize, I have argued that Wolof BNs project a NumP. This NumP can be either singular or plural, options that are independently available for full nominals in the language. A BN with a plural NumP causes the derivation to crash because the feature [+Num : PL] is not licensed or not defused.[14] The feature [+Num : SG] does not impose such a requirement, allowing the derivation to converge. The byproduct is that BNs in Wolof are exclusively singular when unmodified.

However, if the BN merges with some nominal element that can expone a number feature, a plural interpretation does become available, along with a singular one. We can now restate this generalization as the presence of a number probe [Num : __]in the nominal structure the BN belongs to, the exponent of which is a plural morpheme and which suffices to license the [+Num : PL] in a BN (or in any nominal in Wolof that bears such a feature). This is the case of relative clauses (as opposed to plain modifiers) and of possessive nominals (as opposed to linker possessives). We analyze each nominal construction in turn.

We start with relative clauses. In this structure, even though the BN itself does not have a [+Num : PL] licenser (i.e. a matching probe that Agrees with it), there is an Agr at the CP layer of the relative clause. This analysis is motivated by the presence of a class marker prefixed to the relative complementizer *u*. Recall that I model the class marker morpheme as the exponent of a probe that is looking for both a class and a number feature (cf. (13)). Additionally, to ensure that the head of the relative clause is the goal targeted by Agr, I assume that Agr in relative clauses probe for a nominal that bears some Ā-feature (for concreteness, REL(ATIVE)). With this derivation, the interpretable feature [+Num : PL] of the BN that is the head of a relative clause can be Agreed with and, hence, defused. This is why a BN can have a plural interpretation in this case. At the point of the derivation diagrammed in (89), the BN occupies its base generation position and is targeted for Agree by Agr. Afterwards, the BN raises out of the relative clause.

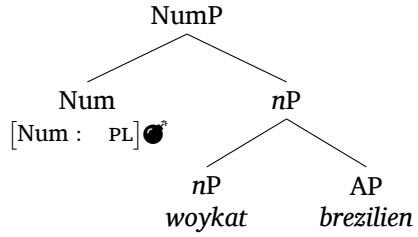
(89) RELATIVE CLAUSE: [+PL] DEFUSED BY AGREE WITH AGR, ALLOWING DERIVATION TO CONVERGE

[14] It is usually the case that [+Num : PL] is licensed by a nominal-internal probe. The reason has to do with Minimality or Earliness: the structure of the nominal is presumably built earlier than the rest of the structure where it is merged into (e.g. an argument position).



In plain modifiers, on the other hand, there is no probe that Agrees with the number feature in NumP. As a consequence, the interpretable feature [+Num : PL] cannot be defused, causing the derivation to crash. This is diagrammed in (90), which represents the BN object ***woykat*** *brezilien* 'Brazilian singer' in (66).

(90) PLAIN MODIFIER: [+PL] NOT DEFUSED BY AGREE, CAUSING DERIVATION TO CRASH



In brief, in this section, I provided answers to the questions this paper set out to address (repeated from (8)):

(91) a. How can we account for the exclusively singular interpretation (and not number-neutral) interpretation of unmodified BNs in Wolof?

b. Why does a BN without any plural morphology behave as if it were singular, while a BN merged with a modifier that contains plural agreement morphology behaves as if it were plural?

BNs in Wolof project a NumP, which can be either singular or plural, just like in other nominals in the language. However, a plural interpretation is precluded because unmodified BNs do not contain any number probe that licenses [+Num : PL], which I proposed to be a derivational time bomb, in Kalin's (2017; 2018; 2019) sense. If the nominal structure contains a number probe, licensing goes through, so that the BN can now have not only a singular interpretation, but also a plural one. Number probes can be found in relative

clauses, which agree in class and number with a BN (or full nominal) head. In contrast, plain modifiers do not contain any number probe, so that they retain the exclusively singular interpretation exhibited by unmodified BNs.

A prediction that emerges from this analysis is that a sentence containing a BN may be completely ungrammatical, lacking even a singular interpretation. This would be the case for nouns that are themselves plural, above and beyond the specification of NumP. A case in point would be pluralia tantum nouns.[15] Babou & Loporcaro (2016) observe that *jooy* 'weeping' is an instance of such a noun in Wolof. *Jooy* is also a pluralia tantum noun for the speakers consulted for the present study. (92) shows that *jooy* can only combine with a plural class marker (*y*), both in the subject and in object position. (92a) and (92b) (originally from Babou & Loporcaro 2016 and confirmed by the aforementioned consultants) further demonstrate the plural requirement imposed by *jooy* with verbal morphology that cross-references the subject.

(92) a. Jooy y-i metti-na-ñu lool.
weeping CM.PL-DEF hard-NA-3PL much
'The weeping is so hard.'

b. * Jooy b-i metti-na lool.
weeping CM.SG-DEF hard-NA.3SG much
Intended: 'The weeping is so hard.'

c. Gis-na-a jooy y-i.
see-NA-1SG weeping CM.PL-DEF
'I saw the weepings.'

d. * Gis-na-a jooy b-i.
see-NA-1SG weeping CM.SG-DEF
Intended: 'I saw the weeping.'

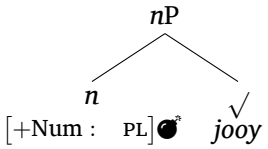
As also remarked by Babou & Loporcaro, *teggin* is another pluralia tantum noun:

(93) a. * Faatu am-na a-b teggin.
Faatu have-NA.3SG INDEF-CM.SG respect
'Faatu has some respect.'

b. Faatu am-na a-y teggin.
Faatu have-NA.3SG INDEF-CM.PL respect
'Faatu has some respect.'

Inspired by Harbour (2011), I encode the plurality requirement of pluralia tantum nouns in the categorizer *n*:

(94) PLURALIA TANTUM BN: [+PL] NOT DEFUSED BY AGREE, CAUSING DERIVATION TO CRASH



Under the assumption that whether or not a noun is a pluralia tantum noun is also an idiosyncratic property, (94) is aligned with this assumption (recall that I assume that root-specific properties are encoded at the categorizer level).

If (94) is the correct representation for *jooy* and *teggin*, the prediction, as mentioned, is that a BN pluralia tantum is going to be ungrammatical, since there is no nominal-internal probe to Agree with [+Num : PL]. The BN cannot "fall back" to a singular interpretation due to the pluralility encoded in at the *n* level. As shown in (95), the prediction is borne out by facts, as *jooy* and *teggin* cannot occur in a bare form:

[15] A few people brought up the relevance of pluralia tantum nouns to me, including D. Pesetsky, O. Preminger, and S. Zompì.

(95) a. * Gis-na-a **jooy**.
see-NA-1SG weeping
Literally: 'I saw weeping.'

b. ?? Faatu am-na **teggin**.
Faatu have-NA.3SG respect
Literally: 'Faatu has respect.'

The ill-formedness of the sentences in (95) is consistent with the analysis put forward here: there is no probe that can license the [+Num : PL] feature that is assumed to be inherent in pluralia tantum nouns.[16]

6 Summary and open issues

In this paper, we investigated BNs in Wolof, which, when unmodified, are exclusively singular, unlike their number-neutral counterparts in many other languages. More precisely, I provided an analysis to the generalization repeated below:

(96) BNs in Wolof are singular, unless there is some nominal-internal plural morphology.

According to the analysis put forward here, BNs in Wolof are singular when unmodified because this is the only option that allows a derivation to converge: BNs can be either singular or plural, but a plural BN causes a derivation to crash because the interpretable feature [+Num : PL] cannot be licensed or defused. The nominal internal morphology that can appear in the nominal construction a BN is embedded within is the realization of a number probe [Num : __] that Agrees with [+Num : PL], thereby defusing it. If this analysis is on the right track, it provides support for the proposal that interpretable features may require licensing as well (Béjar & Rezac 2003, 2009; Kalin 2017, 2018, 2019; though see Coon & Keine 2021 for a diverging view).

The analysis also provides an account as to why BNs in Wolof are singular (when unmodified) and not number-neutral, as is the crosslinguistic tendency. The number interpretation of BNs in Wolof in the analysis advocated for here is the result of a conspiracy between the requirement to license [+Num : PL] and the restrictions imposed by the resources available in the nominal spine in Wolof. The latter regulates the availability of number probes that can defuse the aforementioned interpretable feature. As such, a potential reason why singular BNs are less common than number-neutral ones across BN languages is that the latter may be the result of one factor (e.g. the absence of a projection like NumP, see fn. 12), while the former may be the consequence of a conjunction of factors (e.g. the need to license a [+Num : PL] and the language-specific availability of number probes that can Agree with such a feature).

Abbreviations

I follow the Leipzig glossing rules, with the following additions: CM = class marker, ITER = iterative, LNK = linker, NA = sentential particle for neutral sentences (*na*), and PREP = preposition.

A Number Interpretation in two Types of Possessive Nominals

In Wolof, there are two types of possessive nominals. In (97a), the possessive determiner *sama* 'my' is used. It precedes the possessum *xaj* 'dog'. A definite determiner *bi* 'the' can be part of the same nominal. In (97b), the linker suffix *-u* is used. It is affixed to the possessum *muus* 'cat', which precedes the possesor *Mareem*.

[16] A *Glossa* reviewer remarks that (95b) is grammatical for them. From the extensive list of Wolof pluralia tantum nouns that Babou & Loporcaro (2016) provide, only a handful were so recognized by one of speakers consulted (with the other of the two consultants, I only cross-checked nouns that were already classified as pluralia tantum nouns by the first one). As such, a degree of variation in which nouns are pluralia tantum nouns is expected. The fact that the reviewer finds (95b) well-formed could indicate that this is not a pluralian tantum noun in their grammar. The prediction made by the analysis proposed here is only falsified if a noun is found that passes pluralia tantum diagnostics (cf. the obligatory plural agreement and plural class marker in (92)), but it *can* occur as an unmodified BN.

(97) a. POSSESSIVE DETERMINER

Gis-na-a sama xaj b-i ci baayal b-i.
see-NA-1SG POSS.1SG dog CM.SG-DEF PREP park CM.SG-DEF
'I saw my dog in the garden.'

b. LINKER SUFFIX

Toogakat b-i gis-na a-y muus-u Mareem (…).
cook CM.SG-DEF see-NA.3SG INDEF-CM.PL cat-LNK Mareem
'The cook saw some cats of Mareem's.'

As we will see below, these constructions differ in whether or not they contain some number morphology. When a BN is used in these possessive constructions, its behavior resembles that of plural relative clauses and plain modifiers, depending on whether or not the possessive construction in question contains number morphology.

Starting with possessive determiners, the possessum can either be a full nominal (97a) or a BN (98). Furthermore, the morphology affixed to the possessive determiner is sensitive to the number properties of the possessum that linearly follows it. In (97a), for instance, the possessive determiner *sama* 'POSS.1SG' is singular, since the possessum *xaj b-i* 'dog CM.SG-DEF' is singular. In (98a) and (98b), the form of the possessive determiner remains the same (*sama* 'my') and so does the possessum *nit* 'person'. However, a plural interpretation for the possessum arises in (98b), where there is the addition of the plural suffix *-y* (allomorph: *-i* when the possessive determiner ends in a consonant).

(98) a. sama **nit**
POSS.1SG person
'my friend' (Literally: 'my person')

b. sama-y **nit**
POSS.1SG-PL person
'my friends' (Literally: 'my people')

The possessive determiners in Wolof are listed below:[17] [18]

(99)

Poss'or	Singular poss'um	Translation	Plural poss'um	Translation
1SG	sama xarit	'my friend'	sama-y xarit	'my friends'
2SG	sa xarit	'your friend'	sa-y xarit	'your friends'
3SG	xarit=am	'his/her friend'	xarit=am	'his/her friends'
1PL	suñu xarit	'our friend'	suñu-y xarit	'our friends'
2PL	seen xarit	'your friend'	seen-i xarit	'your friends'
3PL	seen xarit	'their friend'	seen-i xarit	'their friends'

Additional data illustrating the behavior of the possessive determiner are below. (100a), (100b), and (100c) demonstrate that the number of the definite determiner (*b-i*) and that of the possessive determiner must match. (100d) shows that the plural class marker for *nit* 'person' can be *y* or *ñ*. (100e) shows that the number suffix in the possessive determiner remains *y* nonetheless, suggesting that the class marker *y* and the possessive determiner *y* are different morphemes, albeit homophonous ones.

(100) a. Gis-na-a sama xaj b-i ci baayal b-i.
see-NA-1SG POSS.1SG dog CM.SG-DEF PREP park CM.SG-DEF
'I saw my dog in the garden.'

[17] In principle, it could be the case that *-y* is not an instance of agreement of a plural possessum, but rather the last segment of an allomorph of the possessive determiner, the choice of which is conditioned by adjacency with a plural possessum. The fact that *y* occurs at the end of all possessive determiners makes this alternative analysis methodologically undesirable, since it would render the occurrence of *y* across all plural forms accidental. For more on the distinction between allomorphy and agreement, see Weisser (2019).

[18] The 3SG possessive determiner is suffixal and does not seem to display agreement with the possessum.

b. * Gis-na-a sama-y xaj b-i ci baayal b-i.
see-NA-1SG POSS.1SG-PL dog CM.SG-DEF PREP park CM.SG-DEF
Intended: 'I saw the.SG dog of mine.PL in the garden.'

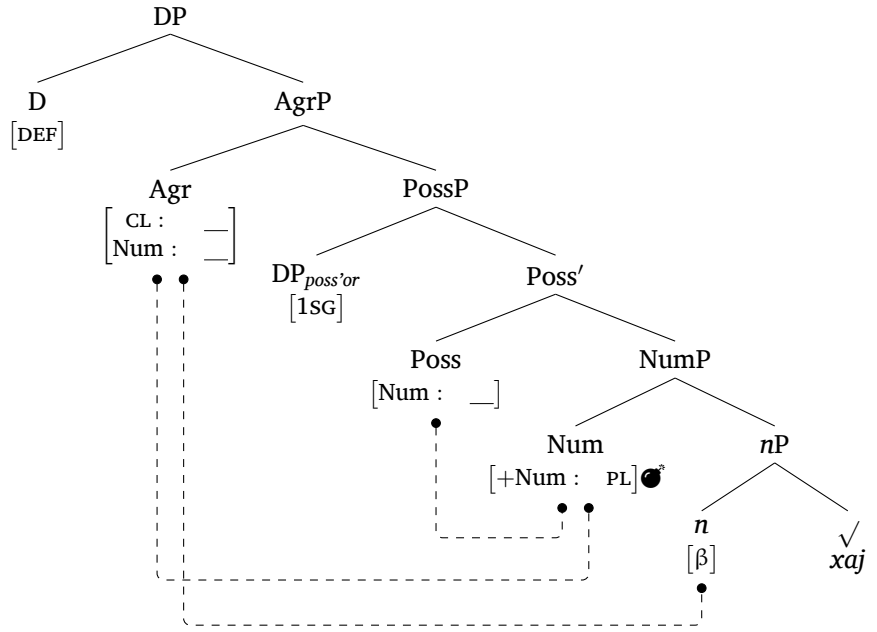
c. Gis-na-a sama-y xaj y-i ci baayal b-i.
see-NA-1SG POSS.1SG-PL dog CM.PL-DEF PREP park CM.SG-DEF
'I saw my dogs in the garden.'

d. Gis-na-a { nit y-i / nit ñ-i } ci Boston.
see-NA-1SG person CM.PL-DEF / person CM.PL-DEF PREP Boston
'I saw the people in Boston.'

e. Gis-na-a sama-y nit { y-i / ñ-i } ci Boston démb.
see-NA-1SG POSS.1SG-PL person CM.PL-DEF / CM.PL-DEF PREP Boston yesterday
'I met the people in Boston yesterday.'

I assume that this type of possessive nominal has the structure in (101), which represents *sama-y xaj y-i* 'POSS.1SG-PL dog CM.PL-DEF' (the head-finality of the definite determiner *y-i* is abstracted away). In this possessive nominal, the head of PossP is proposed to probe for a number feature. This feature is valued by the possessum, which is in its c-command domain. If the possessum is singular, the exponent of Poss is phonologically null. If the possessum is plural, the head of PossP is exponed as *-y*.

(101)



I assume that the determiner that heads the entire possessive construction takes scope over it. Linear order evidence for this assumption is provided by the fact that the indefinite determiner *a-b* 'INDEF-CM.SG' must be placed to the left of the possessive *sama* 'POSS.1SG'; it cannot immediately precede the possessum (*muus* 'cat').[19]

(102) (S. Ndao, p.c.)

{ a-b } sama { *a-b } muus
INDEF-CM.SG POSS.1SG *INDEF-CM.SG cat
'a cat of mine'

Additionally, I assume in (101) that the possessum projects its AgrP within PossP. Agr can then probe downwards for number and class (and eventually be exponed with a class marker). Agr then affixes to the

[19]Definite determiners would not be helpful in this regards, as they are always post-nominal.

determiner.[20] Agr is placed below PossP because otherwise, the class marker would reflect the features of the possessor, which is contrary to fact.

With this background in mind, let us consider what happens when the possessum is a BN. (103) shows that, in this scenario, the possessive construction has an indefinite interpretation, hence it can be used in an existential construction.

(103) Am-na sama **butéel** ci waañ w-i.
have-NA.3SG POSS.1SG bottle PREP kitchen CM.SG-DEF
'There is a bottle of mine in the kitchen.'

Furthermore, BNs inside this type of possessive nominal have a singular interpretation, unless the plural possessum-sensitive *-y* occurs. In the data to follow, the (a) examples illustrate the behavior of possessive constructions where the determiner is suffixed with the possessum-sensitive *-y* morpheme, while the (b) examples illustrate the behavior of possessives without *-y*.

(104) COLLECTIVE PREDICATE

Dajale-na-a { *sama / sama-y } **muus** ci tool b-i.
gather-NA-1SG *POSS.1SG / POSS.1SG-PL cat PREP garden CM.SG-DEF
'I gathered some cats of mine in the garden.'

(105) DISCOURSE ANAPHORA

a. Wën-na-a sama-y **xaj** Mareem. Bëgg-na-a { *ko / leen }.
show-NA-1SG POSS.1SG-PL dog Mareem like-NA-1SG *OBJ.SG / OBJ.PL
'I showed Mareem some dogs of mine. I like *him/them.'

b. Wën-na-a sama **xaj** Mareem. Bëgg-na-a { ko / *leen }.
show-NA-1SG POSS.1SG dog Mareem like-NA-1SG OBJ.SG / *OBJ.PL
'I showed Mareem a dog of mine. She likes him/*them.'

(106) INTERROGATIVE PRONOUN IN SLUICING

a. Mareem jàng-na sama-y **téere**, waaye xa-w-ma { *b-an la /
Mareem read-NA.3SG POSS.1SG-PL book but know-NEG-1SG *CM.SG-which COP.3SG /
y-an la }.
CM.PL-which COP.3SG
'Mareem read some books of mine, but I don't know which one/which ones.'

b. Mareem jàng-na sama **téere**, waaye xa-w-ma { b-an la /
Mareem read-NA.3SG POSS.1SG book but know-NEG-1SG CM.SG-which COP.3SG /
*y-an la }.
*CM.PL-which COP.3SG
'Mareem read a book of mine, but I don't know which one/which ones.'

(107) BINDING OF RECIPROCAL

a. Desin-ante-loo-na-a { *sama / sama-y } **doom** seen bopp.
draw-RECP-CAUS-NA-1SG *POSS.1SG / POSS.1SG-PL child POSS.3PL head
'I made some children of mine draw each other.'

b. Wonale-na-a sama-y **ndoongo.daara** ñu xam-ante.
introduce-NA-1SG POSS.1SG-PL student 3PL know-RECP
'I introduced some students of mine to each other.'

c. Wonale-na-a sama **ndoongo.daara** ?*(ak **ndoongo.daara** Kadeer) ñu
introduce-NA-1SG POSS.1SG student ?*(with student Kadeer) 3PL
xam-ante.
know-RECP
'I introduced a student of mine and a student of Kadeer's to each other.'

[20] It is possible that the latter operation is post-syntactic (Harizanov & Gribanova, 2019), as it skips over intermediate heads.

(108) BINDING OF PLURAL REFLEXIVE

Jàngalekat y-i sang-aloo-na-ñu { *seen / seen-i } **ndoongo.daara** seen
teacher CM.PL-DEF wash-CAUS-NA-3PL *POSS.3SG / POSS.3PL } student POSS.3PL
bopp.
head
'The teachers made some students of theirs wash themselves.'

(109) 'HOW MANY' FOLLOW-UP

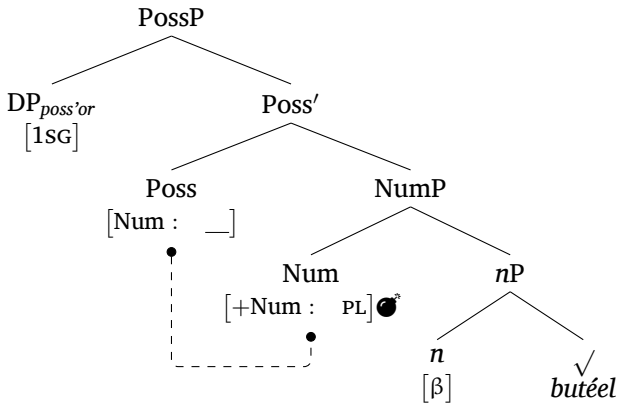
Maymuna ak Mareem jënd-na-ñu { *sama / sama-y } **téere**, waaye xa-w-ma
Maymuna with Mareem buy-NA-3PL *POSS.1SG / POSS.1SG-PL book but know-NEG-1SG
ñaata lën jënd.
how.many COP.3PL buy
'Maymuna and Mareem bought some books of mine, but I do not know how many.'

(110) 'ALL OF THEM' FOLLOW-UP

Sama muus toj-na { #sama / sama-y } **ndap**. Bëgg-na-a y-ëpp.
POSS.1SG cat break-NA.3SG #POSS.1SG / POSS.1SG-PL plate like-NA-1SG CM.PL-every
'My cat broke some plates of mine. I liked all of them.'

To sum up, BNs can occur in a construction that features a possessive determiner which is sensitive to the number of the possessum they combine with. If a plural agreement suffix *-y* occurs, a BN possessum receives a plural interpretation. In the absence of that morphology, the BN retains its exclusively singular interpretation. The defusal of the [+Num : PL] feature in a BN possessum is diagrammed below:

(111) BN POSSESSUM: [+PL] DEFUSED BY AGREE WITH POSS, ALLOWING THE DERIVATION TO CONVERGE



We now turn to the linker possessive nominal (Kihm, 2000), illustrated below.

(112) Gis-na-a **doom**-u Roxaya.
see-NA-1SG child-LNK Roxaya
'I saw a child of Roxaya's.'

Again, I take the possessum in this construction to be a BN because the latter alternates with a full nominal, as we can see in the pairs in (113). In (113e), it is particularly clear that what the definite determiner *b-i* combines with is the noun to which the linker is suffixed (i.e. *muus* 'cat'), since the preceding proper name (*Roxaya*) cannot merge with it, as evidenced by (113d).

(113) a. A-b muus-u Samba lekk-na céeb.
INDEF-CM.SG cat-LNK Samba eat-NA.3SG rice
'A cat of Samba's ate rice.'

b. A-y muus-u Samba lekk-na-ñu céeb.
INDEF-CM.PL cat-LNK Samba eat NA-3PL rice
'Some cats of Samba's ate rice.'

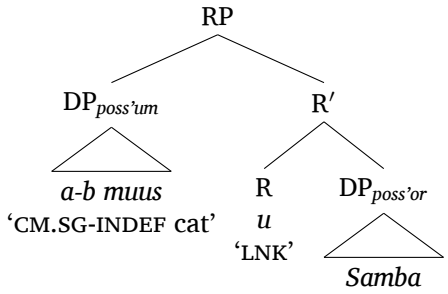
c. Gis-na-a a-y doom-u Roxaya.
see-NA-1SG INDEF-CM.PL child-LNK Roxaya
'I saw some children of Roxaya's.'

d. Bëgg-na-ñu Roxaya (*b-i).
like-NA-1PL Roxaya (*CM.SG-DEF)
'We like Roxaya.'

e. Bëgg-na-ñu muus-u Roxaya b-i.
like-NA-1PL cat-LNK Roxaya CM.SG-DEF
'We like Roxaya's cat.

I assume the structure in (111) for linker possessives, illustrated with *a-b muus-u Samba* 'INDEF-CM.SG cat-LNK Samba' (*a cat of Samba's*). For concreteness, I assume Den Dikken's (2006) Relator Phrase, whose head here is realized by the linker morpheme *-u*. Contrary to the possessive in (101) examined above, in the linker (111), there is no probe for number.

(114)



When the possessum to which it is attached is a BN, it also receives an indefinite interpretation.

(115) Am-na **muus**-u Kadeer ci bayaal b-i.
have-NA.3SG cat-LNK Kadeer PREP park CM.SG-DEF
'There is a cat of Kadeer's in the park.'

As just mentioned, in the linker possessive construction, there is no morpheme sensitive to number. In that case, only a singular reading is available. This is demonstrated by the plural-sensitive diagnostics employed so far.

(116) COLLECTIVE PREDICATE

a. Roxaya boole-na a-y xaj-u Kadeer.
Roxaya put.together-NA.3SG INDEF-CM.PL dog-LNK Kadeer
'Roxaya gathered some of Kadeer's dogs.'

b. Roxaya boole-na **xaj**-u Kadeer *(ak xaj-u Kumba).
Roxaya put.together-NA.3SG dog-LNK Kadeer *(with dog-LNK Kumba)
'Roxaya put together Kadeer's dog *(with Kumba's dog).'

(117) DISCOURSE ANAPHORA

Gis-na-a **muus**-u Kadeer ci tool b-i. Bëgg-na-a { ko / *leen }.
see-NA-1SG cat-LNK Kadeer PREP garden CM.SG-DEF like-NA-1SG OBJ.3SG / *OBJ.3PL
'I saw a cat of Kadeer's in the garden. I like him/*them.'

(118) INTERROGATIVE PRONOUN IN SLUICING

a. Toogakat b-i gis-na a-y muus-u Mareem, waaye xa-w-ma { *b-an la / y-an la }.
cook CM.SG-DEF see-NA.3SG INDEF.CM.PL cat-LNK Mareem but know-NEG-1SG *CM.SG-which COP.3SG / CM.PL-which COP.3SG
'The cook saw some cats of Mareem's, but I don't know which.'

b. Toogakat b-i gis-na **muus**-u Mareem, waaye xa-w-ma { b-an la / *y-an la }.
cook CM.SG-DEF see-NA.3SG cat-LNK Mareem but know-NEG-1SG CM.SG-which COP.3SG / *CM.PL-which COP.3SG
'The cook saw a cat of Mareem's, but I don't know which.'

(119) BINDING OF RECIPROCAL

* Roxaya wonale-na **jàngalekat**-u Mareem ñu xam-ante.
Roxaya introduce-NA.3SG teacher-LNK Mareem 3PL know-RECP
Literally: 'Roxaya introduced a teacher of Mareem's to each other.'

(120) BINDING OF PLURAL REFLEXIVE

a. Isaa sang-u-loo-na a-y xaj-u Kadeer seen bopp.
Isaa wash-CAUS-NA.3SG INDEF-CM.SG dog-LNK Kadeer POSS.3PL head
'Isaa made some dogs of Kadeer's wash themselves.'

b. Isaa sang-u-loo-na **xaj**-u Kadeer { bopp=am / *seen bopp }.
Isaa wash-CAUS-NA.3SG dog-LNK Kadeer head=POSS.3SG / *POSS.3PL head
'Isaa made a dog of Kadeer's wash himself/themselves.'

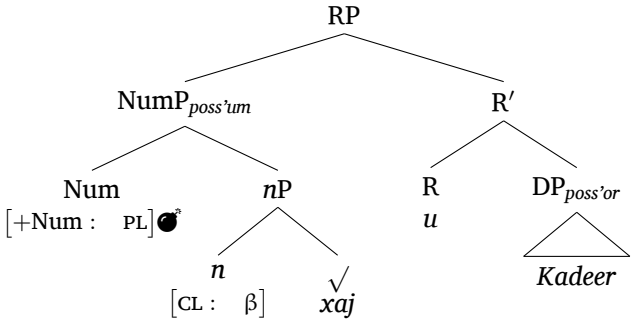
(121) 'ALL OF THEM' FOLLOW-UP

Sama muus toj-na **ndap**-u Kadeer. # Bëgg-na-a y-ëpp.
POSS.1SG cat break-NA.3SG plate-LNK Kadeer # like-NA-1SG CM.PL-every
Literally: 'My cat broke Kadeer's plate. I liked all of them.'

These data indicate that, unlike the possessive determiner, which has number morphology, the linker possessive cannot license a plural interpretation for a BN. However, below I will discuss a difference found among the speakers consulted regarding these properties. As we will see there, the behavior of that variant of the linker morpheme behaves as predicted by the analysis to be proposed.

The numberless linker possessive construction in (122) is outlined in in (116b), which represents ***xaj**-u Kadeer* 'dog-LNK Kadeer'.

(122) BN AS POSSESSUM OF LINKER POSSESSIVE: [+PL] NOT DEFUSED, CAUSING DERIVATION TO CRASH



There is no probe to Agree with the [+Num : PL] number of the BN, causing the derivation to crash due to the failure of defusing a derivational time-bomb. As a consequence, only a singular interpretation is available (because this is the only convergent derivation).

B A Note on Variation in the Linker

One of the speakers consulted allowed for two different allomorphs of the linker suffix, namely, *-u* and *-i*, such that the latter is a plural version of the former. For convenience, I call the dialect where the linker occurs in the invariable form 'Dialect A' and the dialect where both forms *-u* and *-i* can be found 'Dialect B'.[21]. While I do not have the data for all plurality diagnostics considered in this paper, the difference between these allomorphs can be seen in the discourse anaphors paradigm in (123), where the number of the pronoun tracks the number of the possessum the linker is suffixed to. More precisely, in (123a), the linker attached to the possessum *kër* 'house' is the singular *-u*. The determiner that heads this nominal is also in the singular (*g-i*). Correspondingly, the pronoun that refers back to this possessive nominal is the singular *ko*. In contrast, in (123b), the plural allomorph *-i* is used. Now, the determiner of the overall nominal bears the plural class marker *y* and the pronoun is also plural (*leen*).

(123) WOLOF DIALECT B: FORM OF THE LINKER AND DISCOURSE ANAPHORA

a. Liggéeykat b-i tabax-na kër-u Mareem g-i. Bëgg-na-a { ko
worker CM.SG-DEF build-NA.3SG house-LNK.SG Mareem CM.SG-DEF like-NA-1SG OBJ.3SG
/ *leen }.
/ *OBJ.3PL
'The worker built Mareem's house. I like it/them.'

b. Liggéeykat b-i tabax-na kër-i Mareem y-i. Bëgg-na-a {
worker CM.SG-DEF build-NA.3SG house-LNK.PL Mareem CM.PL-DEF like-NA-1SG
*ko / leen }.
*OBJ.3SG / OBJ.3PL
'The worker built Mareem's houses. I like it/them.'

Converging evidence that the *-u/-i* alternation in Dialect B is conditioned by the number of the possessum is furnished by the possibility of using the plural *-i* linker in a nominal that is the complement to a collective predicate (*boole* 'gather').[22]

(124) WOLOF DIALECT B: FORM OF THE LINKER AND COLLECTIVE PREDICATES

Liggéeykat b-i boole-na taabal-i Mareem y-i.
worker CM.SG-DEF put.together-NA.3SG table-LNK.PL Mareem CM.PL-DEF
'The worker gathered Mareem's tables.'

In the analysis put forth in this paper, the interpretable feature [+Num : PL] must enter an Agree relation in order to be defused. If *-i* in Dialect B is the realization of an Agree operation that targets the number of the possessum, we would predict that a BN to which *-i* is suffixed to behave as a plural nominal. This is indeed the case, as demonstrated by the interrogative pronouns in (125). In (125a), to the possessum BN *xaj* 'dog' is suffixed the singular linker *-u* and the interrogative pronoun must be singular. On the other hand, if the linker suffixed to *xaj* is the plural *-i*, the pronoun must be plural too (cf. (118b) above, a data point from the Wolof dialect where only the invariable *-u* is present and the interrogative pronoun used must be singular).

(125) WOLOF DIALECT B: FORM OF THE LINKER AND INTERROGATIVE PRONOUNS

a. Roxaya bëgg-na **xaj**-u Kadeer, waaye xa-w-ma { b-an la /
Roxaya like-NA.3SG dog-LNK.SG Kadeer but know-NEG-1SG CM.SG-which COP.3SG /
*y-an la. }
*CM.PL-which COP.3SG
'Roxaya likes a dog of Kadeer's, but I don't know which one/which ones.'

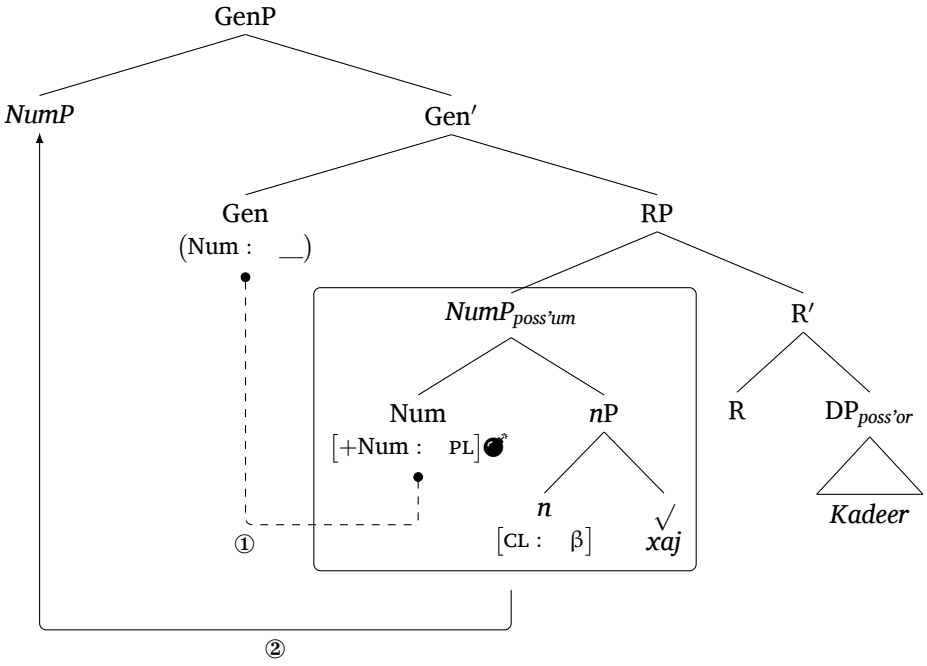
[21] No prominence or preference is implied in choice of these terms. The speaker of Dialect B consulted was a male on their twenties from Dakar

[22] Regrettably, I did not elicit a version of (124) where the possessum is singular (in that case, the class marker in the definite determiner would be *b*). This example is expected to be ungrammatical.

b. Roxaya bëgg-na **xaj**-i Kadeer, waaye xa-w-ma { *b-an la /
Roxaya like-NA.3SG dog-LNK.PL Kadeer but know-NEG-1SG *CM.SG-which COP.3SG /
y-an la }.
CM.PL-which COP.3SG
'Roxaya likes some dogs of Kadeer's, but I don't know which ones.'

However, the structure and derivation I assumed above for linker possessive constructions in (122) is not compatible with this state-of-affairs, given that the possessum is outside of the c-command domain of the linker (here, the head of the Relator Phrase). In order to correct this analysis-internal issue, I propose the amendment in (126), representing *xaj-i Kadeer* 'some dogs of Kadeer's'.

(126) LINKER POSSESSIVE: AMENDED STRUCTURE



In (126), the Relator Phrase (RP) is now embedded in another layer of functional structure, which I dub 'GenP' for convenience. It is the head of the latter that is now exponed as *-u* in Dialect A or as *-u/-i* in Dialect B. This head may also have a number feature to be valued, depending on the dialect (with the optionality being denoted with parentheses). In Dialect A, the linker is invariable and can only combine with BNs with a singular interpretation (recall the data in Appendix A). In keeping with the analysis advanced in this paper, I encode these properties as the absence of a number probe [Num : __] in Gen. Correspondingly, in Dialect B, where the linker can be realized as *-u* or *-i* depending the number interpretation of the possessum it is affixed to, as described above. In both Dialects, Gen triggers the movement of the possessum base-generated at Spec-RP to its own specifier position.[23]

For completeness, I assume the following Vocabulary Items for the linker in each dialect considered here:

(127) LINKER VOCABULARY ITEM: DIALECT A

[GEN] ⟷ */-u/*

(128) LINKER VOCABULARY ITEM: DIALECT B

a. [GEN] ⟷ */-u/*

b. [GEN, PL] ⟷ */-i/*

[23] I abstract away from anti-locality (cf. Erlewine 2016, 2020) issues here.

In this appendix, we briefly considered a dialectal variation observed in the morphology of the linker. This variation is correlated with the number interpretation the possessum the linker is suffixed to. If the dialect where this suffix is sensitive to number, a BN possessum can receive a plural interpretation. In the present analysis, this possibility can be modeled in terms of an Agree operation that allows an interpretable plural feature in the BN to be licensed.

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