More reflections on the nasal classes in Bantu

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The purpose of this paper is to update what we know about the distribution of nasal consonants within certain Bantu noun class prefixes and their cognates outside of Bantu proper. Whereas Narrow Bantu languages have nasal consonants in the noun prefixes in classes 1, 3, 4, 6(a), 9 and 10, found also in certain Wide Bantu/Bantoid languages, these nasals are either missing or only partially present in other Bantoid, Benue-Congo and further outlying subbranches of Niger-Congo. Table 1 presents the reconstructions which have been proposed for Proto-Bantu (**Meeussen1967**), Proto-Benue-Congo (**deWolf1971**), Proto-Eastern and Western Grassfields Bantu (**Hyman1980nasalclasses**), and Proto-Gur (Miehe et al. 2007). Where two columns appear, the first represents the shapes of noun prefixes, the second the shapes of concord prefixes on agreeing elements. (For a broader discussion of East Benue-Congo noun class systems and their use of nasal consonants as noun prefixes, see Good, Chapter 2 of this volume, and in particular §1.)

Table 1: Reconstructions of Relevant Niger-Congo Noun Class Prefixes

class	Proto-Bantu		Proto-Benue-Congo		Proto-EGB		Proto-WGB		Proto-Gur
1 (sg.)	*mʊ̀-	*jʊ̀-	*ù-, *ò-	*gwu-, *à-	*N`-	*ʊ̀-	*ʊ̀(N)-	*ʊ̀-	*ʊ, *a
3 (sg.)	*mʊ̀-	*gʊ́-	*ú-	*gu-, *u-	*N`-	*ʊ́-	*ʊ́-	*ʊ́-	*ŋʊ
4 (pl.)	*mì-	*gí-	*í-	*zí- (?), í-	—	—	*í-	*í-	*i
6 (pl.)	*mà-	*gá-	*à	*ga-, *a-	*mà-	má-	*á-	*gá-	*ŋa
9 (sg.)	*N`-	*jì-	*è-, *ì-	*zì-	*N`-	*ì-	*ì(N)-	*ì-	
10 (pl.)	*N`-	*jí-	*í-	*zí- (?), í-	*N`-	*í-	*í(N)-	*Cí-	*ni
6a (-)	*mà-	*gá-	*mà-, *nà-	*ma-, *na-	*mà-	*mə́-	*mə-	*mə́-	*ma
6b (pl)	*mʊ̀-	*mʊ̀-	(?*mʊ-)						*mʊ
7 (sg.)	*kì-	*kí-	*ki-, *ke-	*ki-	à-	*í-	kí-	*kí-	—

As seen, only classes 6a and 6b reveal nasal prefixes through all of the above groups. In the last row I have shown the shapes of class 7 prefixes to illustrate one of the noun classes that is oral throughout Niger-Congo.[1]

Such forms as in Table 1 immediately raise two questions: (i) Where do the nasals come from? Are they innovated in Bantu according to the Crabb-Greenberg hypothesis (**Crabb1965 Greenberg1963**) or should they be reconstructed at the level of Proto-Niger-Congo (**Miehe1991**)? (ii) Whichever position one takes, how does one derive the above and other distributions of nasal vs. oral noun class markers? If innovated, why should this occur only on noun markers in Bantu? If lost, why should this occur so generally outside of Bantu—and perhaps more mysteriously, only on concord markers within Narrow Bantu?

It is generally assumed that cognate noun class markers can be reconstructed at the Proto-Niger-Congo (PNC) level. Thus consider the resemblance in forms in Table 2, modified from the German Wikipedia entry "Kordofanische Sprachen", following **Schadeberg1981**; **Schadeberg2011** While some of these resemblances are unmistakable, it is sometimes difficult to identify cognate noun classes between the most distant sub-branches, e.g. North Atlantic (Fula, Sereer) vs. Bantu (**Wilson1989**). While **Schadeberg2011** presents Kordofanian classes which are cognate with Bantu classes 1, 3, 4, 6, as in Table 3, there are several Kordofanian pairings that Schadeberg is not able to identify with Bantu genders, e.g. Talodi *ts-/ɲ-, ŋ-/s-, g-/n-, ḍ-/r-* etc.

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[1] I have changed Meeussen's and my transcriptions for Proto-Bantu and Proto-Grassfields Bantu, respectively. While Adere (EGB) has a class 7 nominal prefix *e-*, its prevocalic realization *cw-* may suggest *kɪ-* for Eastern Grassfields Bantu as well. (**Voorhoeve1980kenyang**).

Table 2: Comparison of selected noun class marking across NC groups

	Class 1 Man, Woman	Classes 3/4 Tree(s), Wood(s)		Classes 5/6 Head(s), Name(s)		Class 6a Blood, Water
Kordofanian	gu-, w-, b-	gu-, w-, b-	j-, g-	li-, j-	ŋu-, m-	ŋ-
Atlantic	gu-	gu-	ci-	de-	ga-	ma-
Gur	-a	-bu	-ki	-de	-a	-ma
Kwa	o-	o-	i-	li-	a-	n-
Benue-Congo	u-	u-	ti-	li-	a-	ma-
Bantu nouns	mò-	mò-	mì-	ì-	à-	mà-
Bantu agr.	(j)ʊ̀-	gʊ́-	gí-	dí-	gá-	má- ~ gá-

Table 3: Cognate noun classes in three branches of Kordofanian (**Schadeberg2011**)

class	Heiban	Talodi	Rashad	class	Heiban	Talodi	Rashad
1 (sg.)	gw-	b-	w-	? (sg.)	ŋ-	ŋ-	—
3 (sg.)	gw-	b-	w-	? (pl.)	ɲ-	ɲ-	ɲ-
4 (pl.)	j-	g-	y-	? (pl.)	n-	n-	—
6 (pl. of 5)	ŋw-	m-	ŋ-				

As seen in Table 3, the assumed cognates classes cognate with Bantu 1, 3 and 4 do not exhibit nasal prefixes, while class 6, the plural of class 5, does. However, Kordofanian has other unidentified nasal classes, as seen to the right in Table 3. Where would these nasals have come from?

As mentioned, the position of **Greenberg1963** and **Crabb1965** is that Bantu innovated nasals in the noun prefixes of classes 1, 3, 4, 6, 9 and 10:

> … Bantu has the prefixes *$^*mu$-* and *$^*mi$-* as against Semi-Bantu and West Sudanic *$^*u$-* and *$^*i$-*. This is certainly a Bantu innovation." (**Greenberg1963**)

It is significant, however, that other than the merger of class 6 *$^*a$-* (plural of class 5) with liquid class 6a *$^*ma$-*, no compelling explanation has been provided

for how this might have happened. In addition, the actual situation is much more complex (cf. the extensive review in **Hyman1980nasalclasses** and below).

Contrasting with the Greenberg-Crabb hypothesis, **Miehe1991**'s (**Miehe1991**) position is that the nasal prefixes should be reconstructed at the PNC stage. Two arguments are given: (i) There are reasonable cognate nasal prefixes and frozen relics for several nasal class markers outside of Bantu; (ii) The nasals in classes 1, 3, 4, 6, 9 and 10 are claimed to be gradually lost through erosion and possible re-prefixation.

Given the importance of these nasals in the history of Niger-Congo, it is surprising how little reaction there has been to Miehe's evidence, and the issue has been almost ignored. On the one hand there have been some brief reviews, e.g. **Hedinger1993** and **Heath1994** from which we can assume skepticism, but openmindedness on the part of the latter:

> … the heavy preponderance of **N-* forms in the survey makes direct comparison with Bantu **mu-* and **mi-* adventurous. Unraveling cognate relationships among noun class prefixes is treacherous because of mergers and splits among noun classes, and analogical interaction between nominal prefixes and verbal agreement markers, in addition to phonological attrition and (in some languages) contraction or elimination of the prefix system. However, M does succeed in making a strong case for an original wide distribution of nasal prefixes in the semantic domains typical of Bantu classes, 1, 3 and 4 (among others). (**Heath1994**)

One can also cite positive mention by Williamson (1989: 40; 1993: 43-44), who however accepts Stewart's (**Stewart1999nasal Stewart1999explanation**; **Stewart2002**) PNC reconstruction of nasalized V- prefixes instead of VN- (and presumably NV-):

> Accepting Stewart's hypothesis that the prefixes of classes 9 and 10 were originally close nasalized vowels rather than homorganic nasals, it is somewhat easier to explain why these old prefixes surface sometimes as close vowels, sometimes as homorganic nasals, and sometimes as both. (**Williamson1993**)

If we include Stewart in the mix, we are left with three hypotheses concerning nasality in the indicated noun classes: proto nasal consonants, proto nasalized vowels, no nasality. In my view we have not yet arrived at a solution that answers all of the relevant questions. Those following the Greenberg-Crabb hypothesis have to address the following questions: (i) Where did the Bantu nasals come

from? This is not a problem for Miehe, who assumes they were present in PNC. (ii) How do we account for the nasals that Miehe reports outside Bantu? Again, this is not a problem for Miehe, as these represent retentions from PNC. However, even if these questions disappear with Miehe's hypothesis, other questions remain unresolved: (i) Why were the nasals lost in so much of Niger-Congo? While we can attribute this to phonetic erosion or replacement, it would seem odd that only nasal consonants were lost in those Benue-Congo languages which otherwise maintain CV- prefixes. (ii) Why were nasal consonants preserved in Bantu? (iii) Why does Bantu have nasal marking on nominals, but reconstructed non-nasal concord marking? E.g. Luganda class 3 *ò-mù-tí gù-nó* 'this tree'; class 4 *è-mì-tí gì-nó* 'these trees'. (iv) Is the nasal/oral distinction found anywhere in Niger-Congo outside Bantu? If not, why not? (v) What is the relation of the two sets of marking, e.g. class 3/4 *mʊ̀-/*mì- vs. *gʊ́-/*gɪ́-? Why labial nasals vs. voiced oral velars? Why L tone on noun prefixes vs. H concord tone in most noun classes? Significantly, it is the concord forms which generally correspond to noun marking outside of Bantu.

To explain the nasal vs. oral marking of classes 1, 3, 4, 6, 9 and 10 in Bantu one might adopt one of three strategies: The first would be to reconstruct two sets of PNC allomorphs for these classes. While this could work, it simply delays the ultimate question of why there should be two sets of markers? We would want to know how they arose in pre-PNC, if that's the correct historical stage. To respond to this problem we might instead reconstruct two sets of distinct noun classes, which subsequently merged, as everyone assumes in the case of class 6 *a- (plural of class 5) and liquid/mass class 6a *ma-. There might also have been a plural class *mʊ- that merged with class 4 *mɪ-. In this view, PNC likely had more noun classes than Proto-Bantu (PB).

A quite different proposal would be to reconstruct one set of markers which split into two sets of allomorphs in a way as yet unexplained.[2] In order to consider how a single set of reconstructions might have split into labial nasal vs. velar oral allomorphs, note the partial or complete complementarity between reconstructed V, N, mV and gV markers in Table 4.

Among the gaps seen in Table 4, PB clearly lacks voiced velars on noun prefixes.[3] The concord prefixes, however, fill this gap: *jʊ̀- (1), *gʊ́- (3), *gɪ́- (4), *gá- (6), *jì- (9), *jí- (10). Perhaps Gur *ŋV fills in the *gV gap, in which case Proto-

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[2] It is generally assumed that the [m] of classes 1, 3, and 4 and the homorganic nasal N- ([n]?) of classes 9 and 10 have similar distributions, although possibly different origins.

[3] I am ignoring cases where certain Bantu languages exploit a concord marker in secondary derivations, e.g. Luganda augmentative class 3 *gu-*/class 6 *ga-*: *o-gu-tî* 'a big tree', pl. *a-ga-tî*.

Table 4: Reconstructed Noun Class markers arranged by place of articulation

	Labial	Dental-Alveolar	Velar	Vowel/Nasal
PBC	*(pi-)* **ba-, *bi-, *bù-*	**ti-* **li, *lu-* **ma- ~ *na- (6a)*	**kà-, *ki-, *ku-*	-32cm **ù- (1), *ì- (9*
PGur	**pʋ, *fʋ* **ba, *bi, *bʋ, *wa* **ma (6a), *mʋ (pl.)*	**sɪ, *tʋ* **ɖa, *ɖɪ* **nɪ (9), *ni (10), *na*	**ka, *kʋ* **ŋʋ (3), *ŋa (6)*	**ʋ (1), *i (4), *a*
PB (nouns)	**pì-, *pà-* **bà-, *bì-, *bʋ̀-* **mʋ̀- (1,3), *mì- (4), *mà- (6a),*	**tʋ̀-* **ɖì-, *dʋ̀-*	**kà-, *kɪ-, *kʋ̀-*	**ì- (5)* **N`- (9,10)*

Gur may have nasalized PNC **gʋ-* and **ga-*, which are of course identical to the PB class 3 and 6 concords. A proposal made by the students in my Spring (2013) Bantu and Niger-Congo seminar, inspired by the correlation between [gw, ŋw] and [b, m] in Kordofanian (Table 3), is the historical derivation *$\ast g^w > \eta^w > m$* (in PB noun prefixes).[4] The major question is where the nasality would have come from? Perhaps there was a nasal that preceded PB noun prefixes, thereby producing a derivation such as: *$\ast N\text{-}g^w > \eta g^w > \eta^w > m$*.

Although this is speculative, and there are other possibilities (e.g. why not **ɓʋ-*, **ɓɪ-*, etc.?), Table 5 shows that there are attested shifts between labials and velars in Niger-Congo languages (**Hyman1980nasalclasses**).

However, we still have the issue of determining where the nasality would have come from. Since **Miehe1991** there have been other developments that potentially interface with the problem at hand. First, **Stewart1999nasal Stewart1999explanation**; **Stewart2002** proposes PNC nasalized vowels, which Williamson (1989: 40; 1993: 43-44) extends to noun class prefixes (although they are almost totally lacking in present-day languages). Also of potential importance is the role of the PB determiner prefix known as the "augment":

> A correct view of the augment as a correspondence in Bantu may enable us to bridge a gap between Bantu and the other Benue-Congo languages, by showing how the system of prefixes with differential m- … arose. (**Meeussen1973**)

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[4] Table 3 shows that Kordofanian likes nasals in its noun prefixes, including palatals and velars, which may represent an innovation of the sort considered here. Cf. Williamson's (1989: 40) proposal: *$\ast g^w u\text{-} > wu\text{-} > m\bar{u} > mu\text{-}$*.

Table 5: Labial-velar correspondences in Nupoid and Grassfields Bantu

l Xl Xl Xl llXl

a. Gwari	Nupe	PNupoid		cf. PB	
ēɓí	*ēgī*	**ɓí*	'child'	**-bí-al-*	'give birth'
ēɓwá	*ēgwā*	**ɓɔ́(k)*	'hand'	**-bókò*	'arm, hand'

	b. Mankon	Bafmeng	PGB			
	àbô	*āɣóꞋ*	**-ɓó*	'hand'	**-bókò*	'arm, hand'
		nɨbòmɔ́	*īɣúm̄*	**-ɓùm´*	'egg'	
	bɨ	*ɣɔ́*	**-ɓá*	'they'	**bá-*	SM, class 2

As seen in Table 6, the augment resembles oral noun prefixes with H tone as found outside Bantu, but also in the PB concord markers (**deBlois1970**):[5]

Table 6: The augment in PB and two daughter languages

PB:	**ʊ́-mʊ-* (1)	**gʊ́-mʊ-* (3)	**gɪ́-mɪ-* (4)	**gá-mà-* (6(a))	**ɪ-Ǹ-* (9)	**(j)í-Ǹ-* (10)
Bukusu:	*ó-mu-*	*kú-mù-*	*kí-mì-*	*ká-mà-*	*é-N-*	*cí-N-*
Haya:	*ó-mu-*	*ó-mu-*	*é-mi-*	*á-ma-*	*é-N-*	*é-N-*

It has therefore been attractive to relate the non-Bantu oral prefixes to the augment. The significance of this move is seen from **GrégoireJanssens1999**' (1999) demonstration that the augment+noun prefix sequence can simplify in one of two ways: (i) loss of the augment: V-CV- > CV-; (ii) loss of the noun class prefix: V-CV > V-. Starting with a PB reconstruction such as class 3 **gʊ́-mʊ̀-*, loss of the augment would leave *mʊ̀-* as the noun prefix, while loss of the prefix would yield *gʊ́-* in concords (and in noun prefixes and suffixes outside of Bantu). This still does not explain why the two noun class markers should be different from each other.[6]

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[5] In Table 6 Bukusu devoices **g > k* by the Luyia Law (**HinnebuschEtAl1981**), while Haya deletes the augment consonant, as in most Bantu. While the classes 1 and 9 augments are reconstructed as *L, I know of no Bantu language where they are distinguished tonally from other noun class augments.

[6] **Williamson1993** relates the class 9/10 split to the augment: *Ǹ-* (or a nasal vowel?) is the class 9/10 prefix, with class 10 often enhanced by an augment, e.g. Kikongo *m-bwa* 'dog', pl. *zi-m-*

Note that **deWolf1971** reconstructs the above noun class prefixes in PBC with the shape V-, not CV-. However, **Hyman1980nasalclasses Miehe1991** and especially **GrégoireJanssens1999** show different ways to derive a V- prefix (variant VN-). In the following potential changes, note the potential differences in tonal outcome (although high tone prefixes, especially V-, can independently become L as a kind of reduction process):

CV prefix without augment the consonant drops: *CV̀- > V̀-, e.g. class 7 *kì->ì-; class 12 *kà- > à- the NV metathesizes: *mV̀- > V̀m- > V̀N- CV prefix with vocalic augment the prefix drops: *V́-CV̀- > V́ -, e.g. class 7 *í-kì- > í-; class 12 *á-kà- > á- the prefix vowel drops: *V́-mV̀- > V́-N- (>V́-), e.g. class 3 *ʊ́-mʊ̀- > ʊ́N-; class 4 *í-mì- > *íN-

With this in mind, note the different realization of classes 1, 3, 4, 6 vs. 6a and plural "18a" in Tuki (**Hyman1980tuki** cf. **Musada1995**), which derives *VN-* from /*V-mV-*/:

class 1: *òŋ-gìnī* 'guest, stranger' (but cf. *mo-to* 'person', *mw-ànā* 'child')
class 3: *òŋ-gòlō* 'foot' *òm-bàβē* 'wing' *ò-tēmā* 'heart'
class 4: *ìŋ-gòlō* 'feet' *ìm-bàβē* 'wings' *ì-tēmā* 'hearts'
class 6: *àŋ-bāné* 'breasts' *àŋ-bīlé* 'palmtree' *à-tānē* 'stones' (*àŋ- > à-*) class 6a: *mà-tīá* 'water' *mà-wūtē* 'fat'
class 18a: *mù-nū* 'brain' *mù-nɔ́ɔ̀ní* 'birds' (cf. PNC "6b", PGur 22 *mʊ*)

In (2b), the two *mV-* classes (6a, 18a) perhaps lacked an augment by virtue of their semantics. Tuki has other *CV-* prefixes, *bà-* (2), *bì-* (8), *nò-* (11), *wù-* (14) without augment, which may have fallen out. **Dugast1971** reports comparable data concerning collectives in Tunen (cf. **Mous2003** 302–303), e.g. *ò-n-dɔ̀mb* 'sheep' (class 3), pl. *è-n-dɔ̀mb* (class 4), *mà-n-dɔ̀mb* 'types of sheep' (class 6).

> Signalons enfin que nous rencontrerons un collectif dont le préfixe paraît présenter un prépréfixe (ama- > am-, əm-). (**Dugast1971**)

The history of noun class marking and ultimately nasality may thus implicate the presence of an augment—or different augments, as the case may be. The differential behavior of 1, 3, 4, 6, 9, 10 marking may also be attributed to a reconstructed (or evolved) *V* vs. *CV* shape. One attractive idea (for which, unfortunately, there is no evidence), is that there was a morpheme whose final [m] syllabifies with V-initial prefixes, but otherwise drops out before a consonant-initial prefix:

*Vm-V- > V-mV- > mV- (1, 3, 4, 6) *Vm-CV- > V-CV- > CV- (2, 7, 8 etc.)

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bwa.

The loss of the initial **j* or **g* may also account for the merger of classes 4 (pl.) and 9 (sg.) in a number of Bantu languages (Tables 7 & 8) .

Table 7: Merger of classes 9 and 4 in Haya (**Byarushengo1977**)

lXlllll					
Haya	noun	subject	numeral	object	connective
class 9	*Ǹ -*	*è-*	*è-*	*-gi-*	*ya-*
class 4	*mì-*	*è-*	*è-*	*-gi-*	*ya-*
cf. class 8	*bì-*	*bí-*	*bí-*	*-bi-*	*bya-*

Table 8: Merger of classes 9 and 4 in Tunen (**Dugast1971 Mous2003** 300-2)

lXlllll				
Tunen	noun	subject	numeral	ProPref
class 9	*mè-, èN-*	*yè-*	*é-*	*yè*
class 4	*mè-, èN-*	*yé-*	*í-*	*yí*	*mà-Ǹ-*
cf. class 8	*bè-*	*bé-*	*bé-*	*-bí-*

Another factor that should be considered is the sporadic evidence of relic noun class suffixation in Bantu, which is more widespread elsewhere in Niger-Congo. It is likely that such suffixes never contained a nasal in classes 1, 3, 4, 6, 9 and 10. Again, the nasal classes may have had *-V* (vs. *-CV*) suffixes, as in Tiv (**VoorhoeveDeWolf1969** 52, based on Arnott).

If classes 1, 3, 4, 6, 9 and 10 had a -V suffix, then when suffix vowels dropped, the whole suffix was lost. The alternative is that these classes had earlier *wV, yV* and *ɣV* markers, where the glide first drops out, then the vowel. Note also that class 14 and 15 **Cu-* prefixes drop out entirely (class 3 leaves relics). There is a similar distribution of suffixes in Noni (**Hyman1980nasalclasses**). Understanding the nasals thus necessarily means understanding that the forms from different parts of a paradigm may originally have been different, may come to be different, and may influence the future of a system, e.g. whether nasals are spreading vs. retracting.

Finally, it should be noted that having a nasal (N) vs. oral (O) concord is not an all or nothing thing (**Hyman1980nasalclasses**). One of the aforementioned noun classes can have nasal concord, another oral. Thus note the following out of 52 Bantu languages (mostly Northwest, Table 10).

Table 9: Tiv Noun Classes

l >r@ >l >r@ >l >l>l@ >r@>c@>l

class	subject (pr.cont.)		subject (past)				
1	Ø	ù-	ŋgù	a	w-	àḿ	
2	ù-, mbà-	-v́	mbà-	-v́	mbá↓	ve	á↓ -v́
3	(ú-)	ú-	ŋgú↓	u	w-	áḿ	
4, 5, 10	í-	í-	ŋgí↓	i	y-	áḿ	
6	á-	á-	ŋgá↓	a	áḿ		
6a	ḿ-	-ḿ	mà-	-ḿ	má↓	ma	á↓ -ḿ
7	í-	-ý	kì-	-ý	kí↓	ki	y- á↓ -ý
8	í-	-v́	mbì-	-v́	mbí↓	mbi	á↓ -v́
9	ì-	ì-	ŋgì	i	y-	àḿ	
14	-v́	mbù-	-v́	mbú↓	mbu	á↓ -v́	
15	-ý	kù-	-ý	kú↓	ku	á↓ -ý	

Table 10: Distribution of nasal concord by Noun Class

llllXl

class 3	class 4	class 6(a)	total	observations
N	N	N	20	11/20 are in zone C
O	N	N	18	12/18 are in zones A-B
O	O	N	14	7/20 are in zones D-F

The class 3, 4, and 6(a) distributions N-O-N, N-N-O, O-N-O and O-O-N are all unattested. We thus can draw the following implicational scale: class 3 N ⊃ class 4 N ⊃ class 6 N.

Occasionally non-Bantu languages have a nasal in their pronoun system which resembles Bantu. Thus the Fula [North Atlantic] third person singular human subject and object pronoun *mo* (**Arnott1970**) and the Wawa [Bantoid] third person singular human pronoun *mū* (**Martin2012**) ought to be cognate with the Proto-Bantu class 1 object marker **-mu-*. Similarly re class 1 *mù* and class 3 *mū* pronouns in Esimbi [Bantoid]. As seen in Table 11, from **Stallcup1980esimbi** (S) (1980: 142) and **KoenigEtAl2013** the other pronouns resemble the corresponding noun class prefixes. For some reason the two sources give different oral vs. nasal reflexes on the noun prefixes of classes 2, 6a, 14, and 18a (Table 11).

The fact that one dialect denasalizes class 6 and 18a prefixes and the other

Table 11: Esimbi Noun Class prefixes and pronouns

l >l>l>l Q

class	noun (S)	noun (K et al)	Pronoun	/I, U, A/ =archiphonemes
1	(w)Ù-	((w)U)-	mù[a]	Koenig et al. exx. have L or M tone
2	bÀ-	mA-	bú	why L tone?
3	Ú	U-	mū	
5	Í			
6	Á	A-	zú	
6a	bÀ-, m-	mA-	bù	note L tone; *m-* is used before /*b*/
7	kI-	kI-	kī	
8	bI-	mI-	bī	
9	Ì-	I-	zù	exx. from Koenig et al. have L tone
10	Í-	I-	zú	exx. from Koenig et al. have non-L tone
12	kA-	kU-, kA-	kū	
13	tA-	tU-, tA-	tí	
14	bÚ-	mU-	bú	
18a	bÙ-	mU-	bù	note L tone
19	sÍ-	sI-	sī	

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[a] Cf. the object marker *-ŋw-*. In symbols /*I, U, A*/ stand for archiphonemes whose vowel height depends on the following stem.

nasalizes class 2 and 8 prefixes is something which repeats itself elsewhere in Bantoid, e.g. Ekoid (**Watters1980ejagham**), Kenyang (**Voorhoeve1980kenyang**), and Mbe (**Bamgbose1965**)—and even Narrow Bantu, e.g. zone C denasalization of **mV-* > *bV-*. Any proposed scenario such as **gw* > *m* must be grounded in what we know about the natural history of nasality.

In conclusion, **Miehe1991**'s (**Miehe1991**) demonstration of widespread nasals still leaves a lot to interpret: Who had what when? How did everyone get what they have today? What does this say about the evolution of noun class systems: mergers, splits, loss? (cf. **Good2012**). There is still a lot of work to do before we can arrive at a definitive solution to the issues that I have outlined above.

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