

The nanosyntax of noun class prefixes in Bantu

Lecture 1

1. The syntax/lexicon interface

I begin by outlining two views on the relationship between morphemes and syntactic structures – the traditional/mainstream one and the nanosyntactic view. Most of what follows in the next sections, is part of an argument in favor of the second view.

1.1. The traditional view

(1) The terminal nodes (heads) in a syntactic tree are morphemes (lexical items)

True both of the classical lexicalist view adhering to (2) and Distributed Morphology (DM) as characterized in (3):

(2)a Morphemes are triplets $\langle \text{Ph}, \text{Sem}, \text{F} \rangle$, where Ph is a phonological matrix, Sem represents conceptual meaning (“cat” vs “dog” etc) and F is a set of syntacticosemantic features (including syntactic category features, e.g. N, V,A, ...)

b Syntactic structures are built from morphemes

(3)a Morphemes are sets of syntacticosemantic features

b Syntactic structures are built from morphemes

c Vocabulary items (VIs) are triplets $\langle \text{Ph}, \text{Sem}, \text{F} \rangle$

d A VI X can replace a head H if the features F associated with X is a subset of the features F' associated with H (the Subset Principle)

DM also postulates a set of morphological rules mediating between syntax and vocabulary insertion, e.g. Fusion:

(4) Fuse two adjacent heads into one

1.2. The nanosyntactic view

(5)a Morphemes are triplets $\langle \text{Ph}, \text{Sem}, \text{T} \rangle$, where Ph is a phonological matrix, Sem represents conceptual meaning and T is a syntactic structure

b Syntactic structures are built from features

c A morpheme X can replace a syntactic constituent S if S is a subtree of the syntactic structure T associated with X (the Superset Principle)

Remarks:

(6) (5)b means that each semantico-syntactic feature is a syntactic head

(7) Syntactic heads are merged cumulatively according to a cross-linguistically invariant hierarchy (the fseq)

(8) (5)c limits lexical insertion to constituents

A relaxed version: “spanning”:

- (9)a Morphemes are triplets < Ph, Sem, Seq >, where Ph is a phonological matrix, Sem represents conceptual meaning and Seq is a subsequence of the fseq
b A morpheme X can replace any sequence of heads matching a subsequence of the Seq associated with it

2. A brief introduction to the Nguni noun class system

Nguni is a small subgroup of Southern Bantu comprising Xhosa, Zulu, Swati and Ndebele. Some descriptive works are listed in the references.

2.1. The noun classes

- (10) **umntu** **abantu** (Xhosa)
1 – person 2 – person
'a person' 'people'

- (11) Class 1 *um-* Class 2 *aba-* (Xhosa)
- | | |
|---------------------------|-------------------------------|
| 1a <i>u-</i> | 2a <i>oo-</i> ³ |
| 3 <i>um-</i> | 4 <i>imi-</i> |
| 5 <i>i(li)-</i> | 6 <i>ama-</i> |
| 7 <i>isi-</i> | 8 <i>izi-</i> |
| 9 <i>iN-</i> ⁴ | 10 <i>iziN-</i> / <i>iiN-</i> |
| 11 <i>u(lu)-</i> | |
| 14 <i>ubu-</i> | |
| 15 <i>uku-</i> | |

Morphophonology:

- (12)a The second part of the class 5 and class 11 prefixes only appear on monosyllabic roots
b Likewise, the class 10 prefix is *iziN* only on monosyllabic stems when the initial vowel is present, but *zi* appears even on polysyllabic stems in contexts where the initial vowel drops, as in (13)

- (13) Andiboni **zimfene**
not-1sg-se 10-baboon
'I don't see any baboons'

The initial vowel has a more restricted distribution in Swati:

(14) 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 <i>bu-</i>			
	15 <i>ku-</i>			

2.2. The concords:

Adjectives bear prefixes (adjectival concords – acs) matching a subpart of the corresponding class prefix on nouns:

- (15) *a-ba-ntwana ba-de* (Xhosa)
 ‘2 -child AC2-tall’
 ‘The children are tall.’
- (16) *u-m-ntwana m-de*
 ‘1 -child AC1-tall’
 ‘The child is tall.’
- (17) *i-mi-thi mi-de*
 ‘4 -tree AC4-tall’
 ‘The trees are tall.’

This relation holds throughout the paradigm:

(18)	the class prefix:	the AC:
class 1	<i>u-m-</i>	<i>m-</i>
2	<i>a-ba-</i>	<i>ba-</i>
3	<i>u-m-</i>	<i>m-</i>
4	<i>i-mi-</i>	<i>mi-</i>
5	<i>i-li-</i>	<i>li-</i>
6	<i>a-ma-</i>	<i>ma-</i>
7	<i>i-si-</i>	<i>si-</i>

8	<i>i-zi-</i>	<i>zi-</i>
9	<i>i-N-</i>	<i>i-N-</i>
10	<i>i-zi-N-</i>	<i>zi-N-</i>
11	<i>u-lu-</i>	<i>lu-</i>
14	<i>u-bu-</i>	<i>bu-</i>
15	<i>u-ku-</i>	<i>ku-</i>

Suggesting:

(19) full prefix:	the ac:
[X [Y]]	[Y]
a ba	ba

Verbs also bear prefixes (subject concords – scs) matching a subpart of the class prefix on nouns:

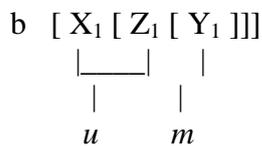
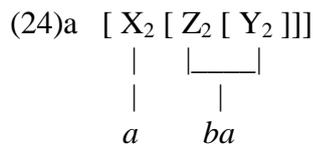
- (20) *U-m-ntwana u-ya-dlala*
 ‘1 -child SC1-Foc-play’
 ‘The child is playing’
- (21) *A-ba-ntwana ba-ya-dlala*
 ‘2 -child SC2-Foc-play’

But in some classes the sc matches the first part of the nominal prefix, while it matches the second part in others:

(22)	the class prefix	the SC
class 1	<i>u-m-</i>	<i>u-</i>
2	<i>a-ba-</i> ²³	<i>ba-</i>
3	<i>u-m-</i>	<i>u-</i>
4	<i>i-mi-</i>	<i>i-</i>
5	<i>i-li-</i>	<i>li-</i>
6	<i>a-ma-</i>	<i>a-</i>
7	<i>i-si-</i>	<i>si-</i>
8	<i>i-zi-</i>	<i>zi-</i>
9	<i>i-N-</i>	<i>i-</i>
10	<i>i-zi-N-</i>	<i>zi-</i>
11	<i>u-lu-</i>	<i>lu-</i>
14	<i>u-bu-</i>	<i>bu-</i>
15	<i>u-ku-</i>	<i>ku-</i>

Solution:

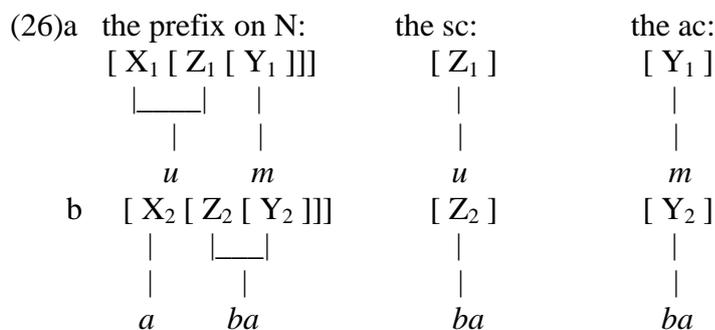
- (23)a the prefix on N: the sc: the ac:
 [X [Z [Y]]] [Z] [Y]
- b Z is lexicalized by the same morpheme that lexicalizes X or Y



Assuming morphemes specified as in (25):

- (25)a $ba \leftrightarrow [Z_2 [Y_2]]$, $a \leftrightarrow [X_2]$
 b $u \leftrightarrow [X_1 [Z_1]]$, $m \leftrightarrow [Y_1]$

By the Superset Principle:



3. Preview

- We will show that the analysis just proposed also allows simple accounts of the particular distribution of the initial vowel in Swati and of the shapes of the demonstratives across the different classes.
- Then, we will argue for a somewhat more fine-grained analysis of the acs leading to the conclusion that the structure underlying the nominal prefixes must be even richer than assumed above, and that “spanning” therefore is even more pervasive than shown here.

References (for all the lectures):

- Abels, K., Muriungi, P., 2008. The focus marker in Kĩtharaka: Syntax and semantics. *Lingua* 118, 687-731
- Bobaljik, J., 2007. On comparative suppletion. Unpublished manuscript, University of Connecticut
- Boškovic, Z., 2008. What will you have, DP or NP?. In: *Proceedings of NELS 37*
- Bresnan, J., Mchombo, S., 1987. Topic, pronoun and agreement in Chichewa. *Language* 63, 145-163
- Buell, L., 2006. The Zulu conjoint/disjoint verb alternation: focus or constituency? *ZAS*

- Papers in Linguistics 43, 9-30.
- Buell, L., 2005. Issues in Zulu Verbal Morphosyntax. Ph.D. dissertation, University of California, Los Angeles
- Caha, P., 2007. Case movement in PPs. *Nordlyd* 34.2, www.ub.uit.no/munin/nordlyd
- Caha, P., 2009. The nanosyntax of case, PhD dissertation. CASTL
- Cheng, L., Downing L., 2009. Against FocusP: Arguments from Zulu. Unpublished Manuscript, Leiden University
- Cinque, G., 1999. Adverbs and functional heads. Oxford University Press
- de Dreu, M., 2008. The internal structure of the Zulu DP. Master's thesis, Leiden University.
- Henderson, B., 2006. The syntax and typology of Bantu relative clauses. Ph.D dissertation, University of Illinois at Urbana-Champaign
- Inkelas, S., 1993. Nimboran Position Class Morphology. *Natural Language and Linguistic Theory* 11, 559-624.
- Jablonska, P., 2007. Radical decomposition and argument structure. PhD dissertation, University of Tromsø
- Khumalo, J. S. M., 1992. The morphology of the direct relative in Zulu. In: Gowlett, D.F. (Ed.), *African Linguistic Contributions*, pp. 210-226. Pretoria: Via Afrika.
- Krüger, C. J., 2006. Introduction to the morphology of SeTswana. *Lincom Europa*, Munich
- Maho, J., 2003. A classification of the Bantu languages: an update of Guthrie's referential system. In: Nurse, D., Philippson, G. (Eds.), *The Bantu Languages*, London, Routledge, pp. 90-102
- McCawley, J., 1968. Lexical insertion in a transformational grammar without Deep Structure. In: Darden, B.J. et al (Eds), *Papers from the fourth regional meeting of the Chicago Linguistic Society*. University of Chicago
- Medova, L., 2009. Reflexive clitics in Slavic and Romance. PhD dissertation, Princeton University
- Meeussen, A. E., 1967. Bantu grammatical reconstructions. *Africana Linguistica* 3, 81-121
- Meinhof, C., 1906. *Grundzüge einer vergleichenden Grammatik der Bantusprachen*. Berlin, Reimer.
- Muriungi, P., 2009. Phrasal movement inside Bantu verbs: Deriving affix scope and order in Kĩtharaka. PhD dissertation, CASTL
- Mzolo, D., 1968. The Zulu noun without the initial vowel. *African Studies* 27, 195-210.
- Neeleman, A., Szendrői K., 2007. Radical pro-drop and the morphology of pronouns. *Linguistic Inquiry* 38, 671-714
- Poulos, G., 1990. A linguistic analysis of Venda. *Via Afrika*, Pretoria
- Poulos, G., Louwrens, L.J., 1994. A linguistic analysis of Northern Sotho. *Via Afrika*, Pretoria
- Poulos, G., Msimang, C.T., 1998. A linguistic analysis of Zulu. *Via Afrika*, Pretoria
- Ramchand, G., 2008. *Verb meaning and the lexicon*. Cambridge University Press, Cambridge
- Riedel, K., 2009. The Syntax of Object Marking in Sambia A comparative Bantu perspective. Dissertation draft, Leiden University
- Starke, M., 2009. Nanosyntax: A short primer to a new approach to language. *Nordlyd* 36.1, 1 – 6
- Taraldsen, K. T., 2009. Lexicalizing number and gender in Colonnata. Unpublished manuscript, CASTL (available at lingBuzz/000884)
- van der Spuy, A., 1993. Dislocated noun phrases in Nguni. *Lingua* 90, 335-355.

- van de Velde, M., 2006. Multifunctional agreement patterns in Bantu and the possibility of genderless nouns. *Linguistic Typology* 10, 2183-221
- Visser, M., 2008. Definiteness and specificity in the isiXhosa determiner phrase. Unpublished manuscript, Stellenbosch University
- Weerman, F., Evers-Vermeul J. , 2002. Pronouns and case, *Lingua* 112, 301-338
- Williams, E., 2003. *Representation theory*. MIT Press, Cambridge
- Zeller, J., 2003. Word-level and phrase-level prefixes in Zulu. *Acta Linguistica Hungarica*, 50/1-2, 227-244
- Ziervogel, D., Mabuza, E.J., 1976. *A grammar of the Swati language*. J.L. van Schaik Limited, Pretoria