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ISSUES IN NOUN CLASSIFICATION AND NOUN CLASS ASSIGNMENT IN GÚJJOLAY EEGIMAA[1] (BANJAL) AND OTHER JÓOLA LANGUAGES

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In his book on gender Corbett observes that establishing the number of genders or noun classes in a given language 'can be the subject of interminable dispute' (1991: 145). Jóola languages like Gújjolaay Eegimaa (bqj, Atlantic, Niger-Congo) have noun class systems exhibiting irregular singular-plural matchings and complex agreement correspondences between controller nouns and their targets, resulting in endless disagreements among authors in Jóola linguistics. This paper addresses the issues surrounding noun class assignment in Gújjolaay Eegimaa (Eegimaa henceforth) and other Jóola languages. It provides a critical evaluation of the noun class assignment criteria used for those languages and proposes cross-linguistic and language-specific diagnostic criteria to account for the noun class system of Eegimaa and other related languages that exhibit a similar system.[2]

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[1]Gújjolaay Eegimaa, also known by outsiders and some authors as Banjal, is in Sapir's (1971: 78) terms, a *BAK* language of the Atlantic branch of the Niger Congo Phylum. *BAK* languages are languages which have a similar 'dependent plural personal marker' of the form *bVk*- (b + vowel +k-). The Atlantic family of Niger-Congo languages has for a long time been divided into three branches: the Northern branch (Fulfulde, Wolof, Eegimaa etc.), the Southern branch (Kisi, Temne, etc.) and Bijogo as an isolate (Sapir, 1971, Williamson and Blench, 2000, Wilson, 1989). However, Blench (2006: 116) suggests (see also Segerer, 2002), that Bijogo shows much more lexical similarities with Benue-Congo than Atlantic and that this 'geographically' based classification of Bijogo in the Atlantic family could be subject to revisions.

Gújjolaay Eegimaa is a Jóola language of the Northern branch spoken in a former small kingdom of ten villages (Mof-Ávvi), located 18 kilometers South-West of the region of Ziguinchor in Southern Senegal. In this paper, language examples in Gújjolaay Eegimaa are transcribed using an updated version of the orthographical representation I designed for my PhD research and distributed to members of the speech community. An acute accent is placed on the first vowel of a word to indicate that its vowels are [+ATR].

[2] I would like to express my gratitude to the University of London Central Research Fund who funded my first four months of fieldwork on the Eegimaa noun class system (Ref: AR/ATF/A), and the Endangered Languages Documentation Programme (ELDP Grants nº FTG0021 & IPF-0141) who supported fifteen months' research for my Ph.D. and the

1. Introduction

Similarly to other Jóola languages, Eegimaa's[3] noun class system features noun class prefixes indicating noun class (and also verb[4] class) membership and number. In Eegimaa every noun is assigned to a class and participates in an agreement system triggered by controller nouns. In Jóola languages, agreement may be realized either alliteratively or non-alliteratively in a sentence, as will be shown below for Eegimaa. In these languages, noun class prefixes have several forms, among which the most common are individual vowels e.g., *e-*, or the forms *Cu-*/*Ci-*[5], *Ca-*, where "C" represents a consonant.

Recent accounts of noun class systems within Jóola languages have been characterized by controversy, especially since the introduction of an element referred to as a *'postpréfixe'* ("postprefix" henceforth) by Sambou (1979). This element is postulated to account for the origin of the noun class prefixes of the form *Ca-* by stating that they have an underlying *Cu-a-* form and as a result, are not fundamentally different from the forms *Cu-*/*Ci-*. This approach reduces the number of classes in Jóola languages contrary to Sapir's (1965) analysis where *Ca-* marks classes different from *Cu-*/*Ci-*. Since Sambou (1979), the postprefix has been adopted and assumed to be common to all Jóola languages (including Eegimaa) and consequently used in addition to the criteria for the differentiation of noun class prefixes and the identification of noun classes in different

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[3] The term Jóola (also spelt Diola, Dyola, Joola, and Jola) is often used to refer to a single language. Linguistic evidence (Barry, 1987, Sapir, 1971), however, shows that 'Jóola' is a cover term for a group of languages and dialects and the peoples who speak them. Those peoples are found in The Gambia, the *Basse-Casamance* area in southern Senegal, and in northern Guinea Bissau where they are referred to as Floup/Felupe.

[4] The issue of the combination of noun class markers with verb stems is not relevant to the discussion proposed here.

[5] The slash is used here to indicate allomorphic variations based on height vowel harmony between noun class prefixes of the form *Cu-* and *Ci-* (see 3.1.1 below for further discussion of this alternation.)

languages. In most studies that have adopted Sambou's proposal, the synchronic relevance of the postprefix is never questioned.

The assignment of nouns into classes in Jóola languages is still a matter of controversy. Virtually no previous studies of Jóola have proposed identical criteria or the same inventory of noun classes. As is the case for other Atlantic languages, there is no established numbering convention for the noun classes in Eegimaa and other Jóola languages, in contrast to Bantu languages where a tradition of numbering classes is established.

This paper addresses the issue of noun class assignment in Jóola languages with particular focus on Eegimaa. Eegimaa has one of the most complex noun class systems of the Jóola languages that have been described and thus provides interesting data for a case study. The following section provides a discussion of the basic terminology used in the description of noun class systems in general (gender, noun class, concord, agreement, etc.) and in the study of the Eegimaa noun class system proposed here. It is followed by a discussion of similarities and differences between noun class markers and agreement markers in Eegimaa in Section 3.

Here, I discuss the relevance and limitations of the criteria used for the noun class inventories proposed in previous studies of Jóola languages, including a critical examination of the notion of a postprefix. I argue that there is no synchronic evidence for its existence and that this element should not play a role in the analysis of synchronic noun class assignment in Eegimaa or other similar systems. Instead, I propose cross-linguistic and language-specific morphosyntactic criteria in section 3.2, whose application shows the existence of 15 noun classes in Eegimaa. A summary of the proposed classes is provided in Table 2.

2. Terminological issues

2.1 Gender. The term "gender" is used in two different ways in the study of noun class systems. This section reviews those two usages and justifies their use in this article. First, I discuss the different usages of the terms "gender" and "noun class" (2.1.1), and then "gender" and "class pair" (2.1.2 below).

2.1.1 Gender and noun class systems. In descriptive linguistics, the terms gender and noun class are often used interchangeably as cover terms for systems of nominal classification that are based on the presence of agreement (Corbett, 1991). These two terms also have more specific usages depending on the tradition of linguistic research. Gender is generally used more specifically to refer to systems found in Indo-European languages e.g., French, and Afro-Asiatic e.g., Hausa (Jaggar, 2001), often referred to as "sex-based" gender

languages (Greenberg, 1978, Heine, 1982), which feature a distinction between masculine, feminine and sometimes neuter. Languages that are traditionally referred to as noun class languages typically exclude the biological sex-based differentiations. The term "noun class system" has traditionally been used to refer to nominal classification systems as found in Niger-Congo, as in (e.g. Eegimaa) and Bantu (e.g. Kiswahili). A noun class system is, according to de Wolf (1971), a more complicated kind of gender system in that there are generally more than three classes, distinguishing on the basis of 'animate' vs. 'inanimate' as well as 'human' vs. 'non-human', etc.

Despite the fact that gender systems (as found in the majority of Afro-Asiatic languages) are generally more covert than noun class systems, which are usually more overt, they are to a large extent structurally similar because they are defined and identified through the presence of agreement as discussed in 3.2 below. Nouns in these systems belong to a finite number of sets and trigger agreement on certain elements, which include definite determiners, adjectives, demonstratives, numerals and anaphoric pronouns.

Here, I follow the traditional use of the term "noun class" for Niger-Congo languages that exhibit such systems, since it has the advantage of excluding the biological sex differentiation unattested in Eegimaa or other Jóola languages.

2.1.2 Gender and Class pairs. Typically, in defining the number of classes in a Niger-Congo noun class language, each singular and plural affix, and each agreement set is individually described (Welmers, 1973). Consequently, the singular and plural forms of a stem are analyzed as different classes (de Wolf, 1971). When the singular and plural forms are analyzed as a pair, they are often referred to by the term gender. Gender in this context differs from its use as a cover term in the description of noun class systems. In Eegimaa for example, *bu-tum* 'mouth' and *u-tum* 'mouths', which are two inflected forms of the stem *-tum* 'mouth', would qualify for the treatment as a gender.

However, Eegimaa has a "crossed" nominal classification system (Heine, 1982: 197). A crossed nominal classification system is one where two or more singular classes can have one plural correspondent and where several plural classes can have one singular correspondent (see Table 2 below). Eegimaa does not exhibit the one-to-one correspondence between singular and plural classes which is typically associated with the term gender. As a result, the term class pair is used to refer to pairs of singular and plural forms of nouns in Eegimaa.

2.2 Agreement/Concord. The terms "agreement" and "concord" are used interchangeably in this paper to refer to the 'systematic covariance between a semantic or formal property of one element and a formal property of another' ((Steele, 1978) quoted in (Corbett, 2006: 4)).

Eegimaa nouns govern agreement on their syntactically dependent elements in a noun phrase and on finite verbs. This is illustrated in example (1) below, where there is agreement between a noun of class 3 *e-* and the two verbs that are in a syntactic relation with it, and also a noun in class 13 *t-* that triggers agreement on its modifier. In the notation throughout this paper, NCM is used to refer to the noun class marker that attaches to a noun whereas CL refers to the agreement markers on agreement targets.

(1) ***e****-hub* ***e****-robo* ***t****-iñ* ***t****-anur* *mati* ***e****-fat*
NCM3[6]-crab CL3-sit:MID NCM13-place CL13-one FUT.NEG CL3–be.fat
'A crab that stays in one place does not get fat. (proverb)'
(ss060508_fir-hono-ao)[7]

In Eegimaa, noun class agreement occurs between a subject noun and the verb as illustrated in (2), but not between a verb and its object.

(2) SUBJ[***a****-rokk-a* ***Ø****a****h****u*] ***a****-añ-ut* [***ga****-llah* ***g****a****g****u*
NCM1-work-AGT CL1:DEF CL1-cultivate-NEG NCM9-land CL9:DEF

g*-ola*]OBJ
CL9-his

'The worker did not cultivate his land' (introsp)

[6] See the list of abbreviations at the end of the article.

[7] The sources of examples given here are indicated near the free translations. For example, 'Part-Obsv' stands for *Participant Observation*, 'Introsp' for (native speaker) *Introspection*, while reference codes for natural speech events, such as 'ss20040817_abas' are names of files collected by the author (SS) followed by the date and the speaker's name or topic.

2.3 Controller and target. The term "controller" (Corbett 1991) will be used to refer to the elements that trigger agreement whereas "target" will designate the agreeing elements. As will become clearer in the next sections, the choice of the form of an agreement morpheme depends on the class of the controller noun. The agreement system of Eegimaa is not fully alliterative, since the form of agreement morphemes (see Table 1 below) is not always identical to that of the noun class marker.

Noun class markers also mark number distinctions. Eegimaa noun class markers combine with noun stems denoting mass and abstract concepts and can be used to express collective meaning as will be discussed in Section 3.1.2 below. Agreement markers also indicate singular and plural person distinctions in the third person. The examples below show an alternation between third person singular ((3)-(5)) and third person plural[8] ((4)-(6)).

(3) ***á****-lullum* ***Ø****anur* ***á****-kkumandi-oli* *ti*
NCM1-white.person CL1:one CL1.3SG-command-1PL.EXCL.DO like

sí-be
NCM4-cow

'One white person commanded us like cows.' (ss040828_sidda)

(4) ***é****-lullum* ***g****ú-uba* ***gú****-kkumandi-oli* *ti*
NCM3-white.person CL2-two CL2.3PL-command-1PL.EXCL.DO like

sí-be
NCM4-cow

'Two white people commanded us like cows.' (ss040828_sidda)

(5) *imbi eno* ***fi****-ttih* ***fa****f****u*** ***fu****-mug-i-muh,*
PERM if NCM7a-war CL7:DEF CL7.3SG-kill-2SG.DO-DUP
'lit: If it happens that the war kills you…' (If you die during the war) (ss040828_sidda)

[8] The occurrence of Ø 'zero' as an agreement marker and the lack of similarities between the controller and the target agreement forms is accounted for in the next sections.

(6) *imbi eno* ***gu****-ttih* ***g****a****g****u* ***gu****-mug-ul-muh*
PERM if NCM8a-war CL8:DEF CL8.3PL-kill-2PL.DO-DUP
'lit: If it happens that the wars kill you(PL)…'
(If you (PL) die during the wars)

The examples above also show that the agreement markers for a given class differ in form from noun class markers and may also differ in different syntactic environments. For instance, in example (4) the noun class marker differs in form from the agreement markers on the numeral and the verb. These differences in agreement are of two types. First, there are phonologically conditioned dissimilarities between noun class prefixes and their agreement correspondences such as those found in classes 3 *e-* and 6 *u-* (cf. Table 1 below). These are common in other Jóola languages (Sambou, 1979, Sapir, 1965). The other types of dissimilarities are the semantically motivated ones which are found in Eegimaa but not found in other related languages such as Jóola Fogny (Sapir, 1965). These are revealed by the use of e.g., NCM 3 *e-* as a plural marker for a human noun, as in example (4), which triggers agreement of CL2, the regular human plural agreement.

The next section gives an overview of the shape of the noun class prefixes, referred to as noun class markers, and their corresponding agreement markers. It also provides a discussion of the variations in form between noun class markers and agreement markers. The criteria used to determine the class membership of nouns showing irregularities between noun class markers and their agreement markers are proposed 3.2 below.

3. Noun class markers and agreement markers

3.1 The shapes and functions of noun class markers. A division of nouns into the 15 classes of Eegimaa can be justified on the basis of the corresponding agreement markers they trigger. As Corbett (1991: 105) argues, '[noun class] agreement provides the basis for defining [noun classes] and for establishing the number of [noun classes] in a given language.' The table below presents noun class controllers and the targets for the definite determiner, the demonstrative pronoun, independent possessive pronouns, the third person subject and as well as the object pronouns, adjectives, numerals, the pronominal subject prefix and the relative prefix. Table 1 shows complex correspondences between the shapes of the prefixes on nouns and those attached to their modifiers. Cases where there is a lack of phonological similarity between controllers and agreement targets are analyzed in detail in Section 3.1.1 below.

Table 1: Noun class prefixes and agreement markers[9] (adapted from Sagna (2005))

	NC markers	DEF.DET	DEM	POSS	PRO	ADJ	NUM	ORD	SUBJ	REL
1	***Ø- ; a-***	***Øa-h-u***	*a-**h**-u-**m**-*	***Ø-***	***Ø-***	***a-***	***Ø-***	***a-***	***a-***	***Ø-a-***
2	***bug-***[10]	***bug-a-g-u***	*u-**bug-***	***bug-***	***bug-***	***gu-***	***gú-***	***gu-***	***gu-***	***g-a-***
2 & 8	***gu-***[11]*(NCM8)*	***g-a-g-u***	*u-**bug-***	***bug-***	***bug-***	***gu-***	***gú-***	***gu-***	***gu-***	***g-a-***
2 & 6	***u-*** *(NCM6)*	***w-a-w-u***	*u-**bug-***	***bug-***	***bug-***	***gu-***	***gú-***	***gu-***	***gu-***	***g-a-***
2 & 3	***e-*** *(NCM3)*	***y-a-y-u***	*u-**bug-***	***bug-***	***bug-***	***gu-***	***gú-***	***gu-***	***gu-***	***g-a-***

[9] In the noun class prefix column the forward slash indicates phonological alternations; the semi-colon shows that no synchronic phonological alternations exist between the prefixes it separates. The ampersand "&"indicates multiple classification of certain nouns which, as will be argued below (3.1.3), are simultaneously assigned to two classes. In table 1, noun class markers and the corresponding agreement markers are in boldface.

[10] The noun class prefix *bug-* is lexically determined since it occurs as a plural marker for only one noun; *bug-an* 'people'.

[11] In previous work (Sagna 2008), I have argued that noun class prefixes such as *gu-* and *e-* which are used with nouns of human denotation, and which were coded NCM 2b and NCM 2d respectively, are homophonous with for example NCM 8 *gu-* and NCM 3 *e-*. However, new evidence shows that it is actually the same prefixes that are used for certain nouns of human denotation of class 2 and non-human nouns in classes 8 and 3. The class membership of nouns is determined by the agreement they exhibit. Noun class prefixes of other classes, which are used as plural markers for nouns of human denotation, are listed in table 2 under the 'class number' column. This allows one to observe the differences between their use with nouns of class 2 (non-alliterative agreement) and the other class where they show alliterative agreement. The new analysis proposed to account for such combinations, is that nouns of human denotation show multiple semantic classifications by using NCM 8 *gu-* and NCM 3 *e-* (but class 2 agreement) to point out that those human nouns have semantic features associated with classes 8 and 3. It is important to bear in mind, that semantic criteria are not used to determine the class membership of a noun. They only help to understand the motivations underlying the use by a noun of (or better from) another class.

	NC markers	DEF.DET	DEM	POSS	PRO	ADJ	NUM	ORD	SUBJ	REL
2 & 4	***su-/si-*** *(NCM4)*	***s****-a-****s****-u*	*u-****bug****-*	***bug****-*	***bug****-*	***gu-***	***gú-***	***su-***	***gu-***	***g****-a-*
3	***e- ; y- ; Ø-***	***y****-a-****y****-u*	***y****-au-****y****-*	***y-***	***y-***	***e-***	***y-***	***e-***	***e-***	***y****-a-*
4	***su-/si- ; s-***	***s****-a-****s****-u*	***s****-au-****s****-*	***s-***	***s-***	***su-***	***sú-***	***su-***	***su-***	***s****-a-*
5a	***bu-/bi- ; b-***	***b****-a-****b****-u*	***b****-au-****b****-*	***b-***	***b-***	***bu-***	***b-***	***bu-***	***bu-***	***b****-a-*
5b	***ba-***									
5b & 1	***ba-*** *(NCM5b)*	***b****-a-****b****-u*	***b****-au-****b****-*	***Ø-***	***Ø-***	***bu-/a-***	***bu-***	***bu-/a***	***a-***	***b-a-/a-***
6	***u-; w-***	***w****-a-****w****-u*	*w-au-****w****-*	***Ø-***	***w-***	***u-***	***Øú-***	***u-***	***u-***	***w****-a-*
7a	***fu-/fi- ; f-***	***f****-a-****f****-u*	*f-au-****f****-*	***f-***	***f-***	***fu-***	***f-***	***fu-***	***fu-***	***f****-a-*
7b	***fa-***									
8a[12]	***gu-*** *; **g-***	***g****-a-****g****-u*	*g-au-****g****-*	***g-***	***g-***	***gu-***	***gú-***	***gu-***	***gu-***	***g****-a-*
8b	***gá-***									
9	***ga-*** *; **g-***	***g****-a-****g****-u*	*g-au-****g****-*	***g-***	***g-***	***gu-***	***g-***	***gu-***	***gu-***	***g****-a-*
10a	***mu-/mi- ; m-***	***m****-a-****m****-u*	*m-au-****m****-*	***m-***	***m-***	***mu-***	***mú-***	***mu-***	***mu-***	***m****-a-*
10b	***ma-***									

[12] Note that the difference made here between the singular class 8 and the plural 9 is based on the argument that singular and plural classes are treated as different classes as pointed out in 2.1.2 above.

	NC markers	DEF.DET	DEM	POSS	PRO	ADJ	NUM	ORD	SUBJ	REL
11a	***ju-/ji- ; j-***	***j-a-j-u***	*j-au-**j-***	***j-***	***j-***	***ju-***	***j-***	***ju-***	***ju-***	***j-a-***
11b	***ja-***									
11 & 3	***ji-*** *(NCM11a)*	***y-a-y-u***	***y-au-y-***	***y-***	***y-***	***e-***	***y-***	***e-***	***e-***	***y-a-***
12a	***ñu-/ñi- ; ñ-***	***ñ-a-ñ-u***	*ñ-au-**ñ-***	***ñ-***	***ñ-***	***ñu-***	***ñ-***	***ñu-***	***ñu-***	***ñ-a-***
12b	***ña-***									
13	***ti- ; t-***	***t-a-t-u***	*t-au-**t-***	***t-***	***t-***	***-***	***t-***	***tu-***	***tu-***	***t-a-***
14	***d-***	***d-a-d-u***	*d-áu-**r-***	***-***	***d-***	***-***	***d-***	***du-***	***du-***	***d-a-***
15	***n-***	-	-	-	***n-***	-	-	-		-

3.1.1 Morphophonemic alternations of the Eegimaa noun class markers. In Eegimaa, it is not possible to have a combination of two noun class markers prefixed to a noun,[13] as in Bantu languages like Herero (Möhlig et al., 2002: 38). Noun class prefixes have the following shapes: ∅ (zero), V-, C-, CV- and CVC-, as can be seen in column two in Table 1 above. Vowels that are attested as part of noun class prefixes of the CVC and CV shapes are /u/ e.g., bug-an 'people' and fu-how 'head'; /i/ e.g., fi-ssih 'finger' and /a/ e.g., ga-rafa 'bottle'. Vowels that can occur in isolation as noun class markers are /a/ e.g., a-rafuhow 'human being'; /u/ e.g., u-ser 'spoons'; and /e/ e.g., e-ral 'river'. All these vowels may be realized as [-ATR] or [+ATR] (Advanced Tongue Root[14]). For example, prefixes in e-vvu 'clean' and é-vvu 'fly' differ because in that the first vowel is [-ATR] while the second is [+ATR]; this does not, however, signal a change in noun class.

Another phonological alternation between vowels is between prefixes having a *Cu-* and *Ci-* shape, which do not indicate a distinction in noun class but vowel height harmony. First described by Sapir (1971: 78) for Jóola languages (cf. Bassène, 2007: 20-21, Sagna, 2008: 82-83 for Eegimaa), vowel height harmony distinguishes two harmonic sets based on frontness.[15] The high front vowel /i/ is used after labial consonants when the initial stem vowel is a front vowel. The high front vowel is also used as a noun class prefix after coronal consonants when the initial stem vowel is a front vowel or /a/.

(7)	*m**i**-s**i**s*	'salt'	*b**i**-e**ç***	'weaving workshop'
	*j**i**-a**r***	'small root'	*ñ**i**-ss**e**l*	'chain'
	*s**í**-bb**i**bi*	'shards'	*s**í**-i**t***	'palm nuts.'

The high back vowel /u/ is used as a noun class prefix vowel after labial consonants when the initial stem vowel is a back vowel or /a/ and after coronal consonants when the initial stem vowel is a back vowel.

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[13] There are cases where a stripped form of the definite determiner is attached to the prefix with a deictic meaning or to convey the meaning of 'this/that one/the other' e.g. *f-a-fu-nah* (CL7-DEF.DET-NCM7a-day) 'the other day', *Øa-h-a-ññil* (ØDEF.DET-CL1-NCM1-child) 'that (aforementioned) child'. However, these pre-prefixed forms of the definite determiner are not noun class markers.

[14] [ATR] vowel harmony has been reported as a feature common to all Jóola languages described thus far (Bassène, 2007, Sagna, 2008, Sambou, 2007, Sambou, 1979, Sambou and Lopis, 1981, Sambou, 1989, Sapir, 1975, Sapir, 1965, Sapir, 1971, Tendeng, 2007).

[15] Sagna (2008: 72) presents and discusses in detailed the Eegimaa vowels.

(8) *b**u**-**u**l* ‘face’ *f**u**-h**o**w* ‘head’

*f**u**-**a**r* ‘root’ *b**u**-**a**s* ‘Ficus exasperata’

*ñ**u**-h**u**l* ‘funeral’ *j**u**-**o**l* ‘small fish’

All noun class prefixes having the form *Cu-* (except NCM 8 *gu-*) also have a *Ci-* variant. With NCM 8 *gu-*, the absence of vowel harmony based on frontness is possibly due to the presence of the dorsal consonant */g/* which triggers the use of the back vowel */u/* but never */i/*.

The semivowels *y-* and *w-* and the high vowels /*e/* and /*u/* alternate in terms of the agreeing elements that they occur with, as can be seen in classes 3 *e-* and 6 *u-* in Table 1 above. Semivowels are attested before vowels, while vowels occur before consonants. Semivowels are also attested as noun class markers of the *C-* shape in nouns like *y-aŋ* ‘house’, *y-on* ‘crocodile’ (*s-on* ‘crocodiles’ in the plural), *w-al* ‘hair’ (*g-al* ‘hair’ in the singular). It is important to note here that the occurrence of a semivowel as a noun class prefix is not the result of any synchronic phonological rule. For example, *y-aŋ* ‘house’ (*s-aŋ* ‘houses’ in the plural) is not underlyingly *e-aŋ*, which in fact designates a ‘kind of musical instrument’. A semivowel can however, also occur as a noun class marker as will be argued in 3.1.3 below.[16]

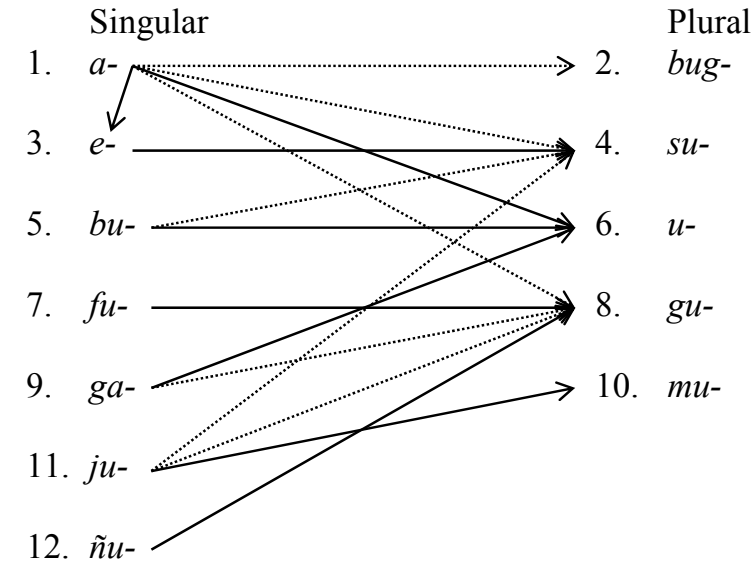
3.1.2 Notes on number. As mentioned above, number is marked by the use of distinct noun class prefixes for the singular and plural sets. For instance, the noun fi-eñ ‘month’ included in class 7 fu- forms its plural as gu-eñ ‘months’ with NCM 8 gu-. All nouns of class 7 fu- form their plural in class 8 gu-, showing a one-to-one singular-plural correspondence. There are also cases where different singular noun class markers have an identical plural class correspondent. For example, bu-ssana ‘dug out canoe’ and ñi-hin ‘plot of rice field’, which belong to singular classes 5 bu- and 12 ñu- respectively, form their plural in noun class 6 u- to produce u-ssana ‘dug out canoes’ and u-hin ‘plots of rice field’. This is a case of many-to-one singular and plural pairing. Furthermore, noun stems that have an identical singular noun class

[16] In example (32), I show cases where the alternation between *y-* and *e-* or *w-* and *u-* with the same noun results either in a minimal pair or produces an incomprehensible word that is at worst not attested in the language. Thus, it cannot be argued that *y-aŋ* ‘house’ and *e-aŋ* ‘kind of musical instrument’, for instance, denote the same entity as suggested in previous descriptions of the language (Bassène, 2007). The argument proposed here is that there are a limited number of nouns which take semivowels as noun class markers and which have to be learnt as such. If there was a productive rule according to which *e-* turns *y-* before a vowel, it has been lost. The synchronic rule is that a noun class vowel prefix occurs before an initial root vowel without triggering any alternation between vowel and semivowel. For example, no recorded loanword shows such an alternation with noun class prefixes. On the other hand, loanwords of class 3 having an initial vowel e.g., *é-otor* ‘car’, do use the prefix *e-* without triggering any assimilation.

prefix do not always combine with the same plural morpheme. For example, ga-ñen ‘hand’ and ga-ssin ‘horn’ have an identical singular noun class prefix 9 ga-, but their plural forms are NCM 8 (gu-ñen ‘hands’) and NCM 6 (u-ssin ‘horns’) respectively showing a case of one-to-many singular and plural pairing. However, these singular and plural pairings of nouns are not easily predictable because of the intricate singular and plural relationship which includes one-to-one, one-to-many and many-to-one correspondences.

One way of representing irregularities such as those outlined above is indicated in Table 2, which shows singular-plural correlations between count nouns. This is a traditional way of summarizing the different noun classes in a language. However, its shortcomings are that it does not reveal the full complexity of the number system of a language like Eegimaa. Therefore, it is proposed that Table 2 should be read in conjunction with Table 1 which shows the different form of prefixes in a class and their corresponding agreement markers.

Table 2 : The summary of noun classes and singular plural correlations



Non-Pairing (Locatives)

13. *t-*
14. *d-*
15. *n-*

Regular plural (productive)

Irregular plural (unproductive)

As is typical in noun class languages, there are more singular than plural noun class prefixes. The singular-plural correlations presented in Table 2 are of two types: the regular and productive correlations and the irregular and unproductive ones. Productive pairings are those that include most plural correspondences between singulars and plurals and which can include loanwords. Unproductive plural formations are irregular in that they have very few members and do not include loanwords. These unproductive correlations can be seen as exceptions to the regular and productive singular-plural formations. NCM 1 *a-* for instance, has more than one plural correspondent. The prefix *bug-* is lexically determined and only occurs in *bug-an* 'people', but is found as an agreement marker for various dependents as shown in Table 1 above. NCM 1 *a-* also has two other irregular counterparts (NCM 4 *su-* and NCM 8 *gu-*) and two regular ones (NCM 3 *e-* whose multiple functions are illustrated in (12)-(13) and NCM 6 *u-*).

Because of these variations in class 1 plural formation, it is difficult to associate a single plural noun class prefix with the class. Another example is *jí-çil* 'eye', which uses NCM 11 *ju-*. This is the only recorded noun which combines with NCM 11 *ju-* in the singular and forms its plural with NCM 8 *gu-*, *gú-çil* 'eyes'. All other nouns of class 11 *ju-* form their plural in class 10 *mu-*. Only one noun stem combines with NCM 11 *ju-* in the singular (*ji-ggaj* 'panther') forming its plural with NCM 4 *su-*.[17]

In addition to distinguishing singularity and plurality with count nouns, noun class markers also combine with non-count nouns and are used to express collective meanings. There are however, no dedicated noun class markers for mass and abstract meanings expressions. Non-count nouns occur in different classes in Eegimaa as illustrated in (9) and (10).

(9)	***fu-****nah*	'day'	***ga-****nnay*	'year'
	bu-*soŋet*	'stupidity'	***mu-****jah*	'intelligence'
	ña-*tiñ*	'pain'	***ji-****bij*	'lie'
(10)	***bu-****nuh*	'palm wine'	***mí-****ita*	'palm oil'
	ba-*raj*	'rice gruel'	***si-****nnaŋ*	'cooked rice'
	gú-*kkaju*	'cashew fruits/alcohol'	***e-****por*	'powder/flour'

[17] Note that most speakers use the singular form (*ji-ggaj*) for the plural, but a plural agreement marker (CL4).

Different types of collectives exist in Eegimaa, some of which are expressed with, what I call 'subclass markers', labeled NCM Xb. These are collectives for small things expressed with NCM 5b *ba-* (11)a, and collectives for swarms which are expressed using NCM 7b *fa-* (11)b. There are also collectives that use different noun class prefixes e.g., NCM 3 *e-* illustrated in (11)c and (11)d which expresses collectives for plants and humans, and its plural correspondent NCM 4 *su-* which expresses distributive meaning referring to entities of different kinds as in (11)d. NCM 4 can also be used with certain mass nouns to indicate diversity of origins as in (11)e.

(11) a. ***a-/u-****ññil* 'child/children'
ba-*ññil* 'group of small children'

b. ***e-/si-****ingilit* 'wasp/-s'
fa-*ingilit* 'swarm of wasps'

c. ***gá-/ú-****gabal* 'water lily/-ies'
é-*gabal* 'colony of water lilies'

d. ***a-/e-****jaora* 'stranger/-s'
si-*jaora* 'strangers from different origins'

e. ***e-****llu* 'meat'
su-*llu* 'meat from different animals'

Sambou (2007: 104-108) discusses aspects of the Jóola Karon number system, showing the existence of some non-count nouns which have only a singular form (*singularia tantum*) and others which only occur with a plural noun class prefix (*pluralia tantum*). However, it is not clear from his discussion which noun class prefixes are used for the formation of collectives. In Sapir's analysis (1965: 61-62), NCM's 3 *e-*, 13 *ba-* and 14 *fa-* are the only noun class prefixes used to express collective meanings.

In Eegimaa most prefixes used as collective markers are singular noun class markers when they combine with count nouns. They trigger alliterative agreement and are, as a result, assigned to classes whose agreement they display.[18]

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[18] It could be argued that if singular and plural are analysed as different sets, collectives and non-count nouns could also be analysed as constituting different sets. However, collectives are usually treated as derivational and are typically not regarded as basic number values (Corbett, 2000), whereas singulars and plurals are analysed as inflectional categories. The traditional approach of treating singular and plural forms of a noun as separate classes seems consistent with this view. In this paper, singular and plural

One further complexity of the Eegimaa number system is the use of the same noun class prefix (NCM 3 *e-*) as a singular marker in examples (11)b and (12), a collective marker in (11)c and (13), a plural marker in (11)d and (14) and with a mass noun in (11)e. Notice that in examples (12)-(14), even though the noun class prefix is the same for all controller nouns, the agreement markers triggered by the singular and collective expressions in (12) and (13), differ from the one that appears for the plural meaning in example (14). The complex Eegimaa number system (including singular-plural correlations, the formation of collectives) and its interaction with inflection and derivation constitute a topic to be investigated in future research. In 3.1.3 below, I discuss formal criteria which can be used to determine the class membership of nouns that show such variations in agreement marking.

(12) ***e-****buh* ***ya****yu* ***e-****kkumasi-e* *imbi* ***e-****huli*
NCM3:SG-kinship CL3:DEF CL3-start-PFV PERM CL3-be.long
'The kinship has started to extend.' (ss20040910_ebuh)

(13) *[…]* *ikki* ***e-****mmano* ***ya****yu* ***é-****puren-ul*
until NCM3:COLL-rice CL3:DEF CL3-take.out-DIR
'[…] until the rice starts producing.' (ss040910_fir)

(14) ***e-****soddali* ***gú-****uba* ***gu-****jog-om*
NCM3:PL-soldier CL2-two CL2-catch-1SG.DO
'Two soldiers caught me.' (ss20090510_Batings-Gal)

In summary, the discussion in sections 3.1.1 and 3.1.2 above, and Table 1 in particular, shows that noun class prefixes associated with a given class may appear in different forms and do not always indicate class membership since the form of the agreement target may differ from that of the class marker on the noun. Table 2 shows that Eegimaa has a crossed noun class system, with regular and irregular correlations between singular noun class markers and their plural counterparts. A further complication is the case of NCM 3 *e-* which combines with noun stems to express singular, plural and collective meanings as exemplified in (12)-(14). An important observation is that the class membership of a noun cannot always be predicted from the form of the noun class marker it combines with. Therefore, instead of morphological criteria, syntactic agreement will be used as the main basis for determining the class membership of nouns.

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categories are treated as distinct classes with agreement used as the criterion to determine class membership.

3.1.3 Variation between noun class markers and agreement markers. This section discusses variation between the forms of noun class markers and their agreement correspondents presented in Table 1. Similar to Jóola Fogny (Sapir, 1965: 24), the Eegimaa agreement system is predominantly alliterative. However, Eegimaa shows more instances of non-alliterative agreement than Jóola Fogny.

Alliterative agreement occurs when the controller noun includes a form which is identical to the agreement marker on agreement targets, thus indicating the class membership of that noun (Corbett, 1991: 117). In Eegimaa, alliterative agreement occurs when the initial consonant or the initial vowel of a noun class marker on the controller noun is phonologically similar to that of the corresponding agreement markers on targets, as in examples (15)-(18) and also in most classes in Table 1.

(15) ***b****-aŋ* ***ba****b****u*** ***bu****-uŋ-e*
NCM5-living.room CL5:DEF CL5-be.wide-PFV
'The living room is wide.' (Introsp)

(16) ***bi****-sem* ***bu****-joh* *y-o*
NCM5a-rust CL5-catch CL3-PRO
'It is rusted.'(Lit: 'Rust has caught it.') (ss20040817_abas)

(17) ***ba****-ccin* ***bu****-ja-or-e* *ni* *bi-çin*
NCM5b-village.shrine CL5-go-REC-PFV LOC NCM5a-settlement
'A village shrine does go together with the settlement.'
(ss20040817_abas)

(18) ***ji****-hin* ***ja****j****u*** ***j****-anur* ***ja****j****u***
NCM11a-plot.of.rice.field CL11:DEF CL11-one CL11:DEF
'The small plot of rice field is the same.' (ss20041010_Fir)

Noun class markers showing phonological similarity with agreement markers are not always identical in form. In examples (15)-(17) for instance, noun class prefixes appear in *C-*, *Cu-/Ci-* and *Ca-* shapes but have the same agreements on targets. Since the class membership of a noun is not necessarily revealed by the prefix attached to it, it is argued that similarity of the agreement forms is more appropriately used as the primary criterion to determine the class membership of a noun.

In previous investigations of Jóola noun class systems, the dissimilarities in the form of noun class markers such as those illustrated in (15) to (17) above have been analysed differently. Sapir (1965: 61-68) treats prefixes of the shape *Ca-* as noun class markers different from those of the shape *Cu-/Ci-* and C- even though they show alliterative agreement (see (19)

and (20) taken from Sapir (1993)). His argument is based on the fact that in Fogny, prefixes of that shape generally prefix to nouns denoting mass and abstract concepts.[19]

(19) *ánoan* ***bu-****facab* ***b-****oola*
everyone NCM9-quarter CL9-3SG:POSS
'Each person her own quarters.' (Sapir 1993)

(20) ***bá-****labiñ* ***b****u-sof-om* *di* *ká-kanum-ak*
NCM13-numbness CL13-catch-1SG.OBJ on NCM7-foot-DEF
'Numbness traps me in the foot.' (Sapir 1993)

The other major approach to the treatment of the prefixes that share the same initial consonant as exemplified in (15)-(17) is championed by Sambou (1979). He argues that in Jóola Kaasa Esuulaaluʔ any prefix of the shape *Ca-* originates from an underlying form ***Cu-a* where the high back vowel is deleted by a regular synchronic rule of vowel coalescence. In Sambou (1979: 89), he argues that the vowel /*a/* in that underlying form is a separate morpheme *-a-* which he calls the postprefix[20]. For example according to Sambou (1979: 133), the underlying form of the Jóola Kaasa Esuulaaluʔ noun *ñ**a**kon* 'filth' is *ñu-**a**-kon* 'filth' which can be broken down into a prefix *ñu-*, the so-called postprefix ***-a-*** and the root *-kon*.

Sambou's postprefix has often been adopted by authors working on different Jóola languages, including Jóola Fogny (Hopkins, 1995), Eegimaa (Bassène, 2007, Tendeng, 2007) and Jóola Karon where it has been described as *'post-classe'* (Sambou, 2007). The postprefix approach has been challenged only in Seck (2002: 199) and Sagna (2008: 198-203). Seck (2002) rejects the postprefix on the grounds that claims about its distribution and function are not supported by empirical evidence. Notice that Seck (2002) proposes an analysis which is close to Sapir's (1965) by treating *Ca-* prefixes as markers for separate classes from their *Cu-*/*Ci-* counterparts.

Bassène follows Sambou (1979) in stating that there is a rule of vowel deletion with two main outputs, which accounts for the variation in the noun class prefixes in examples (15)-(17) (Bassène, 2007: 21-22). This rule is used to try to account for the origin of both noun class markers of the form *C-* and those of the form *Ca-*. Noun class prefixes of the shape *C-* are said to come from a rule that deletes the vowel of a prefix of a *CV-* shape if the initial root

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[19] The numbering convention for noun classes proposed in these two examples is that provided for the Jóola Fogny noun class system by Sapir (1965).

[20] The postprefix has become important in recent years especially because its existence has been taken for granted in most studies on Jóola languages. Therefore, it deserves a detailed discussion here.

vowel is /*a*/ as illustrated in the examples below, taken from Bassène (2007:22).

(21) *g**u*** + *ar* → *g-ar* ‘stomachs’

*m**u*** + *al* → *m-al* ‘water’

*f**u***-*al* → *f-al* ‘river’

The problem with this first rule is that it does not describe a synchronic process. The forms in the left column which are referred to as the underlying ones are in fact nouns in Eegimaa, with different meanings, as can be seen in example (22).

(22)	*g**u***-*ar*	‘roots’	*g-ar*	‘stomachs’
	*m**u***-*al*	‘small Psammophis elegans (snake)’	*m-al*	‘water’
	*f**u***-*al*	‘Psammophis elegans (snake)’	*f-al*	‘river’

Additional examples provided in (23) show that it is possible to alternate the prefixes of the shape *CV-* or *C-* to form singular, plural and diminutive forms, but the shape of the noun class markers remain the same. In addition, examples in (24) show that as a rule, no vowel of a noun class prefix is deleted when an Eegimaa noun or a loanword has an initial /*a*/ vowel. This indicates that the rule of vowel deletion is not a synchronic rule operative on Eegimaa noun class markers. That noun class prefixes of the form *C-* come from an underlying *Cu-* form, is therefore not part of the native speakers’ tacit knowledge.

(23) *fu-ar* ‘root’
f-ar ‘stomach’

ji-al ‘small psammophis elegans (snake)’
j-al ‘small quantity of water’

gu-al ‘psammophis elegans (snake)’
g-al ‘rivers’

(24)	*fu-ap*	‘blister’	*gu-angileay*	‘English’
	ma-agen	‘truth’	*ga-afiç*	‘poster’
	ga-al	‘furrow’	*si-akkut*	‘scorpions’

The second claim of the rule of vowel deletion is that noun class markers of the shape *Ca-* synchronically come from the form **Cu-a*. In a way, the rule of the formation of the postprefix is related to that of the formation of *C-* shaped noun class prefixes in that it is argued that the vowel *u-* is deleted to form the noun class markers of the form *Ca-*. Bassène (2007: 33-34) provides a clearer account of this statement for Eegimaa by arguing that the postprefix is always placed between the noun class prefix and the noun stem as in *ga-toj* 'leaf' and *ga-maŋ* 'love' which according to the postprefix analysis should be broken down as **gu-a-toj* 'leaf' and **gu-a-maŋ* 'love'.

Here again, there is no synchronic rule of vowel coalescence that deletes a vowel /*u*/ when it is in contact with the vowel /*a*/ or any other vowel. Sambou (1979: 18, Sambou, 1989) argues that there is a "general rule" according to which, a vowel "assimilates" to the one that precedes it. In Eegimaa, a rule of assimilation is observed only with irregular verbs[21] which are, in fact, those used as illustrations for this rule of assimilation by Bassène (2007: 22). The general rule is that adjacent vowels of both a noun class marker and a subject agreement prefix always occur in hiatus, i.e. they are not assimilated when in contact with a stem initial vowel as the examples in (25) below show.[22] Note that none of the loanwords in (26), which combine with NCM 9 *ga-*, appear with the so-called underlying form **gu-a-*.

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[21] The assimilation process only occurs in exceptional contexts i.e., with the irregular verbs e-eh 'say', e-em 'be' and e-egen 'have/hold' whose inflected forms exhibit a somewhat different form which does not follow the regular pattern of most verbs in the language.

[22] To account for the numerous cases where contiguous vowels show no assimilation process Sambou posits a phoneme he calls the disjunctive phoneme. He argues that this phoneme, which in actual fact has no phonetic basis, has to be accepted; otherwise one has to find a way of explaining cases where vowels occur in hiatus when the general rule is that contiguous vowels assimilate. In the case of Eegimaa, the general rule is that contiguous vowels belong to different syllables. This reinforces the argument made here, that noun class prefixes of the form C- and Ca- are not the result of any synchronic phonological process.

(25) ***ni-****alene* ‘I have taken (sth) down’
ú-*ulen* ‘pour down!’

ga-*alah* ‘hoof’
u-*alah* ‘hoofs’

fu-*alen* ‘place for selling wine’
gu-*alen* ‘places for selling wine’

(26) ***ga-****hait* ‘sheet of paper’
ga-*bbaç* ‘tarpaulin’

No synchronic rule justifies the treatment of noun class prefixes of the form *C-* as originating from a *Cu-* form or *Ca-* as being underlyingly **Cu-a-*. In fact the postprefix approach seems to mix synchronic and what has been described as a possible diachronic process to account for the existence of the noun class prefixes of the form *Ca-* (Doneux, 1975). According to Doneux’s (1975) hypothesis, the prefix having the form *Ca-*, found in Jóola languages and other Atlantic languages, is probably historically derived from the form **CV-a-*, where the vowel *V* corresponds to /*u*/. This vowel was then deleted at some stage as a result of the adjacency with the vowel /*a*/. According to Doneux’s analysis, the synchronic prefix form *Ca-* would then be the result of a historically relevant morphophonological rule of vowel deletion. This hypothesis seems to have inspired Sambou’s synchronic postprefix, which was subsequently incorporated into most descriptions of noun class systems in Jóola linguistics to argue that prefixes of the form *Ca-* has a synchronic origin of the form **CV-a-*.

From the discussion of the prefixes showing similarities with their corresponding agreement markers, I argue that no morpheme *-a-* ever occurs in the position between a noun class prefix and a noun stem. As a result, referring to the vowel of prefixes of the form *Ca-* as a postprefix is highly problematic since the rule of vowel coalescence posited by the proponents of the postprefix approach is not supported by synchronic data. Thus, I argue that prefixes on nouns appear in different forms and that the criteria showing class membership should simply be those based on agreement. There is no need to posit such an ‘impressionistic morpheme’ (Seck, 2002: 199) to reduce the number of classes.

I also do not follow Sapir in distinguishing *Cu-*/*Ci-* versus *Ca-* as markers of different classes. This is not to deny Sapir’s observation that in Jóola Fogny, most noun class markers of the shape *Ca-* (except NCM 7 *ka-*) are predominantly used with abstract nouns and in the formation of collectives. In Eegimaa, even though it is possible to find count nouns with noun class prefixes of the form *Ca-* as shown in (27), those prefixes are also

used in the formation of collectives (except NCM 9 *ga-* the Eegimaa equivalent of the Fogny NCM 7 *ka-*), abstract and mass nouns. However, as (28) shows, non-count nouns are not restricted to the *Ca-* prefixes but rather also exhibit prefixes of the *Cu-*/*Ci-* shape. In fact the strong tendency to express semantic features such as collectives with some prefixes of the shape *Ca-* is the reason why I have labeled these noun class markers NCM Xb; for example NCM5b *ba-* (see also Sagna, 2008). While this points out to a peculiarity of most of these noun class prefixes, it remains clear from the data that not all prefixes of the shape *Ca-* have these semantic properties. However, the distinction is not synchronically productive, although it may be based on a historically productive process, as suggested by Doneux.

(27)	***ba-****giŋ*	'chest'	***u-****giŋ*	'chests'
	ba-*ppil*	'pile of small sticks'	***fá-****bangur*	'locust'
	ba-*pah*	'rudeness'	***ma-****aro*	'the good'
(28)	***bi-****inum*	'mind'	***mú-****hum*	'honey'
	fi-*eñ*	'month'	***ñu-****ssu*	'shame'

In Eegimaa, loanwords can be integrated based on phonological similarity between the first syllable of the borrowed noun with a noun class marker in the language. In example (29) for instance, the noun *ga-rafa* 'bottle' borrowed from the Portuguese Creole word *ga-raafa* 'bottle' is assigned to class 9 *ga-* based on the aforementioned phonological criterion and shows alliterative agreement.

(29) ***ga****-rafa* ***ga****g****u*** ***g****-umban* ***gu****-fum-o-e*
NCM9-bottle CL9:DEF CL9-mine CL9-break-MID-PFV
'My bottle is broken.' (Introsp)

Another type of agreement which can be subsumed under alliterative agreement is the one revealed by the alternations between semivowels and vowels of the same place of articulation on agreement targets (*u-*/*w-* and *e-*/*y-*) as illustrated in (30) and (31). Semivowels are attested as agreement targets before vowels whilst vowels occur before consonants. Note that these alternations are restricted to targets, since with controller nouns, noun class markers NCM 3 *e-* and NCM 6 *u-* can occur before vowels just like semivowels, as can be seen in example (32) below.

(30) ***u****-jow* ***wa****w****u*** *bú-sol* *nahi* ***ú****-jo-ul*
NCM6-name CL6:DEF NCM5a-back HAB CL6-go-DIR
'The names usually come (are given) later.' (ss060426_fir-ao-hono)

(31) ***e****-buh* ***ya****y****u*** *mamu* ***e****-jow* *mee*
NCM3-kinship CL3:DEF DEM:CL10 CL3-go Like.this
'This is how the kinship goes.' (ss20041010_Fir)

Since there is no synchronic rule of vowel deletion that restricts the occurrence of a vowel before another vowel, it can be argued that the semivowel can also occur as a noun class prefix. Here again, the data provided by the proponents of the postprefix arguing that nouns having the shape ***y+****stem* have an underlying ***e+****stem* shape and those having the shape ***w+****stem* have an underlying ***u+****stem* (see e.g., Bassène, 2007: 21) cannot be validated by synchronic data, as demonstrated by the examples below.

(32)	***e****-aŋ*	'kind of musical instrument'	***si****-aŋ*	'musical instruments'	
	y*-aŋ*	'house'	***s****-aŋ*	'houses'	
	y*-aaj*	'bee'	***s****-aaj*	'(two) bees'	**e + aaj*
	g*-añ*	'cloth'	***w****-añ*	'clothes'	
	u*-añ*	'cultivate!' (2sg.Imperative)			
	ga*-an*	'branch'	***u****-an*	'branches'	**w- aan*

Not only are some of the glosses proposed by the proponents of the postprefix for the examples above erroneous, but also some of the data provided (e.g., *w-aan* for *u-an* 'branches') are not Eegimaa words.

In addition to cases of alliterative agreement discussed above, there are also instances of non-alliterative agreement where there are no similarities between the noun class marker on the controller noun and the corresponding agreement markers on targets. These mismatches include both phonologically-based mismatches and semantically motivated ones.

Phonologically based dissimilarities between noun class markers and their agreement targets are cases where a noun stem occurs without a noun class marker (cf. example (33) below).

(33) ***Ø****-háhae* *nahi* ***é****-sotten-i-sotten*
NCM3-leprosy HAB CL3-cure-PASS-DUP
'Leprosy can be cured.' (Introsp)

(34) ***e****-akkut* ***é****-taf-ol* *t-o*
NCM3-scorpion CL3-sting-3SG.DO CL13-PRO
'A scorpion stung him there.' (Introsp)

Semantically motivated non-alliterative agreement mainly includes cases of multiple semantic classification. This is the situation where a noun combines with a noun class marker of one class, but triggers the agreement marker of another one. 'Multiple semantic classification' simply indicates that the use of a noun class prefix from a different class has underlying semantic motivations. It does not imply that semantic criteria are used for the inventory of noun classes. The noun, as elsewhere, is considered to belong to the class whose agreement marker it exhibits.

The plural formation of nouns of human denotation exemplified in (35)-(37) and the noun *ji-ggaj*[23] 'panther' which belong to classes 3 and 4 but uses NCM 11a *ju-* noun class prefix (see example(39) below), illustrate what is referred to as multiple classification. In (36) for example, the noun combines with NCM 6 *u-* which triggers class 6 agreement on the definite determiner, but the agreement marker on other target elements is that of class 2. These nouns, as Table 1 also shows, use markers from different classes, but their class membership is determined based on agreement.

(35) ***sí-****ppay-oli* *u-**bug**-u* ***gu-****bug-e*
NCM4-father-1PL.EXCL.POSS PRES-CL2-MED CL2-beget-PFV

u-*ññil*
NCM6-child

'Those forefathers of ours begot children.' (ss20041010_Fir)

(36) ***u-****ffan* ***wa****w**u*** *u-**bug**-u* ***gu-****bug-e* ***u-****ññil*
NCM6-old CL6:DEF PRES-CL2-MED CL2-beget-PFV NCM6-child
'Those elders begot children.' (ss20041010_Fir)

(37) ***é-****jjola* ***ya****y**u*** *u-**bug**-u* ***gu-****bug-e* ***u-****ññil*
NCM3-jóola CL3:DEF PRES-CL2-MED CL2-beget-PFV NCM6-child
'Those Jóola people begot children.' (Introsp)

Multiple classification shows a partial membership of the noun in the class whose noun class marker and agreement on the definite determiner are used. In (Sagna, 2008) I have shown that these cases of formal mismatches reflect multiple cognitive categorization processes. The argument proposed is that noun class prefixes are associated with semantic content and that multiple class membership reveals the use of multiple semantic classificatory

[23] It should be noted that nouns do not show multiple classification because of animacy. Animacy plays no role in the Eegimaa noun class system. The semantic principles of categorization which underlie the classification of nouns in example (35)-(37) are culture-bound.

criteria used in the semantic categorisation of the entity denoted by the noun. Table 3 presents a summary of the semantic characterizations of the Eegimaa classes (cf. Sagna (2008)).

Table 3: Outline of Eegimaa semantic parameters of categorization

Noun classes	Typical semantics
1/2	Humanness (including kinship, identity groups in plural)
3/4	Default or unspecified or unfeatured; special humans (including domain of experience of birth and maternity in plural); collectives for colonies; loanwords
5/6	Assemblages or whole; production (also singular domain of experience of birth and maternity) and protection; collectives for small entities; enormous entities & augmentatives
7/8	Roundness; thickness; extended parts of things; augmentative with the meaning round or fat; collectives for swarms (of insects); flexibility
9/6	Flatness; thinness; width; big size; augmentative and derogatory meaning; unpleasant things; rigidity
11/10	Small things; diminutive; endearment
12/6	Economy and social organization or interactions
13	Precise location
14	Location inside
15	Temporal location

In examples (38) and (39) two cases of multiple classification are presented with one "human" noun and one "animal" noun. Here, as with nouns with a human denotation of class 2 illustrated in (35)-(37), culture-specific semantic parameters of classification are responsible for the absence of alliterative agreement. In (38), the multiple classification of 'young woman' is motivated by her simultaneous categorization in the 'domain of experience of birth' (CL5) and the class of humans (CL1) (Sagna 2008: 239-241). On the other hand the combination of *-ggaj* 'panther' with diminutive noun class marker NCM 11 *ju-* is based on a euphemistic classification of this feared animal, whereas CL3, the default class, is a common class for animals.

(38) ***bá****-jur* ***b****au****b****-u* *n-****a****-kkay* ***a****-juh*
NCM5b-young.woman CL5:DEM-PROX LOC-CL1-leave CL1-see

á-pur
NCM1-young.man

'That young woman went to see a young man.' (ss041013_gnabai)

(39) *jambi* ***ji****-ggaj* ***ya****yu* ***y****-ola* ***é****-laput*
PROH NCM11a-panther CL3:DEF CL3-his CL3-be.cruel
'…to prevent his (reincarnated) panther from being cruel.' (ss040918_ñuhul)

3.2 Summary of the class assignment criteria for Eegimaa. In this paper the following criteria are proposed to account for the complex variations noted in the agreement system of Eegimaa. Agreement is a sine-qua-non for defining a language as having a noun class system (Sapir, 1965: 61, Welmers, 1973: 162). Because there is a lack of uniformity in agreement marking between controllers and targets, the agreement diagnostic criteria used to provide a full inventory of the noun classes in Eegimaa must take these peculiarities into account. These criteria may be applicable to other Jóola languages which exhibit simpler or equally complex noun class systems as in Eegimaa.

As indicated above, nouns whose prefixes show alliterative agreement with their agreement targets are assigned to the same class. This criterion accounts for the class membership of nouns exemplified in (40) and (15)-(18) that combine with noun class markers having the shape *C-*, *Cu-*/*Ci-* and *Ca-*. Note that non-count nouns generally show alliterative agreement. Therefore their class membership is decided on agreement criteria.

(40) ***fi****-ttih* ***fi****-cce* ***f****-o,* *t-o* *gu-kkan* ***f****-o*
NCM7a-war CL7-INDEF CL7-PRO CL13-PRO CL2.3PL-do CL7-PRO
'Another war was fought at that place.' (ss040828_sidda)

Locative classes also show alliterative agreement, as can be seen in examples (41)-(44). Apart from one recorded instance where class 13 *t-/ti-* combines with the lexeme *-nah* 'day', locatives do not normally combine with lexical nouns. They exhibit a complex morphological structure with double agreement marking. Eegimaa has three spatial locatives and one temporal class that have the following meanings: 'precise location', 'general location' (expressed by class 5), 'location inside' and 'temporal location'. Spatial location markers combine with demonstrative suffixes to express proximal, medial and distal location relative to the deictic centre. The locative that expresses general location (cf. (42) below) is interpreted as belonging to class 5 because of its similar phonological agreement form with the latter.

(41) ***t****áu****t****-e* ***tí****-jebi-jebi*
CL13:DEM-PROX CL13-be.wet-DUP
'This place (precise place) is wet' (Sagna 2008)

(42) ***b**áu**b**-u* ***bú**-rali-rali*
CL5:DEM-MED CL5-be.far-DUP
'That area is far away' (Sagna 2008)

(43) ***d**áu**r**-u* ***dí**-sikki-sikki*
CL14:DEM-MED CL14-be.deep-DUP
'This place (inside) is deep' (Sagna 2008)

(44) ***n**-án-o-**n**-an* ***n**-u-jo-ulo*
CL15-QUANT-INFX-CL15-DUP CL15-2SG-go-DIR .PFV
'Whenever you come.' (Part-Obsv)

Note that class 2 and class 8 show phonological similarities in some agreement targets as was also shown in Table 1. However pronominal agreement markers on independent pronouns differentiate these two classes and correspond to human versus non-human semantic differences.

(45) ***gu**-tti-ol* ***bug**-ay* ***gu**-ot-ulo?*
NCM8a-same.sex.sibling-3SG.POSS CL2-INT CL2-go.home-DIR.PFV
'Which among his brothers came back home?' (Introsp)

When nouns have a similar noun class marker but different agreement correspondents, then they belong to different classes. This criterion distinguishes some cases of multiple semantic classification revealed by non-alliterative agreement from cases of class membership revealed by alliterative agreement as exemplified in (46) and (47). Recall that cases of multiple classification are, as argued above, manifestations of multiple semantic categorization strategies.

(46) ***bá**-jur* ***b**au**b**-u* *n-**a**-kkay* ***a**-juh*
NCM5b-young.woman CL5:DEM-MED LOC-CL1-leave CL1-see

á-pur
NCM1-young.man

'The young woman went to see a young man.' (ss041013_gnabai)

(47) ***bá**-rusu* ***b**a**b**u* ***bu**-roŋ* *t-o?*
NCM5b-jigger CL5:DEF CL5-remain CL13-PRO
'Are jiggers still there?' (Part-Obsv)

With count nouns illustrated in (48) and (49), singular and plural forms of the same noun stem are traditionally considered as different classes (Sapir, 1965: 61, Welmers, 1973: 162), even when they have similar agreement

markers. This approach which is universally adopted in Jóola linguistics distinguishes class 9 *ga-* and class 8 *gu-* which also has a subclass NCM8b *ga-*. It is only by considering singular and plural as different classes that one can separate classes 8 and 9 since they exhibit similar agreement markers. Following this criterion, it can be argued that examples (48) and (50) illustrate two different classes since the former is singular whereas the latter is plural.

(48) ***ga****-rej* ***g****a****g****u* ***gu****-ba-e*
NCM9-tale CL9:DEF CL9-finish-PFV
'The tale is finished.' (ss20030206_Garej)

(49) ***gu****-mangu* ***g****a****g****u* ***gu****-pu-put*
NCM8a-mango CL8:DEF CL8-rot-DUP
'The mangoes are rotten.' (Introsp)

(50) *jama* ***gá****-gguh* ***gu****-baj-ut*
today NCM8b-genie CL8-have-NEG
'Today there are no genies.' (ss20090319_mussay1)

The application of the criteria discussed above results in the fifteen noun classes presented in Table 1. The inventory of noun classes proposed here differs from previous works in that it does not accept the so-called postprefix as a valid element in the present stage of the language. For example, class 9 *ga-* is not interpreted as being derived from an underlying **Cu-a* noun class as argued by Bassène (2007) and Tendeng (2007).

Another difference between the inventory provided here and that provided by Bassène (2007: 32) is that he proposes a regular singular-plural correlation between NCM 11 *ju-* and NCM 8 *gu-*. NCM 10 *mu-* is in his analysis one that does not participate in singular and plural correlations. My proposal about this specific point is in line with Tendeng's, where NCM 11 *ju-* appears as the singular regular form of class 10 *mu-* (v. Table 2). The correspondence between NCM 11 *ju-* and NCM 8 *gu-* is the irregular one since it only contains one member *jí-çil* 'eye', *gú-çil* 'eyes'. Tendeng on the other hand finds sixteen classes which differ from Bassène's inventory and the one I propose here. She has an additional class 13 *ba-*, which is interpreted by Bassène as deriving from the underlying form of class 5 **bu-a-*. My interpretation of that prefix is that it is a subclass of class 5 *bu-*, bearing in mind that the term *subclass* indicates a semantic tendency but does not describe a formal differentiation. The analysis provided in the current paper deviates from that provided by Bassène by rejecting the inclusion of the postprefix in the analysis.

4. Conclusion.

The North Atlantic Jóola languages of Niger-Congo that exhibit overt nominal classification systems have attracted increasing interest from descriptive linguists in the last decades. The noun class systems of these languages have generally lacked detailed investigations, however, since they are in most cases studied in the framework of larger projects of grammatical descriptions. Due to the numerous forms taken by noun class prefixes in these languages, the complex singular-plural correlations and the irregular agreement correspondences between controllers and targets, other descriptions have been characterized by disagreements between authors, even those describing the same language, as with Eegimaa. Most of the disagreement is related to the treatment of the noun class prefixes of the forms *Ca-* and to some extent those having the form *C-*.

Sapir and his followers analyze prefixes of the form *Ca-* as separate noun class markers whereas Sambou and the subsequent proponents of the so-called postprefix argue that the prefix form *Ca-* is a result of the deletion of the high back vowel /*u*/ of the underlyingly **Cu-a-* form where *-a-* is termed the postprefix. This paper has provided a critical analysis of the criteria used in previous works on Eegimaa and other Jóola languages to give an inventory of noun classes. I discussed the origins of the so-called postprefix and argued that it is irrelevant to the study of nominal classification systems such as that of Eegimaa, because there is no synchronic evidence to support such an analysis.

Using data from Eegimaa which does not exhibit a fully-fledged alliterative system, I argued that the inventory of noun classes in this language and other Jóola languages having similar systems should be based on the rigorous application of agreement criteria that take the language-specific aspects of the system into account. The application of these criteria has revealed that in addition to simple cases of classification revealed by alliterative agreement, Eegimaa also exhibits unproductive multiple semantic classification which formally manifests itself by a lack of alliterative agreement. The cross-linguistic and language-specific diagnostic criteria proposed here may consequently be more applicable for future studies of other Jóola languages than the frequent automatic adoption and application of the analysis based on the postprefix.

Abbreviations Used

1	First person	INTROSP	Introspection
2	Second person	MED	Medial (demonstrative
3	Third person	*	Underlying form/unattested form
AGT	Agentive	MID	Middle voice
C	Consonant	NCM	Noun class marker
CL	Agreement/concord marker, Co-Indexed with corresponding noun class (on verb)	NEG	Negations
COLL	Collective	ORD	Ordinal
DEF	Definite	PERM	Permissive
DEM	Demonstrative	PFV	Perfective
DIR	Directional	PL	Plural
DO	Direct Object	PROX	Proximal (demonstrative)
DUP	Reduplication	POSS	Possessive
EXCL	Exclusive	PRES	Presentative
FUT	Futurity	PRO	Pronoun
HAB	Habitual	QUANT	Quantitative
INDEF	Indefinite	REL	Relative
INFX	Infix	SUBJ	Subject
INT	Interrogative	SG	Singular

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