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## The syntax of plural marking: the view from bare nouns in Wolof

**1 Introduction.** Wiltschko:2008 distinguishes between two types of number (#) features. An **inherent #** heads its own projection and has a number feature to be valued. A **modifying #** does not head its own projection and adjoins to the noun. Wiltschko proposes that these two types of features can be part of either $D^0$ or $N^0$. Implied in the system (p. 688) is the possibility that one of $D^0$ and $N^0$ has a modifying # while the other has an inherent #. Novel data from Wolof suggests that this possibility is realized: positing an inherent # in $D^0$, but a modifying # in $N^0$ allows us to capture the distribution of B(are) N(ouns) in this language. The goals of this paper are: *(i)* expand the empirical domain of languages with a rich system of determiners, but which also allow for BNs; *(ii)* provide further empirical support for the view that # has variable loci.

**2 BNs are singular.** Wolof is a language that has overt determiners (Tamba et al.2012, a.o.), but it also allows for nominals to occur without any determiner. The latter are dubbed 'BNs'.

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

Unlike BNs in some languages (Rullmann&You:2006; Paul:2016; a.o.), BNs in Wolof do not seem to be number neutral (ie. to entail *one or more*). They *cannot* be the antecedent of plural discourse anaphora (2) or of a plural interrogative pronoun (3), combine with a plural particle (*ñu*) that tracks the number of a predicate's semantic subject (4), saturate a collective predicate (5), bind a reciprocal (6). These data suggest that ***BNs in Wolof are singular***.

(2)     Gis na-a     **jangalekat**. Maymuna bëgg na       ko      / *leen.
        see NA-1SG teacher$_{BN}$    Maymuna like  NA.3SG OBJ.3SG / *OBJ.3PL
        Lit.: 'I saw teacher. Maymuna admires her/*them.'

(3)     Jangalekat b-i        seet na     **nonggo darra**, waay xa-w-ma        k-an     / *y-an     la.
        teacher     CM.SG-DEF visit NA.3SG student$_{BN}$      but  know-NEG-1SG CM.SG-Q / *CM.PL-Q COP.3SG
        Lit.: 'The teacher visited student, but I don't know which.SG/*which.PL.'

(4)     Isaa wax na      **nonggo darra** *(y-i)          ñu  binda a-b            leetar.
        Isaa say  NA.3SG student$_{BN}$       *(CM.PL-DEF) 3PL write INDEF-CM.SG letter
        'Isaa told *child/the children to write some letter.'

(5)     *Jangalekat b-i        dajeele na      **xale**   ci   bayaal b-i.
        teacher     CM.SG-DEF gather  NA.3SG child$_{BN}$ PREP park   CM.SG-DEF

(6)     *Jangalekat b-i         wanale   na **nonggo darra** ñu  xam-ante.
        teacher      CM.SG-DEF introduce NA student$_{BN}$       3PL know-RECIP

**3 BNs can be plural.** R(elative) C(lauses) contain a C(lass) M(arker) affixed to COMP (Torrence:2012; Martinović:2017). The RC's CM requires that the RC's head match in number.

(7)     Awa defar na      oto [$_{RC}$ y-u          Samba jënd ] y-i          / *b-i.
        Awa fix    NA.3SG car [   CM.PL-COMP Samba buy  ] CM.PL-DEF / *CM.SG-DEF
        'Awa fixed the cars that Samba bought.'

Contrary to what might be expected from §2, a plural RC (8) can have a BN as its head.

(8)     Fajkat b-i        seet-i   na     **xale**   [$_{RC}$ y-u          feebar ].
        nurse  CM.SG-DEF visit-go NA.3SG child$_{BN}$ [   CM.PL-COMP sick    ]
        'The nurse visited some children who are sick.'

Furthermore, adding a *y-u* plural RC allows the BN to be legitimate in the sentences in §2, leading us to conclude that ***BNs can be made plural***.

(9)     Gis na-a    **jangalekat** [$_{RC}$ y-u          Roxaya xam   ]. Maymuna bëgg na       *ko       / leen.
        see NA-1SG teacher$_{BN}$    [   CM.PL-COMP Roxaya know ] Maymuna like  NA.3SG *OBJ.3SG / OBJ.3PL
        'I saw some teachers who Roxaya knows. Maymuna admires them.'                                          *(cf. (2))*

(10)    Jangalekat b-i        seet na     **bindakat** [$_{RC}$ y-u          Maymuna bëgg ], waay
        teacher     CM.SG-DEF visit NA.3SG writer$_{BN}$ [   CM.PL-COMP Maymuna like  ] but

xa-w-ma      *k-an    la     / y-an     la.
know-NEG-1SG *CM.SG-Q COP.3SG / CM.PL-Q COP.3SG
'The teacher visited some writers who Maymuna likes, but I don't know which.'     *(cf. (3))*

(11)   Isaa wax na    **nonggo darra** [$_{RC}$ y-u      Samba xam ] ñu   janga téere y-i.
      Isaa say   NA.3SG student$_{BN}$     [   CM.PL-COMP Samba know ] 3PL read   book CM.PL-DEF
      'Isaa told some children who Samba knows to read the books.'     *(cf. (4))*

(12)   Jangalekat b-i      dajeele na     **xale**    [$_{RC}$ y-u      Samba xam ] ci    bayaal b-i.
      teacher    CM.SG-DEF gather   NA.3SG child$_{BN}$ [   CM.PL-COMP Samba know ] PREP park    CM.SG-DEF
      'The teacher gathered some students who Samba knows in the park.'     *(cf. (5))*

(13)   Dimbala na-a    **xale**      [$_{RC}$ y-u          njool ] **ñu**   janga téere b-i.
      help     NA-1SG child$_{BN}$    CM.PL-COMP tall      ] 3PL read   book CM.SG-DEF
      'I helped some tall children read the book.'     *(cf. (6))*

**4 Analysis.** The analysis will rely on the following ingredients: *(i)* I posit a CMP where the Wolof's CM is placed. Because this morpheme encodes number information, I also posit that it contains an inherent # that can be SG or PL. Finally, I posit that BNs in Wolof are bare because they lack a CMP. *(ii)* Kramer:2016 proposes that *n* can bear a plural # feature. Nothing seems to prevent a singular *n*, so I posit that Wolof has a $n_{SG}$ available in its lexicon. Also following Kramer, I assume that $n_{SG}$ co-exists with a plain, #-less *n*. By assumption, to avoid a semantic clash, $n_{SG}$ can only combine with a singular CM, while the plain *n* can combine with a singular or plural CM. *(iii)* I follow Wiltschko in assuming that the modifying # adjoins to the root and that, being a modifier, it is optional. The root is below the categorizer *n*. *(iv)* Following Danon:2011 and Landau:2016, I assume that $D^0$ has unvalued $\varphi$-features, including [# : _] that are valued by DP-internal features. *(v)* Following Marantz:2007, I assume that categorizers like *n* are phases. Under review: the inherent # in CM can supply the # feature sought by $D^0$. Because of the presence of CMP, the derivation converges with the #-full or #-less *n*, provided that there is no semantic number clash. The presence or absence of the modifying # is rendered irrelevant for syntactic covergence, though semantic well-formedness independently rules a derivation in or out. In BNs (15), the absence of CMP has as a byproduct the need for a $n_{SG}$, since there is no other goal to value [# : _] in $D^0$. The grammar can derive a BN with a plain *n* or a modifying #, which, by *(ii)*, is optional. However, because *n* is a phase (cf. *(v)*), the plural feature in # is not visible to $D^0$ (PIC, Chomsky:2001). The reason why unmodified BNs in Wolof behave as if they were singular (§2) is that the derivation only converges if the *n* used is $n_{SG}$. If a plural RC is added (16), a plural # feature can be supplied to $D^0$, even if $n_{plain}$ is used. The presence of a source of plural # renders the invisibility of the modifying # below *n* inconsequential to the convergence of the derivation, allowing BNs with a plural interpretation to be licensed (§3).

(14)     [$_{DP}$ $D^0_{[\#:\_]}$ [$_{CMP}$ $CM^0_{[\#:SG/PL]}$ [$_{nP}$ $n_{plain}$ / $n_{[\#:SG]}$ [$_{\sqrt{P}}$ [$_{\sqrt{P}}$ ] [$_{\#}$ $\#_{[\#:PL]}$ ]]]]]       *full nominal*

(15)     [$_{DP}$ $D^0_{[\#:\_]}$ [$_{nP}$ *$n_{plain}$ / $n_{[\#:SG]}$ [$_{\sqrt{P}}$ [$_{\sqrt{P}}$ ] [$_{\#}$ $\#_{[\#:PL]}$ ]]]        *unmodified BN*

(16)     [$_{DP}$ $D^0_{[\#:\_]}$ [$_{nP}$ [$_{RC}$ **y-u**$_{[\#:PL]}$ ] [$_{nP}$ $n_{plain}$ [$_{\sqrt{P}}$ [$_{\sqrt{P}}$ ] [$_{\#}$ $\#_{[\#:PL]}$ ]]]]]       *BN modified by RC*

**4.1 A prediction.** The analysis predicts that modifiers that do not have number will not have the same effect that *y-u* RCs do. This prediction seems to be correct *(cf. (13))*:

(17)   *Isaa wax na     **nonggo darra** breziliën ñu   janga téere y-i.
      Isaa say   NA.3SG student$_{BN}$      Brazilian 3PL read   book CM.PL-DEF

**5 Conclusion.** The analysis relies on mostly independently motivated ingredients to derive the distribution of BNs in Wolof, which seem to have an singular interpretation, unless they are modified by a plural RC. If correct, it may provide further support for Wiltschko's analysis of # and the literature on the multiple positions that # can occupy (Kramer, Ouwayda:2017, a.o.).