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Bantu DP structure: A *n* analysis of gender

Bantu noun classes

- All nouns in Bantu languages belong to a noun class.
- Bantu languages have on **average 12-20 noun classes**.
- Carstens (1991, 1993, 2008) analyzes Bantu noun classes as **combined number and gender information**, e.g. classes 1/2 are SG/PL of gender A, as visible in the noun prefix, concord on modifiers, and verb agreement (cf. Bresnan 1991):

(1) A SG **m**-toto   hu-**yu**   **a**-na-soma
        1-child   DEM-1   1SM-PRES-read
    PL **wa**-toto   ha-**wa**   **wa**-na-soma
        2-children   DEM-2   2SM-PRES-read
   D SG **ki**-tabu   hi-**ki**   **ki**-na-som-wa
        7-book   DEM-7   7SM-PRES-read-PASS
    PL **vi**-tabu   hi-**vi**   **vi**-na-som-wa
        8-book   DEM-8   8SM-PRES-read-PASS

Question:

What is the structural representation of noun classes and gender in Bantu languages? How are non-derived noun classes structurally similar to or different from derived noun classes (infinitives, diminutives, etc.)?

Goal:

To show that analyzing gender as located on *n* (Kramer 2014) in Bantu languages provides new insight into Bantu DP structure, thereby offering further evidence for gender on *n* as a crosslinguistically plausible and uniform analysis.

Gender on little *n*

- Little *n* renders a structure nominal, whether it is attached to a root, a noun, verb or clause.
- We assume Kramer's (2015) structure of the DP:

(2)
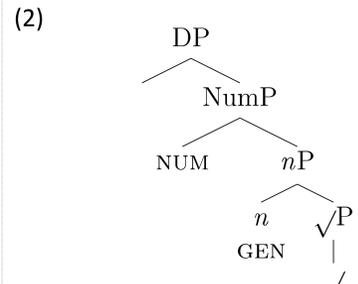
- Distributed Morphology insertion rules determine how roots and heads are spelled out in each (obligatory) context:

(3) a. (n_A (√guest)) → geni   m-geni 'guest' (class 1)
    b. (n_C (√car)) → gari   ma-gari 'cars' (class 6)
    c. n_A + SG → m-   m-toto 'child' (class 1)
    d. n_A + PL → wa-   wa-toto 'children' (class 2)

- Kramer notes that there can be **many 'flavors' of *n***.

Where no references are indicated, data are gathered by the authors.

Gender on *n* as nominalizer

- If gender is on *n*, then we expect **derived nouns of a particular category** to have **consistent gender**, e.g. all infinitives are assigned the same gender.
- In Bantu languages, **infinitives have a dedicated noun class** (class 15), suggesting a dedicated n_{inf} cuts off the verbal projection (4):

(4)

(5) a. n-a-laba   b. o-**ku**-(mu-)laba
     1SM-PST-see   AUG-15-(1OM-)see
     'I saw.'   'to see (him/her)'   [Luganda]
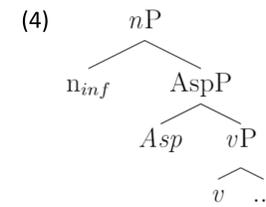
- Nominalizations of other categories can be formed using regular noun class prefixes.

(6) a. -rat- 'love'   b. **le**-rat-o   c. **mo**-rat-iw-a
             5-love-NMLZ   1-love-PASS-FV
             `love (n.)'   'beloved one'   [Northern Sotho, Mletshe 2017: 32-33]

- These show variation in size, and can even contain an object (V+O) -- evidence of nominalizing *n* being able to take a larger verbal projection as its complement.

(7) a. **mu**-sal-a-n-kwawa   b. **mu**-ten-z-a-ggulu
     3-cut-FV-9-armpit   1-shake-CAUS-FV-heaven
     'sleeveless cloth'   'earthquake'   [Luganda]

- This demonstrates that **gender as marked by noun class markers has nominalizing properties**, as predicted by a *n* analysis of gender.

Locatives as *n*

- In many Bantu languages, **locatives are DPs**, not PPs (cf. Marten 2010).
- Locative DPs can also be analysed using *n*, with crosslinguistic variation in size of the complement:
- *n* + root (limited)

(8) pá-ntú   kú-ntú   mú-ntú
    'on a place' Cl. 16   'somewhere' Cl. 17   'somewhere inside' Cl. 18
            [Luba-Kasai L31a; Kuperus & Mpunga wa Ilunga 1990: 37]

- *n* + NumP

(9) pa-n-gándá   kú-n-gándá   mu-n-gándá
    16-9-house   17-9-house   18-9-house
    'at the house'   'to the house'   'in the house'   [Bemba, Marten 2012: 433]

(10)

- *n* + DP

(11) o-**mu**-ti   m-**o**-mu-ti
     AUG-3-tree   18-AUG-3-tree
     'a/the tree'   'in the tree'   [Kwanyama, Halme 2004:162]

- If the augment reflects D (De Dreu 2008, Visser 2008), then its presence between the locative and basic prefix indicates a DP complement, as seen for the Kwanyama augment -*o*- (11). This is impossible in Lugwere:

(13)

(12) **a**-ka-tale   o-mu-ka-tale   *o-mu-**a**-ka-tale
     AUG-12-market   AUG-18-12-market   AUG-18-AUG-12-market
     'market'   'at/on the market'   [Lugwere]

- Therefore **not all languages have a 'double DP' structure** for locatives as in (13) (pace Bresnan & Mchombo 1995; Carstens 1997, 2008); Lugwere takes a NumP complement (10).
- Even for locatives without an overt locative prefix, verbal agreement reveals the same structure:

(14) Nyumba-ni   pa-/ku-/m-na   wa-tu   w-engi.
     9.house-LOC   16/17/18-have   2-people   2-many
     'In/at the house are many people.'   [Swahili, Carstens 1997:402]

- The behaviour of Bantu locatives as nouns and the variation in complement size can straightforwardly be captured in a *n* analysis of gender.
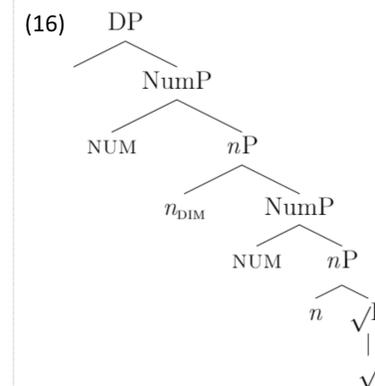
Denominals: diminutives & augmentatives

- Diminutives and augmentatives form another class of derived nominals.
- These nouns are formed through the addition of a **dedicated noun class marker**:

(15) a. mu-kómáná   c. **ka**-mu-kómáná
      1-boy   12-1-boy
      'boy'   'tiny boy'
   b. **ru**-mu-kómáná   d. **zi**-mu-kómáná
      11-1-boy   21-1-boy
      'thin, scraggly boy'   'big boy'   [Shona; Déchaine et al. 2014:35]

(16)

- This can also be analyzed as stacking of *n* with diminutive semantics → a **denominal noun** analysis of diminutives and augmentatives.
- In some languages (e.g. Makonde), diminutive/ augmentative prefixes take a smaller complement (a root), replacing the original noun class marker.
- Following Kramer (2014), the **gender on the highest n "wins"** in determining verbal agreement:

(17) **chì-mù**-kómáná   **chì**/* à-nò-fámbá
     7-1-boy   7SM/*1SM-HAB-walk
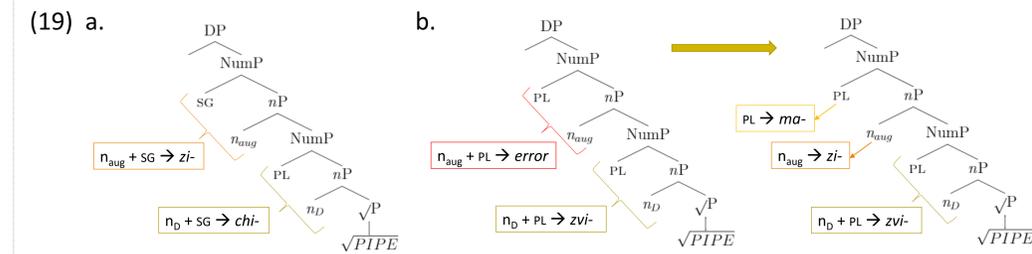   `(The) slim boy walks.'   [Shona, Déchaine et al. 2014 adapted]

Multiple instances of NUM?

(18) a. **zi-chi**-kwepá   b. **ma-zi-zvi**-kwepá
     21-7-pipe   6-21-8-pipe
     'big pipe'   'big pipes'   [Shona, Déchaine et al. 2014]

(19) a.   b.

- Class 6 *ma-* is the default plural in many languages.
- Given language-specific insertion rules, the *n* analysis of gender **properly accounts for multiple instances of number**.

Further research

- In some languages, locatives (but typically not diminutives) allow concord on modifiers either with the inner noun or the outer locative (Bresnan & Mchombo '95, Carstens '97).
- Locative nouns can also be formed by the suffix -*ni*. In languages where this is the only locative marker, we assume that this is the spell-out of n_{loc}. A further puzzle are languages with both pre- and suffixes (though not always obligatory):

(20) a. va-tákúlú   b. o-ttóló-ní   c. m-múrúddá-ní
     16-9a.courtyard   17-well-LOC   18-3.village-LOC
     'at home'   'at the well'   'in the village'   [Cuwabo, Guerois 2014: 51, 63]

- There is further variation in deverbal nouns taking a suffix depending on the semantics of the resulting noun, typically -*i* or -*o* (Mugane 1997, Mletshe 2017).

(21) a. mu-shum-i   <   -shum- 'work'   b. vu-tshil-o   <   -tshil- 'live'
     1-work-NMLZ   14-live-NMLZ
     'worker'   'life'   [Venda, Mletshe 2017: 32]

Conclusions:

Postulating gender on *n* allows for a crosslinguistically uniform and plausible analysis; doing so also captures common nominalizing properties of Bantu noun class markers and provides a unified structure of Bantu nominals, including derived nominals and potentially locatives.