

The nanosyntax of noun class prefixes in Bantu

Lecture 2

1. Recap

- The Nguni adjectival concords (acs) are built from an invariant subset of the heads that form the class prefixes on nouns.
- The Nguni subject concords (scs) also correspond to fixed head occurring inside the class prefixes on nouns, but this head is neither the same head that is used for the acs, nor the head spelling out as the initial vowel:

(1) the prefix on N: the sc: the ac:
 [X_n [Z_n [Y_n]]] [Z_n] [Y_n]

- The head Z used by the scs is lexicalized by the same morpheme that lexicalizes X in some classes, but by the same morpheme that lexicalizes Y in other classes:

(2)a [X₂ [Z₂ [Y₂]]] (class 2)
 | |
 | |
 a ba

b [X₁ [Z₁ [Y₁]]] (class 1)
 | |
 | |
 u m

2. Overview

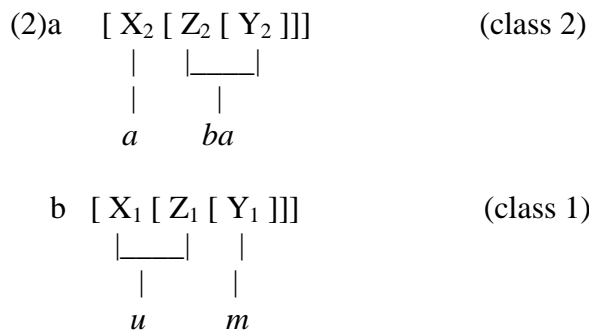
- We will look at two observations that support the analysis of scs in (1)-(2). These concern the distribution of the initial vowel in Swati and the formation of demonstratives.
- Then, we will look at the object concords (ocs) and argue that these justify positing yet another structural layer within the class prefixes appearing on nouns.
- Finally, we will see that the special agreement markers on the “enumerative” adjectives motivate a final structural layer at the bottom of the full class prefixes seen on nouns.
- Along the way, some principles assumed to govern lexical insertion will be introduced.

3. Two predictions borne out

The aim of this section is to identify two predictions made by the analysis of scs in (1)-(2) and then discuss two empirical observations that seem to verify those predictions.

3.1. A prediction about initial vowels

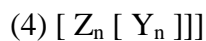
The analysis of the scs embodied in (1)-(2) claims that the initial vowel in Zulu and Xhosa in some classes lexicalizes only the highest head X_n , while it lexicalizes both X_n and the lower head Z_n in other classes, as exemplified in (2):



All classes with where the sc is a V, are like class 2 and have the same morpheme V lexicalizing both X and Z:

- (3) Classes where the initial vowel also lexicalizes Z:
1, 3, 4, 6, 9

Suppose now that a language L otherwise identical to Zulu and Xhosa (including the lexical entries) does not project the functional structure on nouns beyond Z, i.e. the maximal structure will be as in (4):



The prediction is that L should have an initial vowel only in the classes listed in (3).

3.2. The distribution of the initial vowel in Swati

Consider now the distribution of the initial vowel in Swati:

- | | | | | |
|-------------|-------------|---------|-------------|---------|
| (5) Class 1 | <i>umu-</i> | Class 2 | <i>ba-</i> | (Swati) |
| 3 | <i>umu-</i> | 4 | <i>imi-</i> | |
| 5 | <i>li-</i> | 6 | <i>ema-</i> | |
| 7 | <i>si-</i> | 8 | <i>ti-</i> | |
| 9 | <i>iN-</i> | 10 | <i>tiN-</i> | |
| 11 | <i>lu-</i> | | | |

14 *bu-*

15 *ku-*

Unlike Xhosa and Zulu, Swati only has an initial vowel in classes 1, 3, 4, 6 and 9.

On our analysis this is because the class prefixes on nouns only have the structure in (4) in Swati, while the scs are the same, e.g. there are morphemes *u*, *a* and *i* as in (6):

(4) [Z_n [Y_n]]

(6)a *u* ↔ Z_{2,3}

b *a* ↔ Z₆

c *i* ↔ Z_{4,9}

So:

(7)a [Z_{1/3} [Y_{1/3}]] (classes 1 and 3)

| |
u *mu*

b [Z₆ [Y₆]] (class 6)

| |
a *ma* (but ?!)

c [Z₄ [Y₄]] (class 4)

| |
i *mi*

d [Z₉ [Y₉]] (class 9)

Alternatively, Swati nouns have X lexicalized by a floating high tone in all classes, e.g. as in (8):

(8)a [X₂ [Z₂ [Y₂]]] (class 2)

| |_____|
| |
H *ba*

b [X₁ [Z₁ [Y₁]]] (class 1)

| | |
H *u* *m*

3.3. A prediction about truncation at the bottom

At first glance, the Nguni class prefixes seem to be made up by only two parts, the initial vowel and the CV part following it, e.g. as in (9):

(9)a [u [mu]] (class 1)

b [a [ba]] (class 2)

But our analysis of the scs claims that there are really (at least) three parts, as in (10), where Z is the head copied in the scs:

(10) [X_n [Z_n [Y_n]]]

The analysis also entails (11):

(11)a In the classes where the sc is a V, the CV part of the prefix only lexicalizes the lowest head Y.

b In the classes where the sc is a CV, the CV part of the prefix lexicalizes both Z and Y

For example:

(12)a [X₁ [Z₁ [Y₁]]] (class 1)

_____ |
| |
u *m*

b [X₂ [Z₂ [Y₂]]] (class 2)

| _____
| |
a *ba*

Suppose now that there is an environment E in which a truncated version of (10) occurs, lacking the lowest head Y. According to our analysis, (13) should hold for the prefixes occurring in E:

(13) The prefix retains its CV part in all and only those classes whose scs are V

For example:

(14)a [X₁ [Z₁]]] (class 1)

_____ |
| |
u

b [X₂ [Z₂]]] (class 2)

| |
a *ba*

The classes whose scs are a V, are 1, 3, 4, 6 and 9. So, the following should hold:

(15) The prefix retains its CV part in all classes except 1, 3, 4, 6, and 9

3.4. The Nguni demonstratives

(16) Class 1	<i>lo</i>	Class 2	<i>laba</i>	(Zulu)
3	<i>lo</i>	4	<i>le</i>	
5	<i>leli</i>	6	<i>la</i>	

7 *lesi*
 9 *le*
 11 *lotu*
 14 *lobu*
 15 *loku*

8 *lezi*
 10 *lezi*

The demonstratives are transparently composed as exemplified in (17) for classes 2, 8/10 and 11:

- (17)a [la [X a [Z ba]]] (and /aa/ → [a])
 b [la [X i [Z zi]]] (and /ai/ → [e])
 c [la [X u [Z lu]]] (and /au/ → [o])

Or:

- (18)a [la [X [Z]]] (class 1,3: *lo*)
 |
 u (and /au/ → [o])
 b [la [X [Z]]] (class 4, 9: *le*)
 |
 i (and /ai/ → [e])
 c [la [X [Z]]] (class 6: *la*)
 |
 a (and /aa/ → [a])

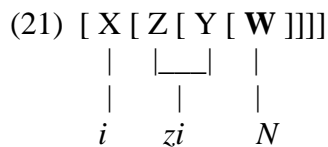
Thus:

- (19) In every class, the demonstrative contains the V part of the corresponding class prefix, and it also contains the CV part except in classes 1, 3, 4, 6 and 9.

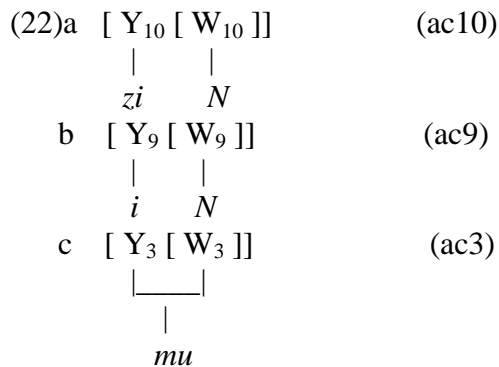
3.5. A special case: class 10

- (20)a the class 10 prefix on nouns = *iziN-*
 b sc10 = *zi-*
 c ac10 = *ziN-*
 d the class 10 demonstrative = *lezi*

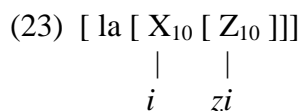
Thus, the class 10 prefix contains three morphemes *i – zi – N* rather than two (*i – ziN*) and the structure of the prefix must contain at least four heads:



Correspondingly, the acs copy both of the two lowest heads Y and W:



The class 10 demonstrative:

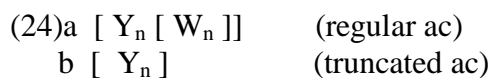


4. The lowest heads

We have just claimed that acs contain at least two distinct heads and will first provide independent support for this. Then, we will show that there must be yet another head at the bottom of the structure.

4.1. A prediction about truncated acs

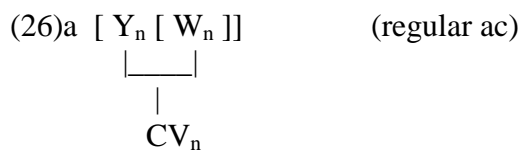
If acs have the structure in (24)a with two heads, the possibility arises that there could be truncated acs missing the lower head W, as in (24)b:



In all classes except 9 and 10, (24)a is lexicalized by a single morpheme with a lexical entry like (25):



In these cases, the truncated acs will look exactly like the regular acs:





But in classes 9 and 10, the truncated ac should lack the $-N$.

4.2. The enumerative concords

The enumeratives constitute a subset of the adjectives with special properties, e.g. those in (27) (Zulu):

(27) *-nye* “one”, *-phi* “which”, *-mbe* “different, other”, *-ni* “what kind of”

These come with concords which coincide with the regular acs except in classes 9 and 10:

- (28)a class 9 *yiphi incwadi*
 AC9-which 9-book
 b class 10 *ziphi izincwadi*
 AC10-which 10-book

In classes 9 and 10, the regular acs have a final N (ac9 = iN -, ac10 = ziN -), the enumerative concords (*yi*- and *zi*-) don't.

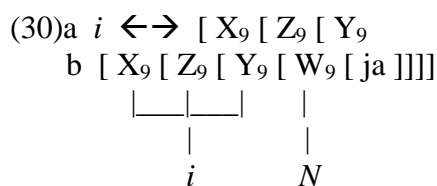
Thus, the enumerative concords instantiate the scenario described in 4.1.

4.3. When the initial vowel drops

In vocatives, in the scope of negation and with a pronominal demonstrative, the noun loses its initial vowel in all classes, e.g as in (29) with class 9 *inja* ‘dog’.

(29) Hamba, (*i)nja!
 go 9-dog

But the class 9 initial vowel i – lexicalizes all three heads above W:



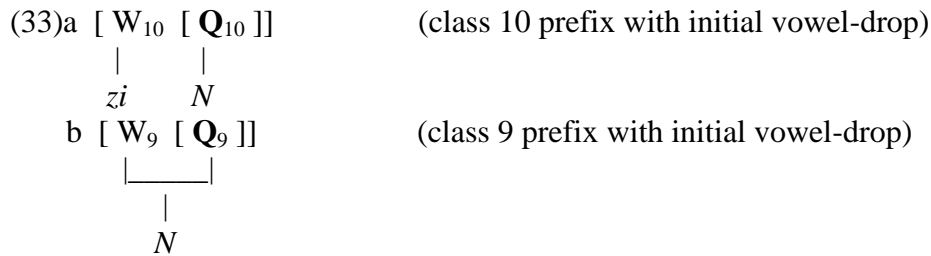
Therefore:

(31) Dropping the initial vowel corresponds to trimming the structure down to W.

But the vocative of class 10 *izinja* ‘dogs’ retains the $-zi$ -:

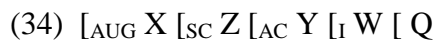
(32) Hambani, zinja!
 go-pl 10-dog

Therefore, therefore *zi* must lexicalize W, and there must be an additional head below Q holding the *N*:

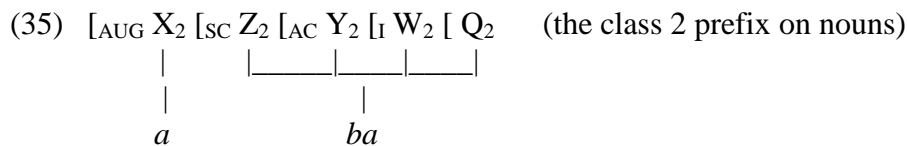


5. Summary

- A class prefix on a noun must contain (at least) five heads: [X [Z [Y [W [Q.
- Using labels reminiscent of the structural properties of the heads and their relation to the different concords:



- Each morpheme occurring in the concords or inside the prefixes on nouns can lexicalize more than a single head. For example, in all classes with a sc = CV (except class 10), the CV lexicalizes all four heads below X:



6. Preview

- We will introduce the object concords and fit them into the analysis.
- We will discuss syncretisms between different concords of the same class and their significance for the analysis.
- We will look at the special class 1 participial sc and show that it follows from the analysis that only class 1 can have a special participial sc