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PROTOLANGUAGE AND PROTOTYPE:
A «PROTO-LETTER» AND A «PROTO-SPIRIT» IN NOUN CLASSES OF NIGER-CONGO

Protolanguage and prototypical language: where is a problem?

The term "prototypical language" is ambiguous. At least in African linguistics it is used to designate no less than two different phenomena: 1) the closest language to the original protolanguage; 2) a "model" language which represents in the most appropriate manner a feature (or a bunch of features) of a group of modern languages. These two definitions not only differ, but may be opposed to one another in a range of contexts. A prototypical bird (like sparrow) has very little to do with protobirds, dinosaurs and crocodiles.

A consonant cluster [kt] existed in the protolanguage of the Romance group, it was inherited by all Romance dialects in the reflexes of the type *noctem, *okt-, *lactem, *factum* etc., and it was changed in all of them at a later stage. This cluster did not wish to be preserved in any Romance language or dialect, including Italian dialects, direct successors of Vulgar Latin. It means that the Modern Romance "model language", an "ideal" Romance language (if linguists find it justified as a linguistic construct) would not have a **-kt-** cluster, as opposed to the protolanguage.

These considerations may seem trivial. However, according to the vast literature concerning the problem of the linguistic prototype, they are not shared by many linguists. Let me illustrate it with a classical example. The possibility of reconstruction of three series of consonants (*P,*B,*BH) in the protolanguage of the Indo-European family was previously rejected on the basis of the fact that such a system does not exist in any of modern languages. In such a case, we would never have reconstructed the cluster **-kt-** in the protolanguage of the Romance group... hadn't we known Latin! In the reconstruction of noun classes in Niger-Congo languages, as we will see later, the notion of a protosystem is often substituted by a system which, for some not always justified reason, is considered prototypical.

The mismatch between prototypical characteristics and those of a protolanguage appears, among other reasons, because modern languages inherit not only some isolated forms but also phonotactic rules and paradigmatic structures with their internal collisions. A disappearing protolanguage leaves these collisions to its descendants to resolve. Solutions for the very same problem included to the "testimony" are generally different. The ***-kt-** cluster existed in the protolanguage of the Romance group but was considered "inappropriate" for the phonological system. Therefore, numerous strategies of its transformation arose: from the geminate **tt** in Italian and **Vt** in French to **pt** in Romanian. Even today, comparative studies pay less attention to the reconstruction of structures than that of forms.

In some cases the polarization of the interpretations represented above is even more apparent. If in the cited examples concerning the reflexes of **-kt-* or the three series of Indo-European consonants the connection between "prototypical yesterday" and "prototypical today" exists (the original form disappeared and was replaced by some other forms), we don't very often have any reason to associate the diachronic understanding of the prototype and the synchronic one.

Let us consider the example of the Gbaya language group which, according to the latest data, is an independent branch of the Niger-Congo macrofamily. The languages of this group are very close to each other, by African standards: up to 70% of correspondences in the Swadesh list,

which means that the age of the division of the group corresponds to the one of Germanic, Romance or Slavic languages. We deal with languages which are closely related indeed and originate from the same source. In some of these languages, the numeral 11 is formed according to the model: «10 + his head + 1», for example, in ɓozom - *ɓú-zúà-ndáŋ* '11'. In other languages "his head" is replaces by the model "his stomach" (*zàŋáà*, for example in mbodɔmɔ), the third possible model is "his back" (for example, in ɓiyanda - *ɗò*), the forth one is «his bone» (for example, in ɓuli – *gbàláà*) [Moñino, p. 656].

Why did all these languages need to change the protoform (the diachronic model)? What was so bad in it for all the modern languages? And how exactly did it look like? The list of semantic models used in the Gbaya languages looks fairly strange: it seems that almost any body part can be used as a connector (a synchronic prototypical model). In our example, we do not deal with a diachronic transformation of a particular protolanguage form, but rather with inheriting a "principle" of the protolanguage categorization, that is, rather the "spirit" of the protolanguage than its "letter".

Such questions often arise when we analyze different noun class systems in Niger-Congo languages. Let me cite a characteristic example concerning the class semantics here. In Niger-Congo languages including Bantu and some Atlantic languages, there is a small class of nouns which is one of the most stable. It includes very few words with the following meanings: "hand", "foot", "knee", "ear" and... "moon, moonlight, month". Surprisingly enough, this noun grouping is often preserved even in those numerous examples where protolanguage class prefixes (which presumably were sg. ***ku-** / pl. ***ma-,*a**- in Proto-Niger-Congo) disappear and are replaced by prefixes of some other noun classes. The most plausible motivation for the unification of the term for 'moon' with terms for paired body parts is that the term for 'moon' reflects traces of the traditional moon calendar according to which a month was divided into two phases. So the most important semantic feature of the class is the feature of pairing. This categorization feature appears in a certain sense to be prototypical and more stable in the diachrony than the class affixes themselves.

Let us conclude with preliminary observations.

First. In linguistics, there are two separate (and sometimes non-intersecting) notions standing behind the term "prototypical structure", that is, "diachronic" and "synchronic".

The former implies a search for a structure which corresponds at best to the original one; in such a sense, "prototypical" = "belonging to the protolanguage". The latter implies a choice of the most typical underlying structure, regardless to the way it was generated.

However, there are many examples of pseudo-prototypes of both kinds, that is, a particular stereotype of interpretation of the structure which appears in a situation where some languages and dialects are described better than others. There is one important detail: we know many examples where interesting data or their outstanding interpretation attract the attention of linguists to one particular language (not necessarily the "best" in the diachronic or synchronic sense). In such a case the data of this language becomes a gnosiological prototype, a basis for a linguistic discussion. Moreover, in this case we most often deal with an "exotic" language which can neither be a model in the diachronic nor in the synchronic sense.

Therefore, the typology of prototypes of language structures or prototypical languages can be represented as follows:

1. A "diachronic" prototype – a language/structure which corresponds at best to the those in the protolanguage (TYPE-DIACH)
2. A "synchronic" prototype – a language/structure most typical for a group of genetically related modern languages (TYPE-SYNCH)
3. A "gnosiological" prototype – a "pseudo-prototype" which is illegitimately attributed to (1) or (2) for some subjective reason related to the development of a particular linguistic tradition, or a "theoretical" prototype which does not pretend to be (1) or (2) but which occasionally appeared the focus of discussion of a particular theoretical problem (TYPE-GNOS).

I would like to add to this simplified typology an opposition which is highly relevant to this paper: an opposition of separate prototypical forms or their meanings, on one hand (TYPE-DIACH-FORM, TYPE-SYNCH-FORM), and of structures, paradigms and conflicts in the system, on the other (TYPE-DIACH-STRUCT, TYPE-SYNCH-STRUCT).

Let us proceed to the examination of noun classes in Niger-Congo which provide a rich material to illustrate all aspects of the problem presented above.

Prototypical structure of noun classes in Niger-Congo languages

A noun class system prototypical in the sense (TYPE-GNOS) is undoubtedly the system of the Swahili language, the best-known Bantu language. Let us cite (in a simplified way) this system – Scheme 1.

Scheme 1. Noun classes in Swahili

	Singular		**Plural**	
1	**mu, mw**		**wa, w**	2
1A	**Ø**			
3	**mu, w**		**mi**	4
5	**ji, j**		**ma**	6
7	**ki, ch-**		**vi,vy**	8
9	**N/Ø**		**N/Ø**	10
11=14	**u, w**			
15	**ku, kw**			

Comment. According to the established tradition, the left column groups together singular noun classes, the right column marks plural ones. The numbers on the scheme correspond to the numbers of protolanguage (Proto-Bantu) classes. Index 11=14 means that in Swahili, reflexes of proto-Bantu classes 11 and 14 coincided (***lu** and ***bu** in Proto-Bantu respectively).

This system is not prototypical in the TYPE-DIACH sense – hundreds of other Bantu languages continue to distinguish all reflexes of proto-Bantu noun classes, as opposed to Swahili. Interestingly, the Swahili language is not prototypical in the sense TYPE-DIACH-STRUCT either: that is, in Swahili, not only Proto-Bantu noun class markers, but also the system of correlation of noun classes by number, marked by lines on the scheme, are preserved worse that many others languages.

Let us confirm this, comparing the system of Swahili with that of Proto-Bantu (locative classes excluded) – scheme 2.

Scheme 2. Noun classes in Proto-Bantu

	Singular		**Plural**	
1	**mù**		**βà**	2
1A	**Ø**		**βà ~ βɔ̀**	2x
3	**mù**		**mì**	4
5	**lì**		**mà**	6
7	**kì**		**βì̦**	8
9	**nì**		**lì̦, nì**	10
11	**lù**			
12	**kà**		**tù**	13
15	**kù**		**βù**	14

One very important distinction becomes apparent at first sight on these schemes. If the Swahili scheme consists primarily of horizontal lines, while two diagonal lines seem to be a deviation from a prototypical model (in the sense TYPE-SYNCH-STRUCT), for Scheme 2 it is difficult to choose a prototypical model. We have 7 horizontal and 6 diagonal lines.

The comparison of the two systems destroys the illusion according to which the protolanguage system was some kind of an *Ordnung*, where every singular class corresponded to its only plural class (as in pair 3~4), while in the descendant languages this transparent protolanguage system was corrupted. The reality appears to be strictly the opposite!

What is the structure the Proto-Bantu system should be traced back to? How were the number correlations in the noun class system of Proto-Nuger-Congo arranged? A special publication of Denis Creissels is dedicated to the research of the prototype noun classes in Niger-Congo [Creissels]. Let us point out here three important issues:

1. Creissels is primarily interested in the TYPE-DIACH-STRUCT type. Tswana, which represents Bantu classes better than Swahili in many respects, is chosen as a model language: *«Les exemples illustratifs seront tirés du tswana, dont le système de classes est très proche du prototype qu'on peut dégager de la comparaison des langues Niger-Congo, permettant ainsi à la fois d'illustrer le prototype et de faire apparaître les écarts, variations et irrégularités qui se manifestent même dans des les langues dont le système de classes s'écarte relativement peu du prototype Niger-Congo».*

2. Remarking that in Niger-Congo *«the most typical languages from this point of view are Bantu and Atlantic languages» («les langues les plus typiques de ce point de vue sont les langues bantoues et les langues atlantiques »)*, in his conclusions Creissels relies more upon Bantu systems than upon Atlantic systems. For both of them Creissels reasonably distinguishes the main particularity of their diachronic development, that is, the regular simplification of the proto-language system in a wide range of modern languages: *«Quant au Niger-Congo, <...> on ne trouve aucune indication qui irait dans le sens de la reconstruction d'un système de classification moins grammaticalisé. <...> Les systèmes de classes nominales « incomplets » par rapport au prototype bantou sont très*

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communs dans diverses branches du Niger-Congo, mais tout indique qu'ils ne sont pas à interpréter comme des systèmes de classe émergents, mais plutôt comme le résultat de la désintégration de systèmes plus anciens proches du prototype bantou. <…> … les données Niger-Congo illustrent abondamment les processus que des systèmes de classification nominale à un stade avancé de grammaticalisation peuvent subir : érosion phonétique des marques de classe des noms et création de nouvelles marques de classe par l'agglutination d'anciens déterminants aux noms ; - modifications dans la répartition des noms en classes ; - réduction du nombre de classes par fusion de classes originellement distinctes ; - réduction de l'inventaire des constructions dans lesquelles le nom est impliqué dans un phénomène d'accord » [Creissels, p. 157-166].

3. Totally agreeing with the last conclusion, we will add that it can be expanded to another very important structural feature of class systems, that is, the correlation of classes by number. If we look beyond Bantu, we can see numerous correlations in number which are more complicated which makes us look differently at a possible prototypical structure of the TYPE-DIACH-STRUCT type. Let us illustrate this with a class system with number correlations in one of North Atlantic languages of the Central group, namely Bayot [Diagne].

Scheme 3. Noun classes in Bayot
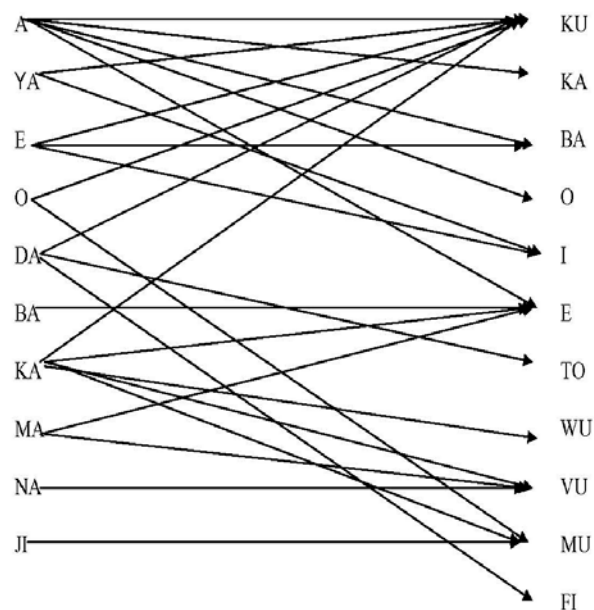
Here horizontal lines on the scheme are rather an exception than a rule. Why shouldn't we, taking into account the general tendency formulated by Creissels, conclude that systems of the Bayot type illustrate the diachronic prototypical structure of Niger-Congo classes better than the Proto-Bantu system, let alone Swahili and Tswana?

Some reasons why this point of view is not popular were formulated above. First, it would contradict Bantu-centered interpretations of Niger-Congo (TYPE-GNOS). Second, in numerous descriptions of class systems, as it has already been noted, the protolanguage is involuntarily identified with a certain "pre-language", that is, every time linguists try to explain diachronically one system or another basing on a *tabula rasa*, while it is obvious that (let us cite Creissels again), *«les systèmes de classes nominales Niger-Congo ne semblent avoir conservé aucune trace des stades de leur évolution dans lesquels nous pouvons imaginer qu'ils présentaient un degré moindre de grammaticalisation, et c'est dans d'autres familles de langues qu'il faudra*

chercher des données permettant de reconstituer l'origine de tels systèmes de façon autre que purement spéculative» [Creissels].

And, finally, there is another factor which is for me the most important one. Diagonal lines on the scheme are perceived as deviations from horizontal ones because in the abundant literature on noun classes almost nothing is written on the problem of their function. In a number of papers, I tried to show that the most important, if not principal, function of noun class systems is hidden behind numerous variations in the correlation by number: that is to classify meanings [Pozdniakov 1993; 2003]. Let us present briefly the position I am trying to defend.
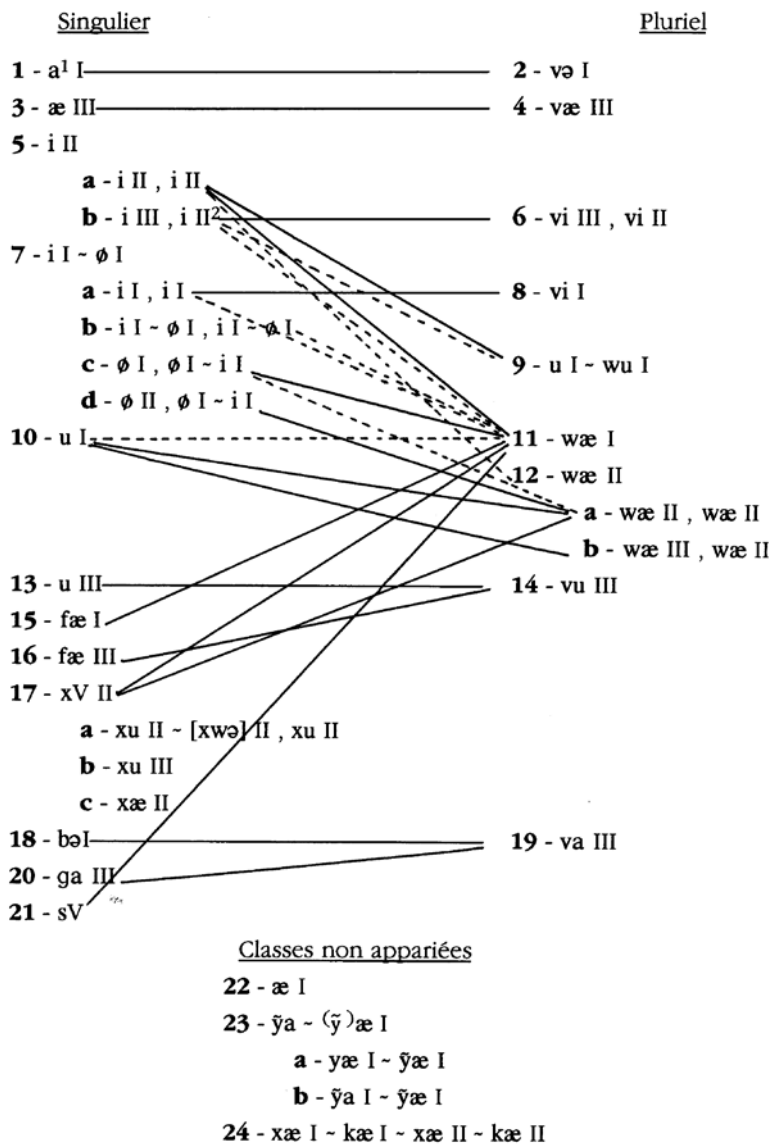
As a rule, noun class systems are organized in a way that every noun contains only one classification marker (prefix or suffix of the class, we will not examine exceptions here). It means that we deal with **a paradigm** in which the choice of markers is organized by principle of disjunction (or/or) but not conjunction (and/and). Therefore, a semantic value which is multidimensional by definition is determined to be attributed to one and only classification group. For example, a language has to choose which noun class the word for 'scorpion' should be attributed to. For some reason, we presuppose that the language has to attribute this term to the class of animals, if one exists. However, at least in many Atlantic languages, together with the classes for animals, there are other classes with clearly marked features which could characterize scorpions: for example, "dangerous creatures" (those that bite, cut, prick), "bad things" (a pejorative feature), "small objects" (a diminutive feature), "ancestors" (in certain cultures), "composite objects (processes)" – a feature which is marked in a number of Indo-European languages by attributing nouns to the *pluralia tantum* class (for example, in Russian *штаны* (pants)*, шахматы* (chess)*, бусы* (beads)*, ворота* (gates)*, очки* (glasses)*, гусли (gusli), роды* (lying-in)*, поминки (funeral feast)*), "long objects", *etc.* Without any serious reason the top of the hierarchy of features is given to the feature "animals". But for every language and every culture the hierarchy of features is multiple-valued, and the scorpion is classified differently across Atlantic languages. In literature, we regularly come across a passage of the following kind: "The class X in our language includes nouns denoting animals. But 1) not all nouns denoting animals are attributed to this class, 2) this class contains nouns denoting not exclusively animals". Should we excuse ourselves to the linguists for this "incoherent", "anomalous" language which "violated" strict classification features, integrated into the system by a scientific board of wise ancestors? This is no more than another attempt to present a prototypical system as a harmony and to consider all modern systems as deviations from it. Wouldn't it be more appropriate to leave to the languages their right to choose, with the help of the only class marker which can be attached to the lexical root, the feature which for some reason is considered the most relevant?

What can be done in case a language wants to show that the scorpion is at the same time an animal and a dangerous creature? In reality, the languages, despite the common prohibition to have more than one class marker, manage to do it rather well. Moreover, Atlantic languages extensively use the following elegant technique: one semantic feature is marked by a singular noun class prefix while another one is marked by a plural noun class prefix. For example, in the Temne language the word *u-them* "old man" attributed in singular to the class of humans (cl.1), has in plural the form *ma-them* and belongs to the class of collective plural (cl. 6N), while we would expect a plural form for humans **a-them* (cl. 2). Therefore, singular and plural forms show different classification features. In the Fula language, on the contrary, the feature "humans" is preserved in the plural class (*maamaa-ɓe* «old women», *patiraa-ɓe* «old wives», cl. 2), while in singular forms the feature of singulativity arises (an object distinguished from a number of homogenous objects - *maamaa-re, patii-re,* cl. 5). In the Konyagi language, neither singular nor plural are expressed by classes for humans: *ɛ̀-nɜ̀m / vɛ̀-nɜ̀m* 'old woman' (classes

3/4 [Santos]), as opposed to *sə̀væ̀lə́ / və̀-sə̀væ̀lə́* 'woman, wife' (classes 1/2 [Santos]). However, it doesn't give any ground for numerous speculations concerning the "inhuman" attitude of speakers of noun class languages to elderly people and women.

For Atlantic languages, the technique of differential marking in singular and plural paradigms is undoubtedly prototypical both in the sense TYPE-DIACH and TYPE-SYNCH. Moreover, a consistent application of the technique of ramification of paradigms denoting noun classification allows to mark even more semantic features. Let us examine briefly the noun class system in Konyagi (Northern group of Northern Atlantic languages), following the interpretation of Santos – scheme 3.

Scheme 3. Noun classes in Konyagi

Singulier — Pluriel

1 - a¹ I ——————— 2 - və I
3 - æ III ——————— 4 - væ III
5 - i II
  a - i II , i II
  b - i III , i II² ——————— 6 - vi III , vi II
7 - i I ~ ø I
  a - i I , i I ——————— 8 - vi I
  b - i I ~ ø I , i I ~ ø I
  c - ø I , ø I ~ i I
  d - ø II , ø I ~ i I ——————— 9 - u I ~ wu I
10 - u I ——————— 11 - wæ I
                 12 - wæ II
  a - wæ II , wæ II
  b - wæ III , wæ II
13 - u III ——————— 14 - vu III
15 - fæ I
16 - fæ III
17 - xV II
  a - xu II ~ [xwə] II , xu II
  b - xu III
  c - xæ II
18 - bəI ——————— 19 - va III
20 - ga III
21 - sV

Classes non appariées
22 - æ I
23 - ỹa ~ (ỹ)æ I
  a - yæ I ~ ỹæ I
  b - ỹa I ~ ỹæ I
24 - xæ I ~ kæ I ~ xæ II ~ kæ II

– appariements réguliers
-- appariements possibles·

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[1] Les classificateurs sont structurellement non intonés.
[2] i III, i II. Lire ainsi : i III : marques du nom / i II : marques d'accord.

We see that in Konyagi as well as in Bayot one of the most important structural features of the class system is the existence of different number correlations in many classes. Hovewer, in the description of classes in Konyagi we have to introduce one more feature which was absent in the languages examined above. There are Roman numbers on the scheme – I, II, III. They denote three possible degrees of alternation of the initial consonant of the root: weak, neutral and strong. One of three degrees in assigned to every noun class. In particular, the following tripartite series of alternations are distinguished for voiced consonants:

degree	sonants				glottalized sonants		
III	mp	nt	nty	nk	mb	nd	ndy
II	**b**	**d**	**dy**	**g**	ɓ	ɗ	ʄ
I	w	l	y	ɣ	v	ry	y

Let us illustrate these alternations which occur in particular in the formation of plural forms, with some examples [Santos,102]:

ì-gwə́d   / wǽ-wə́d   / fǽ-nkwə́d   / vù- nkwə́d
'mango' / 'mango (pl.)' / 'mango (dim.)' / 'mango (dim.pl.)'
ì-də̀nt   / ù- lə̀nt   / bə̀-lə̀nt   / và-ntə̀nt
'catfish' / ' catfish (pl.)' / 'catfish (augm.)' / 'catfish (augm.pl.)'.

The situation is further complicated by the fact that the alternation of initial root consonants extends to the dependent words, while the term "concord" is can only be used provisionally here because in a number of noun classes the degree of alternation in the dependent word does not copy the noun one, but rather is contrastively different. This is why on the scheme given above we often see notation of the type « ì III , ì II » or « vì III , vì II » (classes 5b and, following Santos), which means degree III in the noun and degree II in dependent words, for example: *ì-ndì* (III) *ì-d́ǎ mpò*(II) 'the only hive',*vì-ndì vì-gwǽmœx* 'beautiful hives'. We find an interesting remark in relation to this in [Santos]: « On observe chez les locuteurs plus jeunes, une tendance à la régularisation de l'accord, et l'on peut entendre : *ì-ndì ì-ndámpò* (II) 'une seule ruche', *vì-ndì vì-nkǽmœx* 'de belles ruches'. L'accord en degré II est très régulièrement observé chez les adultes. Même par les jeunes, c'est cet accord qui est considéré comme bon » [Santos, p.92].

A highly complicated system of this kind where semantic parameters of the noun are marked on the crossroads of several paradigms – singular and plural class affixes on the noun, the degree of alternation assigned to the sg. and pl. class, and the degree of alternation assigned to the dependent forms - demands some new approaches to its description and schematic representation. The traditional scheme with two columns for sg. and pl. classes and lines denoting the number correlation which is fairly appropriate to the representation of noun classes in Swahili is almost inapplicable to the representation of classes in languages like Bayot and, to even more so in Konyagi.

Indeed, according to the tradition, a fragment of a system with singular prefix *ì-* and plural prefix *wǽ-* is supposed to be represented in the following way:

Scheme 4. A fragment of class system in Konyagi

```
ì-   I  ⟍              ⟋  wæ̀-  I
         ⟍          ⟋
ì-   II ————⟍————⟋———— wæ̀-  II
              ⟋⟍
ì-   III ⟋          ⟍  wæ̀-  III
```
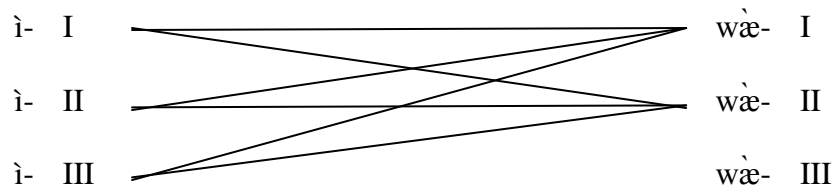
Let us cite some examples of every revealed correlation:

ì- I / wæ̀- I : *ì-l̃àŋ / wə̀-l̃àŋ* 'Gambian squirrel',

ì- I / wæ̀- II: *ì-wúl / wæ̀-búl* 'monkey (sp.)', *ì-vàkə́ / wə̀-ɓàkə́* 'hand'

ì- II / wæ̀- I : *ì-bə́l̃ / wæ̀-wə́l̃* 'spiderweb', *ì-də́l / wæ̀-lə́l* 'herb', *ì-gə̀t / wæ̀-yə̀t* 'hole', *ì-ɓə̀lə́ / wæ̀-və̀lə́* 'female breast', *ì-dìbə́ / wæ̀-ryìbə́* 'fright', *ì-fæ̀g / wæ̀-yæ̀g* 'tomb'

ì- II / wæ̀- II : *ì-bìnə́ / wæ̀-bìnə́* 'ant (sp.)', *ì-géw̃ / wæ̀-géw̃* 'grain of néré'

ì- III / wæ̀- I : *ì-mbùf / wæ̀-vùf* 'thigh'

ì- III / wæ̀- II : *ì-ncæ̀w / wæ̀-jæ̀w* 'antelope (sp.)'.

It is clear that such a scheme is, on one hand, very complicated, and on the other hand, highly uninformative, because a part of important information is left outside the scheme (for example, the opposition of degrees of alternation in the concord models).

There is no reason to consider this complicated noun classification system prototypical (in the diachronic sense) for Niger-Congo. It may be prototypical only for the languages of the Northern group of North Atlantic languages where, on the protolanguage level, it must have been shaped. However, one structural feature of the Konyagi system which hasn't yet been examined may happen to be characteristic for the Niger-Congo protolanguage. Let's examine it in detail.

If we look at the phonetic structure of class prefixes in Konyagi (see above, scheme 3), we may notice one particularity: all plural prefixes have a CV- structure with a labial consonant. Class 9 on the scheme is the only one with a prefix of V- structure with a back rounded vowel; moreover, it has an allomorph *wu-*. It means that in Konyagi the subsystem of plural noun classes has a distinct submorphic mark [+labial].

The real status of this feature can be proved by some anomalies in functioning of singular noun classes. If labiality marks plural noun classes, this feature is not supposed to be distinguished in singular noun classes. However, among singular classes we find **fæ̀** classes (15 and 16 on the scheme). The formation of plural of class 15 nouns, though, differs from that of the vast majority of other classes: instead of replacing the singular class marker by a plural one, in the case of **fæ̀** we deal with an uncommon agglutinative technique of affixation of a plural class marker to a singular one (*fæ̀-rə̀mp / wæ̀-fæ̀-rə̀mp* 'turtle', *fæ̀-rún / wæ̀-fæ̀-rún* 'crocodile', *fæ̀-sìl̃ / wæ̀-fæ̀-síl̃* 'warthog', *fæ̀-só / wæ̀-fæ̀-só* 'porcupine', *fæ̀-wə́ry / wæ̀-fæ̀-wə̀ry* 'scorpion (sp.)', *fə́-rə́kwə̀kél̃á / wæ̀-fə́-rə́kwə̀kél̃á* 'snake (sp.)') and in correlation with another plural class marker: *fæ̀`-ryèf ~ ù-fæ̀`-ryèf* 'leaf'. As a result, as the main principle of replacement of class markers correlating by number still dominates, class **fæ̀** naturally transforms to a zero class: *fæ̀-rə̀mp / wæ̀-fæ̀-rə̀mp* 'turtle', *fæ̀-rún / wæ̀-fæ̀-rún* 'crocodile' > *Ø-fæ̀rə̀mp / wæ̀-fæ̀rə̀mp* and *Ø-fæ̀rún / wæ̀-fæ̀rún*, *etc.* That means that the segment **fæ̀** integrates to the root. It facilitates the possibility for borrowings with an initial **f-** to be coordinated by the class **fæ̀** model, keeping the most natural – zero – prefix form in singular. For example, in Konyagi the root (most probably, borrowed from Mande languages) *fali* 'donkey' integrates into the system the following way: *fali > Ø-fæ̀lí / wæ̀`-fæ̀lí*, although Santos interprets it as *fæ̀`-lí / wæ̀`-fæ̀-lí*.

An interesting detail: in all examples with **fæ`-** prefix cited above the root initially comprises a consonant of degree I, that is, a fricative for voiceless and an oral sonant for voiced. As a result, it facilitates the transition from ***fæ-root** to **Ø-fæ-root**, as singular and plural members of this pair demand the same stage of alternation: **fæ-** I ~ **wæ-** I (it may not be by chance – with the same degree of alternation it may be easier to integrate class **fæ** into the system of correlations reducing it to zero). If in the singular we find a consonant of stage II, in the pairs sg. ~ pl. we attest the effect of consonant alternation: *fæ̀-kǽnd / wæ̀-fæ̀-xǽnd* 'cock', *fæ̀xæ̀nkæˆ / wæ̀-ɣæ̀xæ̀nkæˆ* 'Diakhanké > Ø-fæ̀kǽnd / wæ̀-fæxǽnd* and *Ø-fæ̀xæ̀nkæˆ / wæ̀ɣæ̀xæ̀nkæˆ* respectively. These are very interesting examples, and they reveal many things. First. They show that plural correlate for **fæ I** is **wæ` I**, but not **wæ` II** or **wæ` IIII**. Secondly, they show that for language speakers class **fæ`** still exists and is not entirely integrated into the lexical root – otherwise we wouldn't have observed the weakening of the level of alternation of the root consonant in the plural form.

In any case, we see prefixes integrate to the root from left to right, as if it was an old abacus, leaving a zero prefix behind which can later be replaced by a segmental prefix of another class.

One point is important for us here – singular labial prefixes disappear transforming into zero ones and as a result the feature [+labial] becomes a real marker of plural noun classes.

Note that transformations in class **fæ`-** examined above are characteristic not only for Konyagi or the Tenda group in general which this language belongs to, but also for Atlantic languages of other groups (we cannot support this statement here, but at least in Northern Atlantic languages (Fula, Nyun, Cangin languages), in the same lexemes, as in Konyagi, we attest an integrated class marker ***fa-)**.

It means that the process of labialization of plural markers characterizes not only Konyagi but at least the protolanguage of the Northern group of North Atlantic languages. In other words, the submorphic feature is very ancient. So ancient that if we go back to scheme 2 we will see that a prototypical (in the diachronic sense) proto-Bantu language is characterized by the same submorphic feature: a vast majority of plural markers in proto-Bantu include a labial consonant.

The submorpic adjustment of noun class markers can lead to radical changes of the system. Let us consider a remarkable example form Jaad (Badiaranke). In this language, the processes which in Konyagi are only slightly noted went forward to their logical end. Let us illustrate the Jaad system by some examples:

		Sg.	Det.	Pl.	Det.
1.	'cow '	ku-na	**k**-un	**be**-**ku**-na	**k**-un
2.	'field'	pə-dao	**p**-en	**be**-**pə**-dao	**p**-en
3.	'antelope (sp.)'	wan-cafɛ	**w**-an	**be**-**wan**-cafɛ	**w**-an
4.	'crocodile'	faa-tama	**f**-an	**be**-**faa**-tama	**f**-an
5.	'smith'	u-saa	**w**-en	**be**-saa	**b**-en
6.	'smith' (dial.)	u-saa	**w**-en	**be**-**be**-saa	**b**-en

As we see in the first four examples, the submorphic feature of plural classes transformed to a full-fledged morpheme – a plural marker. The morpheme **be-** is attached to a singular class marker. Therefore, the category of number detaches completely from the category of class. It leads to the emergence of an agglutinative technique which makes a class marker lose its properties of a cumulative morpheme: first, the number is expressed, and only then the class. The only case where the former system is present is the plural class for humans (example 5), where we still observe the technique of replacement of the prefix and a special plural determinative is retained. A very interesting hybrid form is attested in [M.-P.Ferry, ms.] in one of Jaad dialects (example 6). The plural determinative is preserved, but to the left of the plural prefix we see a new homonymous plural marker attached!

Examples of class systems in Atlantic languages examined above differ in numerous aspects from Bantu systems. At the same time they show many resemblances which could reflect the class system in Proto-Niger-Congo. I would like to add some features of the prototypical system to those distinguished by Creissels:

a) phonetic adjustment of plural class markers. The existence of labial consonants in plural classes in Proto-Bantu and numerous North Atlantic languages can happen to be both a diachronic prototypical feature and a synchronic feature. The first assumption presupposes that Atlantic and Bantu systems reflect a trait of submorphic organization of classes in Proto-Niger-Congo. It is possible, though, that we deal with parallel processes of "labialization" of plural subsystems under the influence of plural noun class for humans (class 2 ***ba** or **be** in Proto-Niger-Congo). In such a case, the systems of the Konyagi type are prototypical in the sense TYPE-SYNCH-STRUCT;

b) diversity of correlations of classes by number in which the number of types of correspondences (of correlations of singular and plural classes) exceeds radically the number of singular or plural classes. A relative autonomy subsystems of sg. and pl. in the categorization of nouns;

c) a close interaction of noun class paradigms with other paradigms related to the noun classification [Pozdniakov 2010], in particular, with the paradigms of derivation markers, including morphonological ones (nasality, tonal morphemes, etc.);

d) the complicated structure of oppositions by number where, along with an opposition sg. (0) / pl. (+), a very important role is given to the opposition singulative (+) / plural collective (0);

e) a special role in the system of classes 1 and 2 – singular and plural classes for humans, which often determines its specific formal marking.

My point is that bantu noun classes can not be considered as prototypical Niger-Congo systems in the diachronic sense. The reason is that such a system must have a higher level of complexity comparable to the systems of Bak or Bijogo belonging to the Central group of North Atlantic languages. The prototypical system of Niger-Congo in the synchronic sense can be well represented by numerous Bantu languages as well as by more divergent Atlantic languages. It can be explained by the fact that the principles of functioning of class systems of Niger-Congo languages are surprisingly consistent, and any specialist will easily recognize a Niger-Congo language by its noun class system.

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