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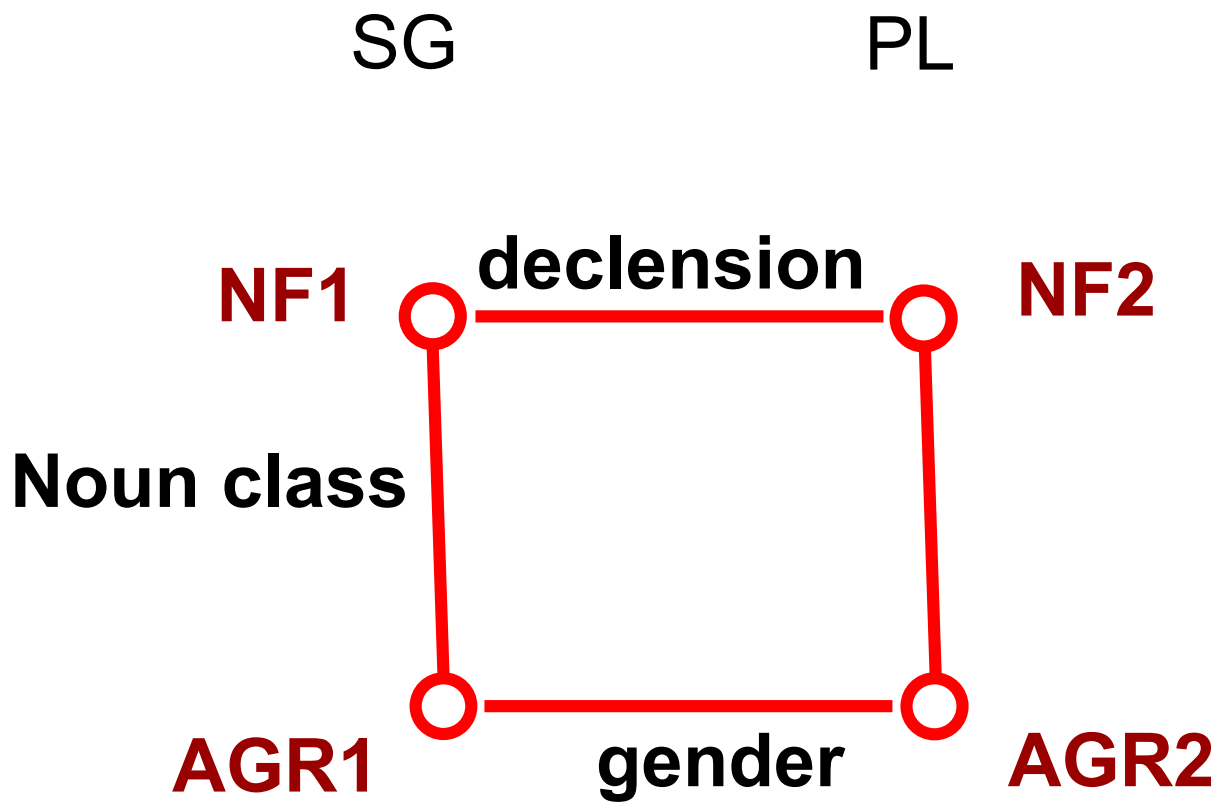
**Some properties of
the Atlantic noun class systems
In the Niger-Congo context**

Berlin, 30.11.2018

**Some properties of
the **Atlantic** noun class systems
in the **Niger-Congo** context**



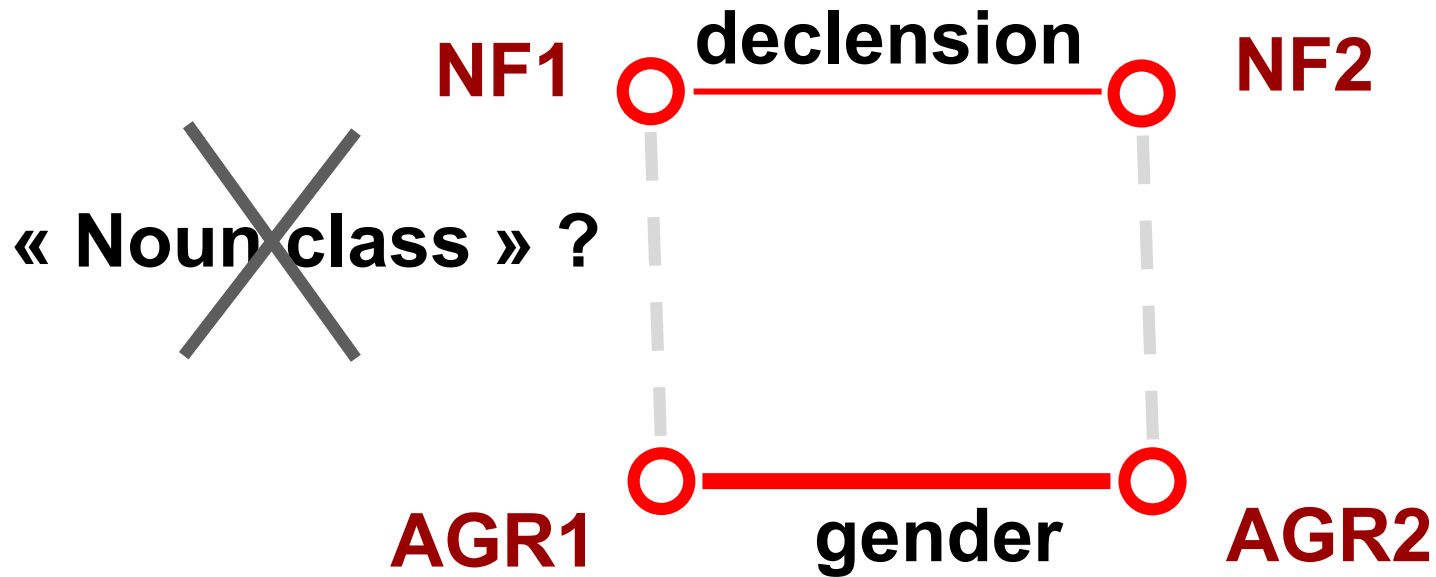
**Some properties of
the **Niger-Congo** class system
in the **Atlantic** context**



The NC canonical system:
4 sets / paradigms (4 points) plus lines

Swahili

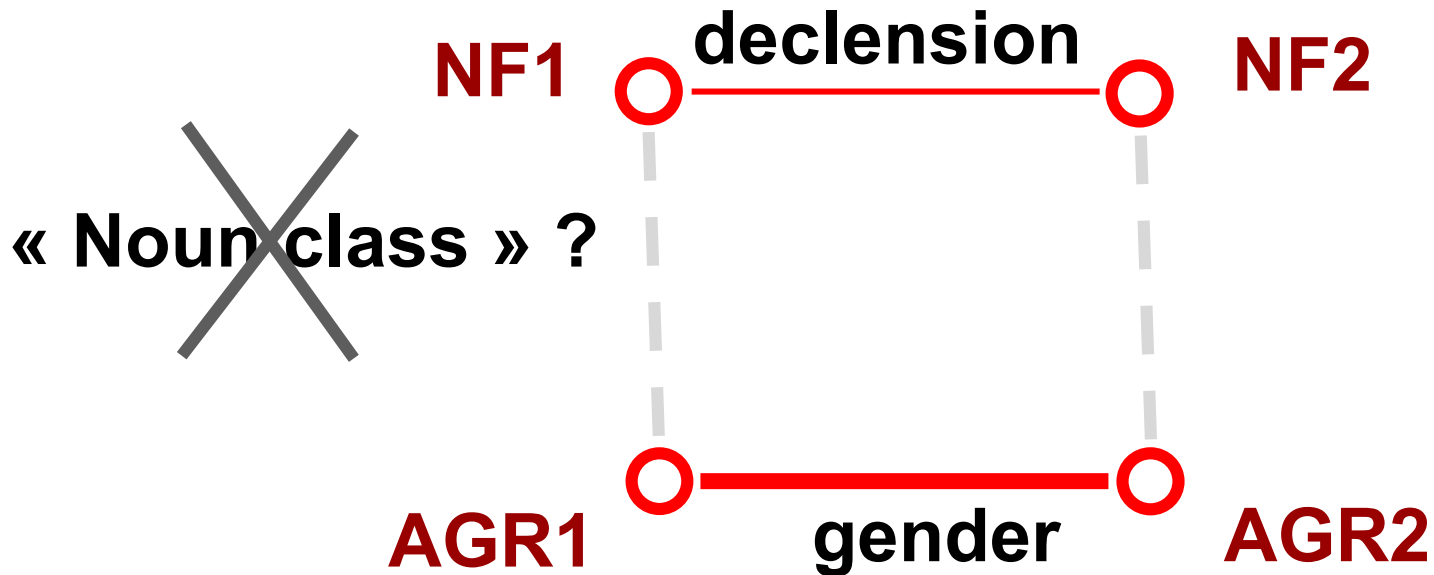
The idea is to study these paradigms separately



The predominance of the agreement paradigms

Swahili

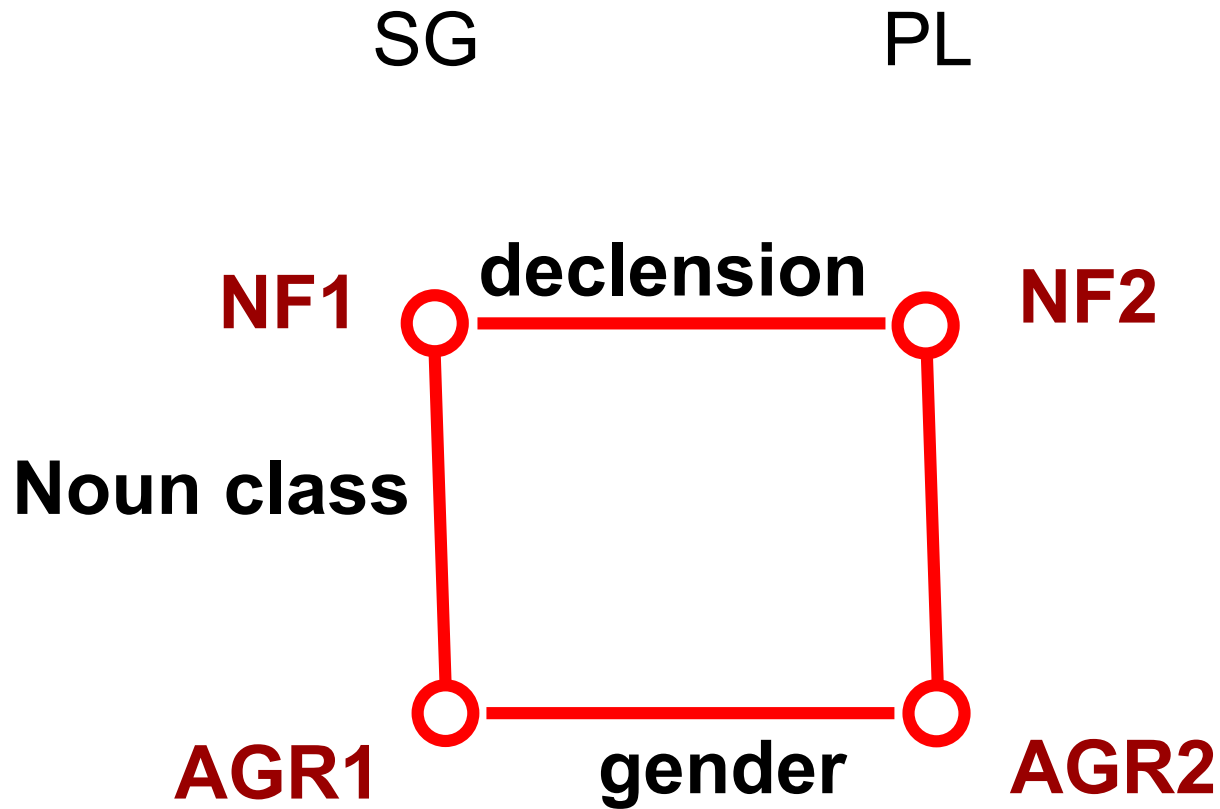
« Gender is more important than Declension »



Is it different in the «philological» model?

1 (NF mu) \neq 3 (NF mu) – different numbers

1 (NF mu) = 1a (NF \emptyset) – the same number



Yes, it is interesting to study
these points (paradigms) and lines separately

POZDNIAKOV, K. La classification nominale : à la croisée des paradigmes // « *Essais de typologie et de linguistique générale* ». Mélanges offerts à Denis Creissels. Paris: ENS Editions, 2010, p.p. 87-105. [PDF](#)

Atoms and molecules

SG

PL

NF1



NF2

AGR1



AGR2

Languages without genders (English)

SG

PL

Yoruba

NF1



NF2



AGR1



AGR2



It is not a gender system

Dagaari?
Ndut?



Alternation : SG / PL

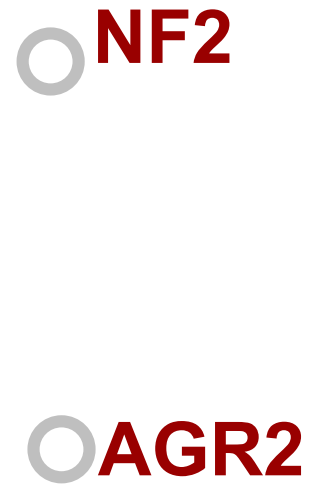
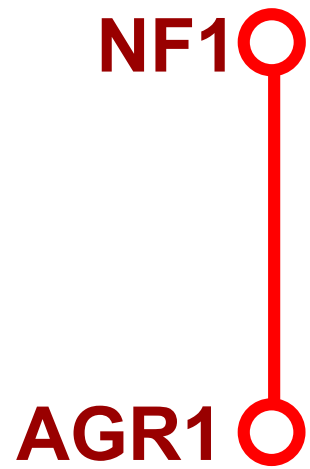
NF1 ○

○ NF2



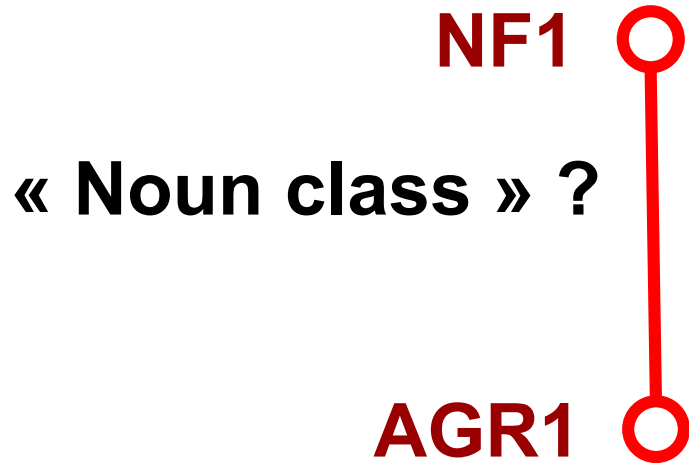
Kenn nit ku goor ki
K-'one' 'person' K-rel. 'man' K-def
'One man'

?





Badiaranke, Spanish

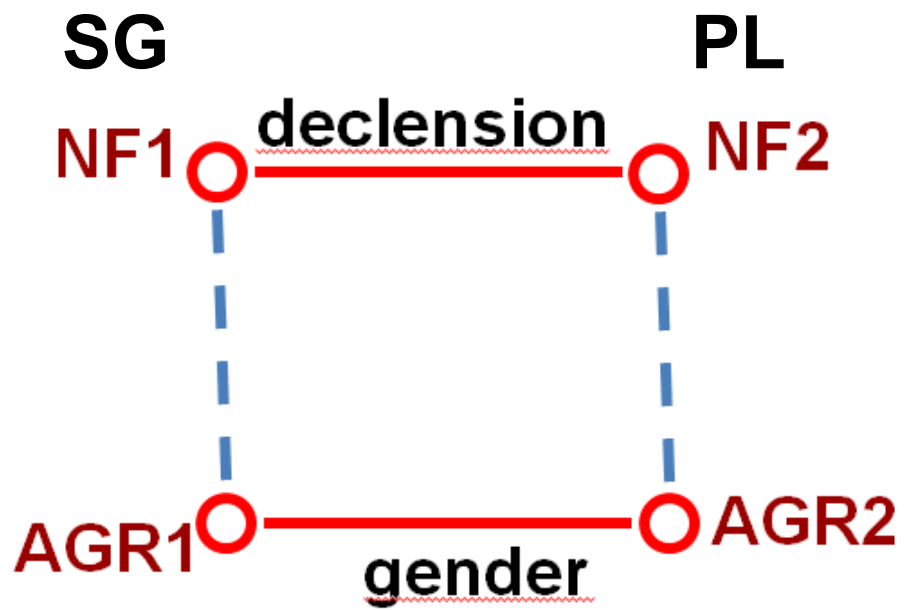


○ NF2

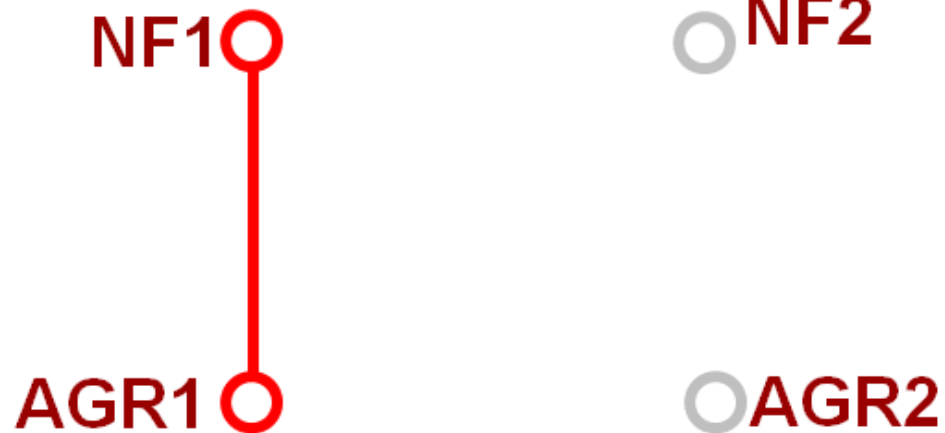
○ AGR2

Atlantic: Badiaranke (Jaad)

	Sg.	Dét.	Pl.	Dét.
‘vache ’	ku-na	k -un	be -ku-na	k -un
‘champ’	pə-dao	p -en	be -pə-dao	p -en
‘antilope (sp.)’	wan-cafɛ	w -an	be -wan-cafɛ	w -an
‘crocodile’	faa-tama	f -an	be -faa-tama	f -an
‘forgeron’	u-saa	w -en	be -saa	b -en
‘forgeron’ (dial.)	u-saa	w -en	be - be -saa	b -en



Your prototype



Badiaranke



NF1 ○ declension ○ NF2

≠

AGR1 ○ gender ○ AGR2
Human - human ± Human +

It is not an agreement !

Pronoun	weak form	strong f
Grammatical function	SUBJ and OBJ	SUBJ
1.sg.	N	muŋ
2.sg.	i	huŋ
3.sg.	u	wa
1.pl	ja	jawa
2.pl	ma	mawa
3.pl.a	a	awa
3.pl.b	ba	bawa

(4) *Domain: Quantifier + Noun*

a. ni-baal-a ba-muŋ
 person(*Gb*)-male-PL *Gb*-ALL
 'all men'

b. bola-sa a-muŋ
 elephant(*Ga*)-PL *Ga*-ALL
 'all elephants'

c. ŋ kpaga vii-ne a-naase
 1SG have cooking.pot(*Ga*)-PL 3PL. *Ga*-four

It is not an agreement !

'I have four cooking pots'

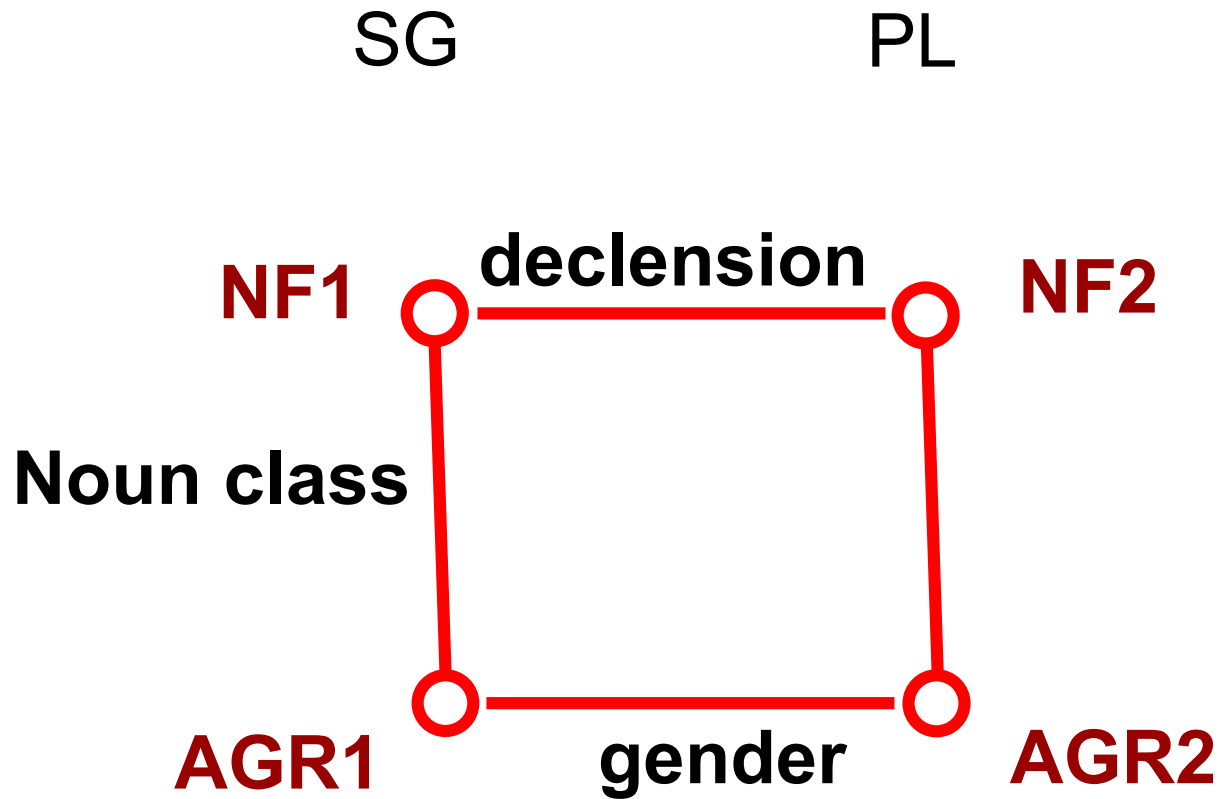
d. ŋ kpaga bi-se ba-naase
 1SG have child(*Gb*)-PL 3PL. *Gb*-four
 'I have four children'

The agreement classes in Russian (Zalizniak)

	1	2	3	4	5	6
	Masc	Masc	Fem	Fem	Neutral	Neutral
	<i>dom</i>	<i>slon</i>	<i>sten-a</i>	<i>koz-a</i>	<i>okn-o</i>	<i>chudovisch-e</i>
bel- 'white'	'house'	'elephant'	'wall'	'goat'	'window'	'monster'
Nomin SG	ij	ij	aja	aja	oje	oje
Accus PL	ije	ih	ije	ih	ije	ih

	Masc	Fem	Neutr
inanim	1	3	5
anim	2	4	6

Chakali ≈ Russian

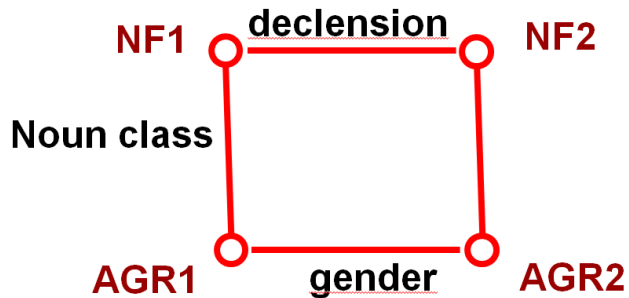


The NC canonical system:
4 sets / paradigms (4 points) plus lines.

Where are the main problems?

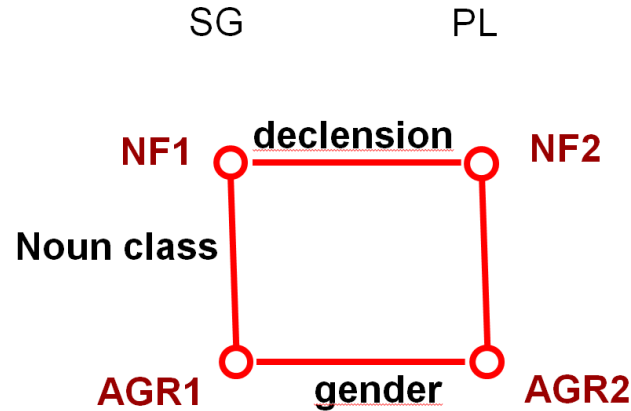
SG

PL



- 1) We have some systems where there is more than 4 points (Atlantic mutation agreement ...)
- 2) Every line represents more than 1 paradigm
- 3) Every paradigm has some autonomy in classifying features
- 4) It is easy to separate every paradigm but how to describe their connections / links?
How to describe a system of noun classification?

- 1) We have some systems where there is more than 4 points (Atlantic mutation agreement ...)



Consonant mutations

Fula :

cap(p)aat-o || / **saf**(f)ar-be | 'moor'

Konyagi (Santos)

ì-gwád / wà-wád / fà-nkwád / vù- nkwád

‘mango’ / ‘mango (pl.)’ / ‘mango (dim.)’ / ‘mango (dim.pl.)’

II

I

III

III

ì-dànt / ù- lànt / bà-lànt / và-ntànt

‘catfish’ / ‘catfish (pl.)’ / ‘catfish (augm.)’ / ‘catfish (augm.pl.)’

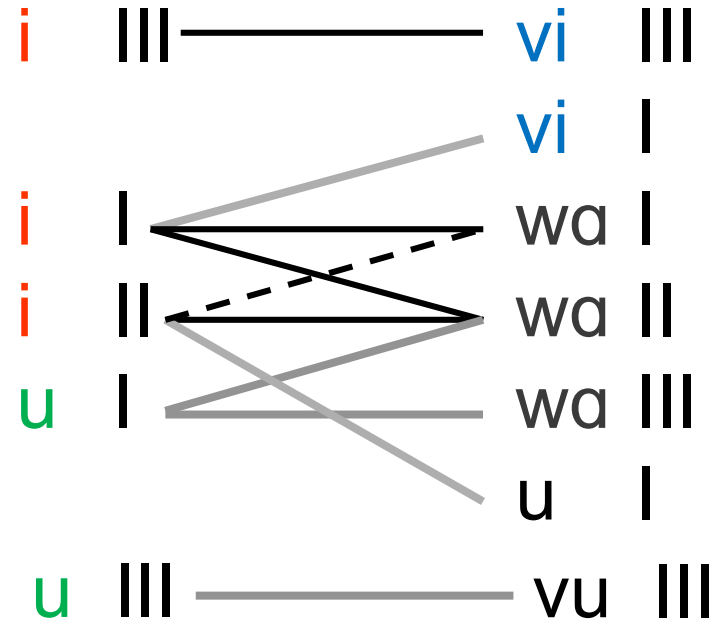
II

I

I

III

A fragment:



- 1) GENDER $i\ I / vi\ I \neq$ GENDER $i\ II / u\ I$;
- 2) GENDER $u\ I / wa\ II,III \neq$ GENDER $u\ III / vu\ III$

AGR with **different grades** form **different genders**

Fula

Category	grade sg	grade pl	Structure
+ human	II	I	CV
neutral	I, III	II	CV
+ diminutive	II	III	CVC'

Sereer

Category	grade sg	grade pl
+ human	II	I
neutral	I, II, III	II
+ diminutive	III	III

Mutation Grade agreement

Kobiana

a-**b**u a-**d**e

grade II agreement

Un gros ventre

u-**mb**egoer u-**nd**e

grade III agreement

Une grande plante

∅-fécẽw̃ i-wárax	ε-péréǰá ε-bárax	a-ngés a-mbárax
CL ^{in-I'} -lune CL ^{in-I} -rouge	CL ^{εI-II} -lèvre CL ^{εI-II} -rouge	CL ^{aη-III} -œil CL ^{aη-III} -rouge
'une lune rouge'	'une lèvre rouge'	'un œil rouge'

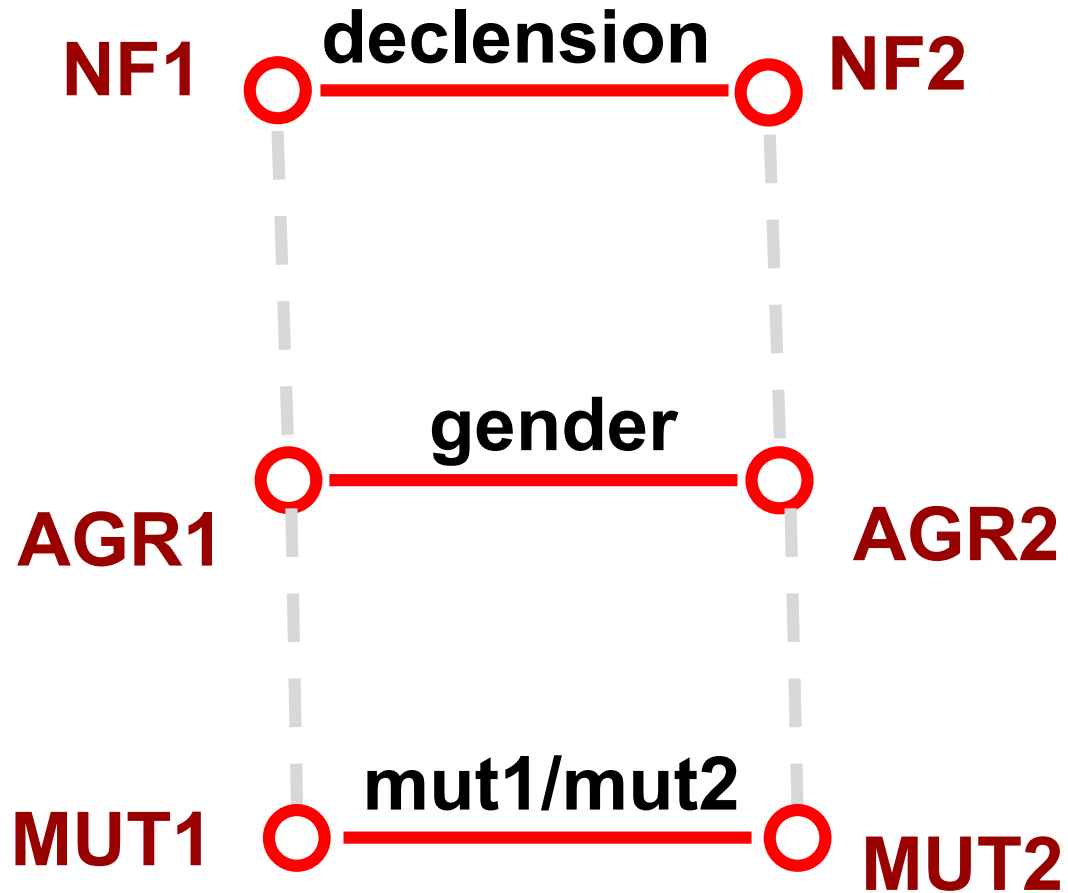
PL:

ó-pécẽw̃ ó-bárax ó-féréǰá ó-wárax
 'lunes rouges' 'lèvres rouges'

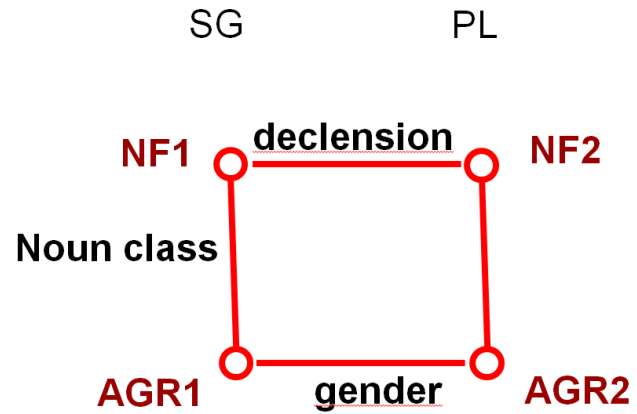
Two different types of agreement at the same time:

1. Prefixes
2. Grades

How to show it?



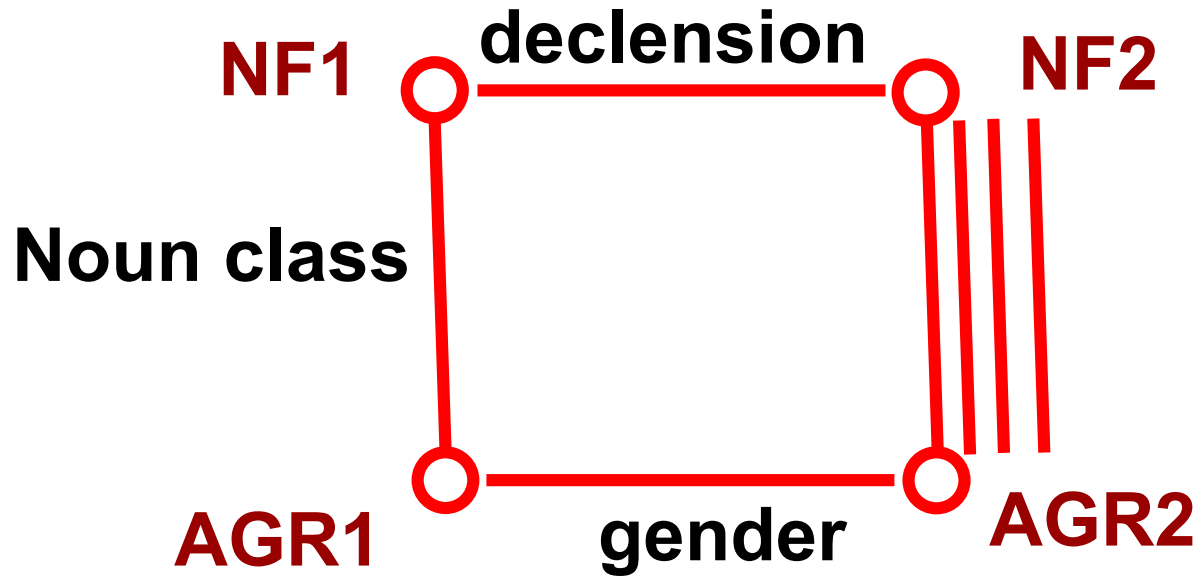
But MUT1 depends on NF1



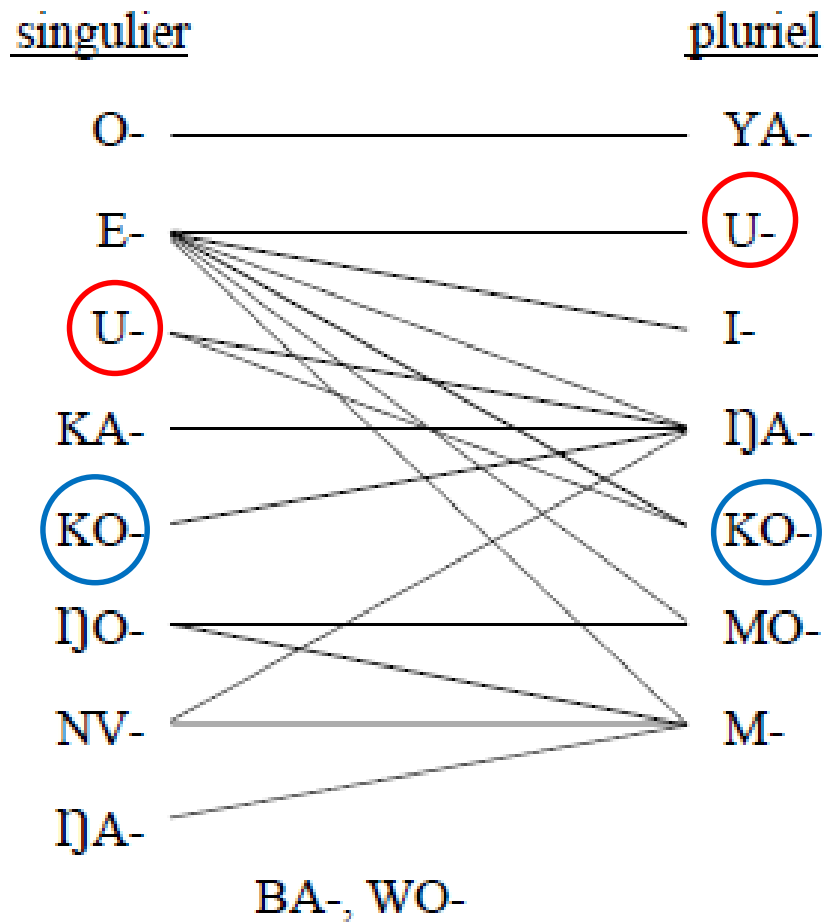
2) Every line represents more than 1 paradigm

Many agreement paradigms
but also
various paradigms of **Number**

Many agreement paradigms
but also various paradigms of **Number**



Bijogo (Segeberer)

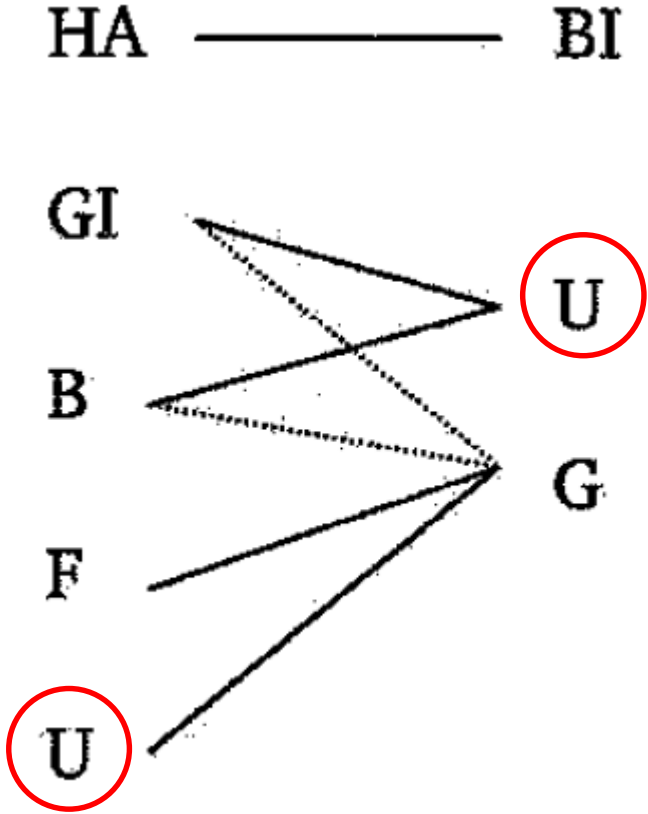


Bijogo (Segeberer)

KO / E: grain de riz; in mollusque sp. ; un haricot; morceau d'igname

E / KO: emprunts, lune(s), morceau de viande - viande, beaucoup de viande; veine(s); tendon(s); nerf(s).

Balant (Creissels)



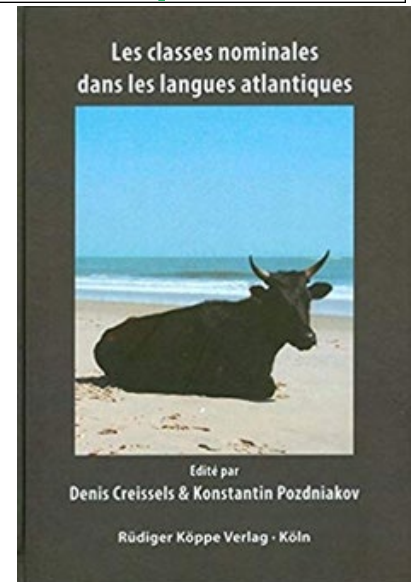
Yesterday
Vere (Ulrich)

U _____ N
N _____ T

Basari (Perrin)

	SG	PL	SG	PL
	ɔŋ-III SG	ɔŋ-III PL	ɔl-I SG	ɔl-I PL
préfixe	ɔ- (o-)	ɔ- (o-)	ɔ- (o-)	ɔ- (o-)
défini	-ɔŋ	-ɔŋ	-ɔl	-ɔl
dém.	ɔŋó	ɔŋó	ɔló	ɔló
relatif	ɔnd	ɔnd	ɔr	ɔr
	<i>ɔ-ngáw̃-ɔŋ</i> 'le gros lit'	<i>ɔ-mban-ɔŋ</i> 'les cheveux'	<i>ɔ-sél-ɔl</i> 'la soif'	<i>ɔ-ǰamb´-ɔl</i> 'les éléphants'

Different paradigms !



Complex structure of Number



Singulatif ← PL. COLL.

Fula

SG	PL	SEM	CLP	CLS	SG
holbunder(re)	kolbule	cheville	ɗe	nde	ɗe-nde
yitere	gite	œil	ɗe	nde	ɗe-nde
wattere	batte	trace	ɗe	nde	ɗe-nde
wubbere	gubbe	poing	ɗe	nde	ɗe-nde
wuucere	buuce	poumon	ɗe	nde	ɗe-nde
goro(ore)	gorooje	noix de cola	ɗe	nde	ɗe-nde
huyfere	kuyfe	noyau ; noix	ɗe	nde	ɗe-nde
rubbere	dubbe	noix de rônier	ɗe	nde	ɗe-nde
nyaayere	nyaaye	perle	ɗe	nde	ɗe-nde
seedere	ceede	cauri ; monnaie	ɗe	nde	ɗe-nde
tobbere	tobbe	goutte	ɗe	nde	ɗe-nde
waalere	gaale	grain, pépin	ɗe	nde	ɗe-nde
yulbere	yulbe	braise	ɗe	nde	ɗe-nde
dabi(ire)	dabiije	punaise	ɗe	nde	ɗe-nde
feccere	pecce	part; partie	ɗe	nde	ɗe-nde
soppere	coppe	morceau	ɗe	nde	ɗe-nde
haatannde	kaatane	pierre de foyer	ɗe	nde	ɗe-nde

Triads

Bainouk (Cobbinah)

Table (111) *Triadic noun class paradigms (n=94)*

Paradigm			Domain	Type frequency
Singular	Count plural	Unlimited plural		
<i>bu-</i>	<i>i-</i>	<i>di-</i>	FRUITS	26
<i>bu-</i>	<i>i-</i>	<i>ba-</i>	TUBERS/GROUND GROWING PLANTS	6
<i>bu-</i>	<i>i-</i>	<i>ja-</i>	ANIMALS	12
<i>gu-</i>	<i>ha-</i>	<i>ba-</i>	SMALL FRUITS, SMALL OBJECTS	19
<i>gu-</i>	<i>ha-</i>	<i>ja-</i>	GRASSY PLANTS, PLANT PARTS, BODY PARTS	26
<i>ran-</i>	<i>ñan-</i>	<i>ja-</i>	AMPHIBIANS	5

Preprefixation

- Locative noun classes
- « **ba-k** » group of Atlantic
- Swahili **ki-** **ji-** tu and not ***ki-** tu
 CL7+CL5-person CL7-person
 ‘midget’
 < **ji-**tu ‘giant’
- Fula (the next slide)

2 affixes in SG

Fula

SG	PL	SEM	CLP	CLS	SG
holbunderere(re)	kolbule	cheville	ɗe	nde	ɗe-nde
yitere	gite	œil	ɗe	nde	ɗe-nde
wattere	batte	trace	ɗe	nde	ɗe-nde
wubbere	gubbe	poing	ɗe	nde	ɗe-nde
wuucere	buuce	poumon	ɗe	nde	ɗe-nde
goro(ore)	gorooje	noix de cola	ɗe	nde	ɗe-nde
huyfere	kuyfe	noyau ; noix	ɗe	nde	ɗe-nde
rubbere	dubbe	noix de rônier	ɗe	nde	ɗe-nde
nyaayere	nyaayfe	perle	ɗe	nde	ɗe-nde
seedere	ceede	cauri ; monnaie	ɗe	nde	ɗe-nde
tobbere	tobbe	goutte	ɗe	nde	ɗe-nde
waalere	gaale	grain, pépin	ɗe	nde	ɗe-nde
yulbere	yulbe	braise	ɗe	nde	ɗe-nde
dabi(ire)	dabiije	punaise	ɗe	nde	ɗe-nde
feccere	pecce	part; partie	ɗe	nde	ɗe-nde
soppere	coppe	morceau	ɗe	nde	ɗe-nde
haatannde	kaatane	pierre de foyer	ɗe	nde	ɗe-nde

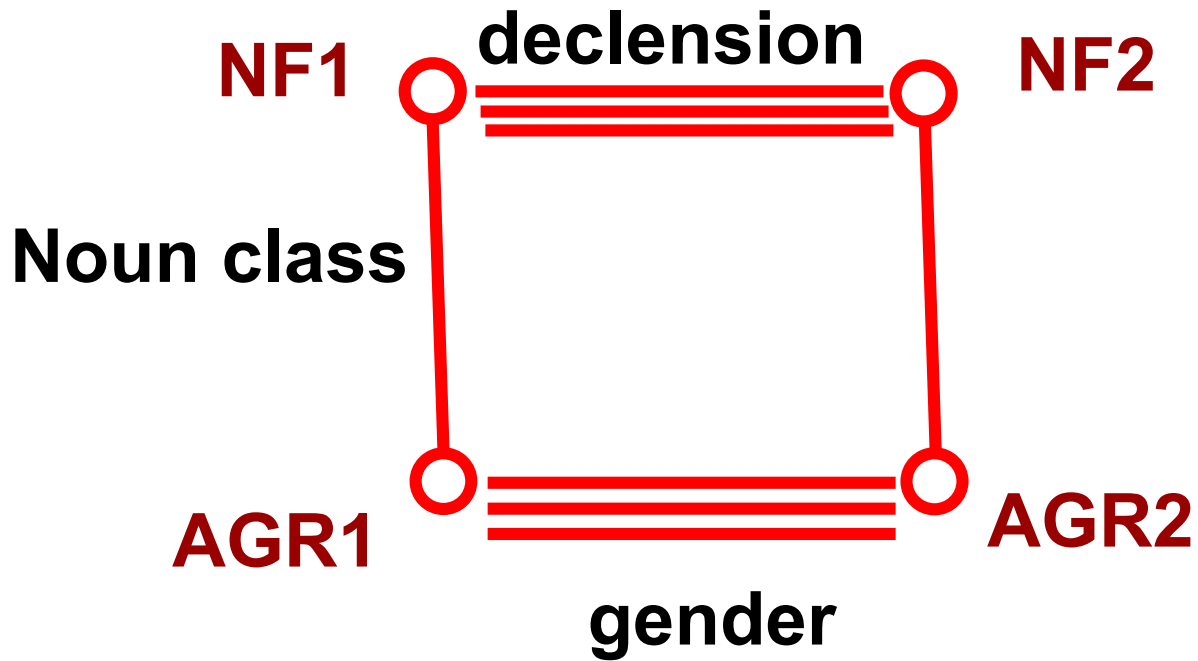
Transnumerals

Singularia tantum ≠ Pluralia tantum

14 bu SG

15 ku SG

6 ma PL



Various paradigms of Declension and Gender

Specific marking of humans (sometimes animated)

- 1) Specific tone (Bantu, Tenda) – NF', AGR
- 2) Binary opposition « humans ± » (Wolof) – NF', AGR
- 3) Preprefixes (Bak) – NF'
- 4) Specific agreement (Atlantic, Limba) - AGR
- 5) Specific opposition in the mutation grades (North Atlantic) – AGR.MUT
- 6) Special structure of Human PI collective (suffix) etc.

Specific tone (Bantu, Tenda) for Animated +

	<i>Noun</i>	<i>Agr.</i>
1	*m̀̀	*̀̀
1a	∅	*̀̀
3	*m̀̀	*g̀̀
5	*ì	*lí
7	*k̀̀	*g̀̀
9	*̀̀̀	*j̀̀
11	*l̀̀	*l̀̀
12	*k̀̀	*k̀̀
14	*b̀̀	*b̀̀
15	*k̀̀	*k̀̀

Specific marking of dimensional classes

- 1) Preprefixes (Bantu) – NF' : Swahili *mtu* 'river' – *ki-ji-to* 'small river', *mtu* 'person' > *ki-ji-tu*
 - 2) Specific oppositions AGR.MUT in Genders - AGR.MUT (Sereer)
 - 3) No Genders (Bijogo) – NF, AGR (CL **BA** – Pejoratif SG-PL)
 - 4) Special agreement (Wolof) – AGR
 - 5) Specific NF structure (Fula) – NF
- etc.

Nordic Journal of African Studies 26(4): 344–383 (2017)

**Patterns and Developments in the Marking of
Diminutives in Bantu**

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Preprefixes for dimensional classes (Bantu)

Kimbundu (H21, Quintão 1934: 18)

di-tadi	‘stone’	(class 5)
ma-tadi	‘stones’	(class 6)
ka -di-tadi	‘small stone’	(class 12 + class 5)
tu -ma-tadi	‘small stones’	(class 13 + class 6)

Bemba (M42, Hoch n.d.: 96–99)

umu-ntu	‘person’	(class 1)
aka -mu-ntu	‘small person’	(class 12 + class 1)

Herero (R30, Kavari and Marten 2009: 169–171)

o-ru-vyó	‘knife’	(class 11)
o- ka -rú-vyó	‘small knife’	(class 12 + class 11)
o- u -tú-vyó	‘small knives’	(class 14 + class 13)
o-mu-tí	‘tree’	(class 3)
o- ka -mu-tí	‘small tree’	(class 12 + class 3)

Rangi (F33, Gibson 2012): classes 12/19

vi-ryo	‘millet’	(class 8)
fi -vi-ryo	‘small millet’	(class 19 + class 8)

Rombo (E623, Shinagawa 2014, p.c.): classes 12/8

ki-du	‘ear’	(class 9)
ka -ki-du	‘small ear’	(class 12 + class 7)
fi -ki-du	‘small ears’	(class 8 + class 7)

Bembe (D54, Iorio 2011: 50): *i-* (class 5) and *tu-* (class 13)

mi-tfwē	‘heads’	(class 4)
tu -mi-tfwē	‘small heads’	(class 13 + class 4)

Sena (N44, Mozambique)

m-peni	‘knife’	(class 3)
ci -m-peni	‘small knife’	(class 7 + class 3)
pi -mi-peni	‘small knives’	(class 8 + class 4)
ka -m-peni	‘small knife’	(class 12 + class 3)
m-buzi	‘goat’	(class 9)
ci -m-buzi	‘goat kid’	(class 7 + class 9)
pi -m-buzi	‘goat kids’	(class 8 + class 10)
ka -m-buzi	‘goat kid’	(class 12 + class 9)

Ronga (S54, Bachetti 2006: 63–64)

yi-ndlu	‘house’	(class 9)
xi-yi-ndlw-ana	‘small house’	(class 7 + class 9 + -ana)
swi-yi-ndlw-ana	‘small houses’	(class 8 + class 9 + -ana)

Fula dimensional sub-systems (an innovation)

Diminutives

sg

pl

II ... ngum (Est) (dim. intensive)

II ... ngel (FJ,Center)

II ... kal (partitive)

II ... kel (FJ) (dim. intensive)

II ... kun (FJ)

II ... kol (offsprings)

III ... kon ~ koñ ~ kol ~ koy

Augmentatives

Eastern dialects

III ... nga

III ... ngi (Ansongo)

III ... ko

Others

II ... ngal

II ... ngil ~ ngii (FJ)

II ... •e / •i (~ le / li)

Tableau 13. Supercatégories en sereer – K. POZDNIAKOV & G. SEGERER, *idem*.

catégorie	deg. sg	deg. pl
humains	II	I
neutre	I	II
	II	II
	III	II
diminutifs	III	III

Is the agreement sets are the determinative criteria in a class system description?

Maybe, but it could not be an absolute criterion

2 points:

1) Wolof example – the next slide

2) Landuma example

Indefinite

Wolof

K	B	W	M	G	J	L	S	Ñ	Y
ak	ab	aw	am	ag	–	–	–	–	ay

K	B	W	M	G	J	L	S	Ñ	Y
ak	ab	aw	am	ag	ab	ab	ab	ay	ay
ak	ab	aw	am	ag	ab	ab	as	ay	ay

Ab saatu **su** gàtt ‘a shot knife’

Indef knife rel short

As tuq **su** ràpp ‘an old little mortar’

Indef l.mortar rel worn

Two different classes S?



Indefinite

Wolof

K	B	W	M	G	J	L	S	Ñ	Y
ak	ab	aw	am	ag	–	–	–	–	ay

K	B	W	M	G	J	L	S	Ñ	Y
ak	ab	aw	am	ag	ab	ab	ab	ay	ay
							as		

Moreover: **dim.**
koog gi / ag koog ‘a spoon’ / *as koog* ‘a little spoon’

16 SG classes instead of 8?!
(cf. Russian 6 agreement classes)

Landuma: initial consonants

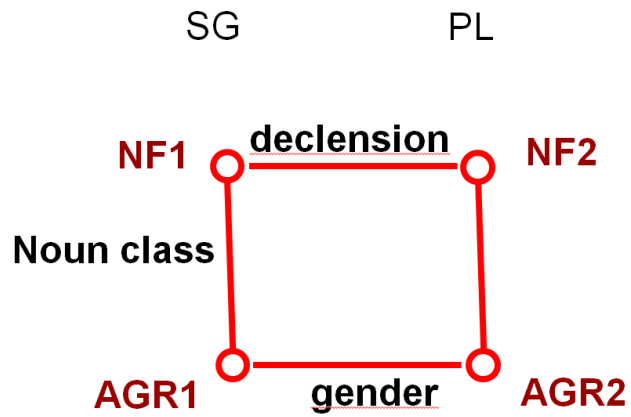
p	t	c	k
f		s	h
b	d	j	gb
m	n	ɲ	ŋ
w	l	y	

Noun + definite article

12

'sweet potato'	butɛtɛ bi
'sand'	cəsənc ci
'hand'	dʌkand di
'flour'	fʌriŋ fi
'secret'	gbundo gbi
'freedom'	hɛri hi
'onion'	jʌbʌ ji
'maize'	kəbabu ki
'week'	lɔkuŋ li
'water'	mʌnc mi

'fire'	nɛnc ni
'journey'	ɲʌmʌnɛ ɲi
'mat'	ŋar ŋi
'fireplace'	pʌkʌ pi
'hair'	səfon si
'finger'	tʌlɛr ti
'clothes'	yʌc yi
'stone'	ʌsar ɲi
'school'	ɛkɔl ɲi



3) Every paradigm has some autonomy in classifying features

Bantu B20 (Koya, Ndambomo, Mwesa ...)

SG

PL

Human

1



2

Animated

Animal

9



Koya (Medjo Mvé)

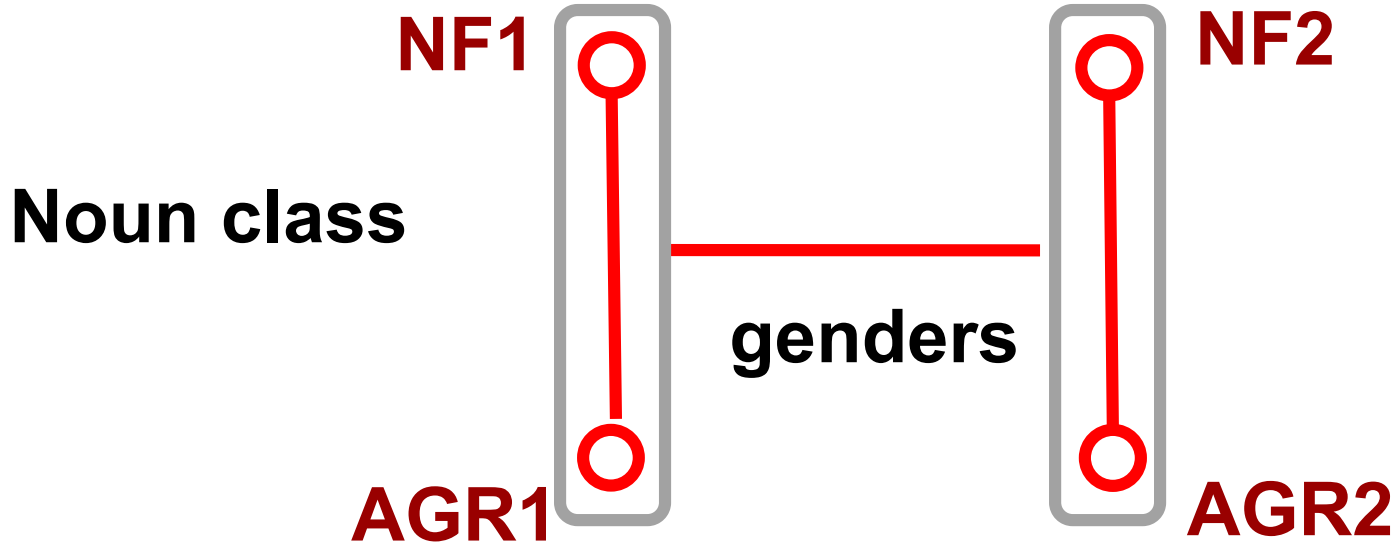
CL 9 / CL 2

fìè / bá-fìè	poisson	ngíyà / bà-ngíyà	gorille
kʸémà / bà-kʸémà	singe	ngómbà / bà-ngómbà	porc-épic
kúdʸè / bá-kúdʸè	tortue	ngóngù / bà-ngóngù	lion
kùyà / bá-kùyà	chimpanzé	ngóyà / bà-ngóyà	sanglier
ṅádì / bá-ṅádì	buffle	nkʸéṅà / bà-nkʸéṅà	scorpion
ndzínè / bà-ndzínè	araignée	pò / bá-pò	souris, rat
nzíè / bà-nzíè	panthère	ngámbè / bá-ngámbè	araignée

No animals in CL 9 / CL 10

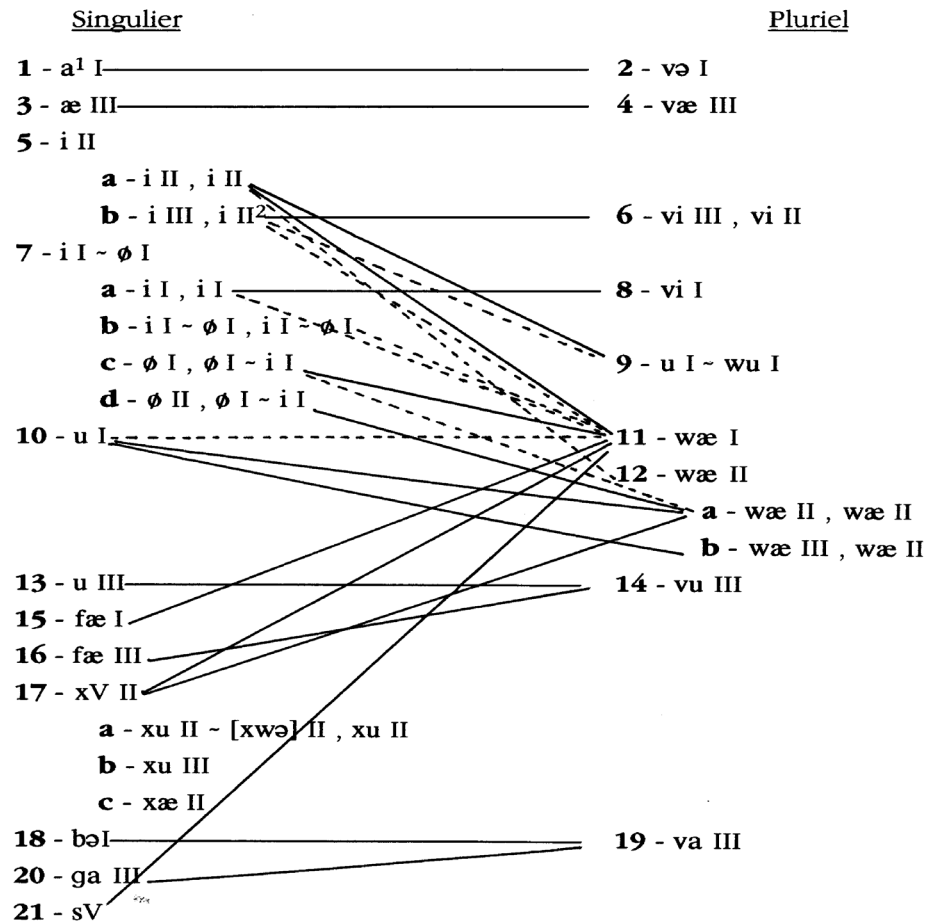
SG

PL



How to make a synthese ?
The traditional synthetic model
Does it work?

Konyagi (Santos)



Classes non apparées

22 - æ I

23 - ŷa ~ (ŷ)æ I

a - yæ I ~ ŷæ I

b - ŷa I ~ ŷæ I

24 - xæ I ~ kæ I ~ xæ II ~ kæ II

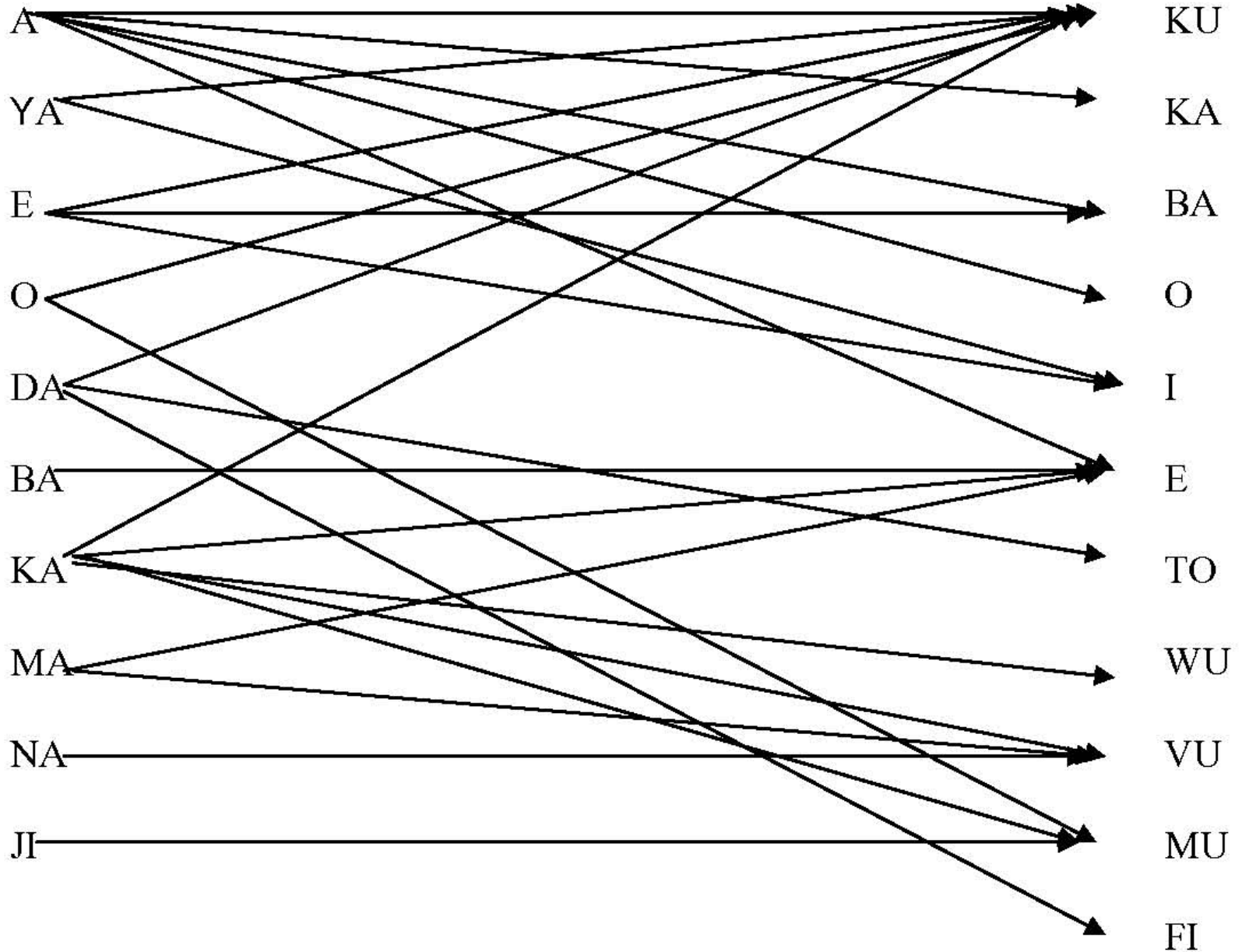
- appariements réguliers

-- appariements possibles

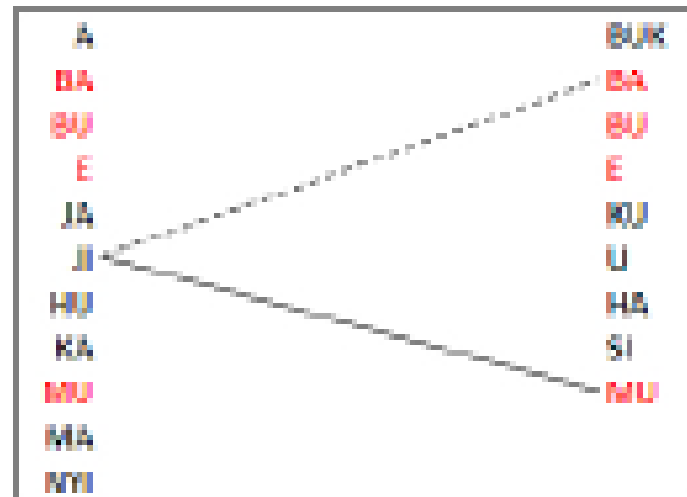
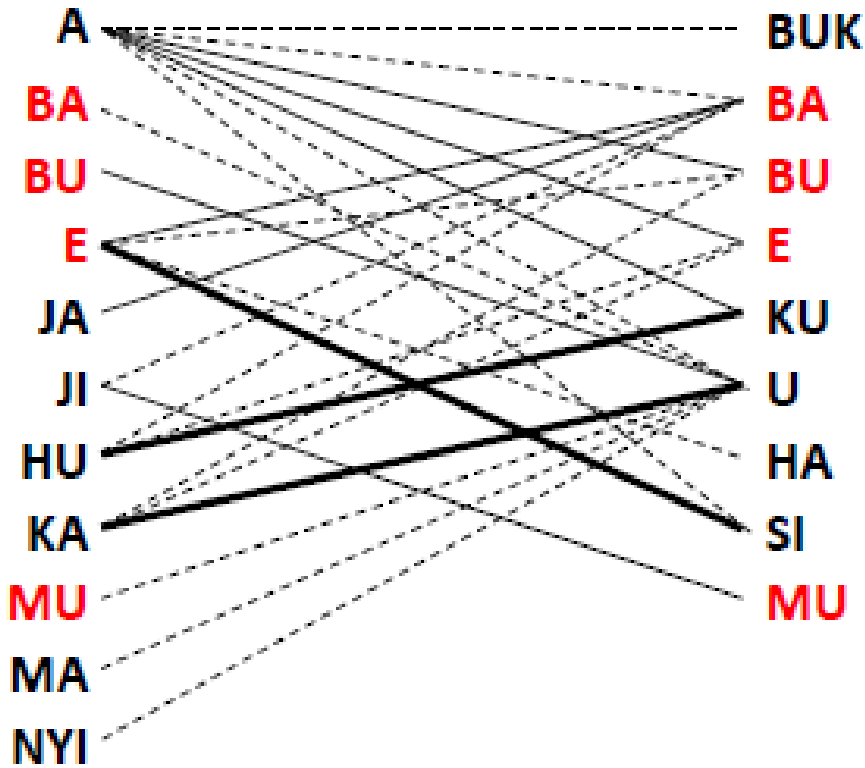
¹ Les classificateurs sont structurellement non intonés.

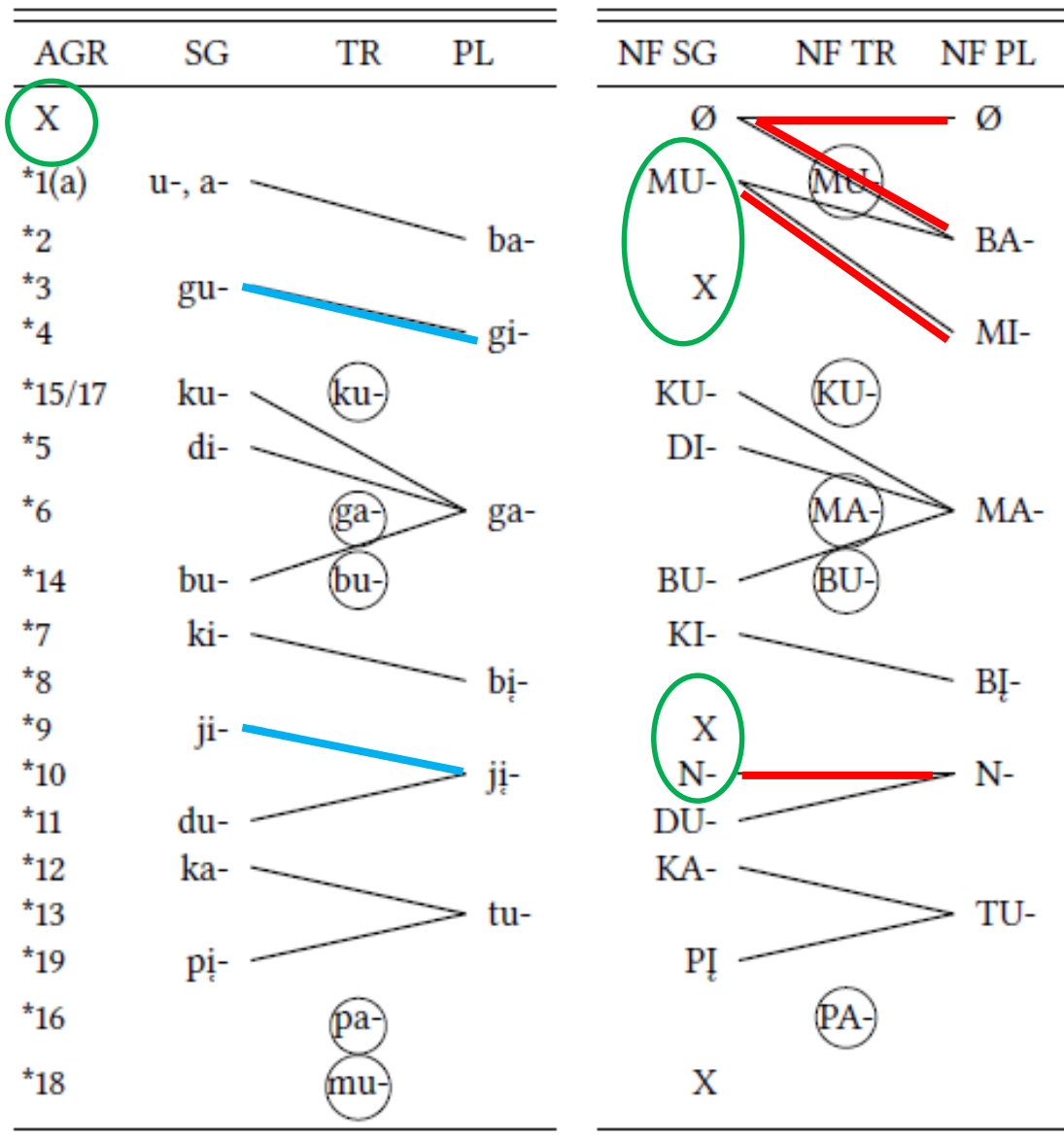
² i III, i II. Lire ainsi : i III : marques du nom / i II : marques d'accord.

Bayot(Diagne)



Keerak (Segerer)





Questions:

X
MU-

N-
X

MU-¹ NF SG

Note: X = no independent counterpart in the other class type.

Figure 8: Gender system (left) vs. declension system (right) of Proto-Bantu.

What are we doing? If we describe a system:

			trans	NF	2	4	6	8	10	13
	NF				*bà	*mì	*mà	*bì	*Ñ	*tù
		AGR			*bá	*gí	*gá	*bí	*jí	*tú
trans							+			
NF										
1	*mù	*ù		1=3	+					
1a	∅	*ù			+					
3	*mù	*gù		1=3		+				
5	*ì	*lí					+			
7	*kì	*gí						+		
9	*Ñ	*jì							+	
11	*lù	*lú					+		+	
12	*kà	*ká								+
14	*bù	*bú	+				+			
15	*kù	*kú	+				+			

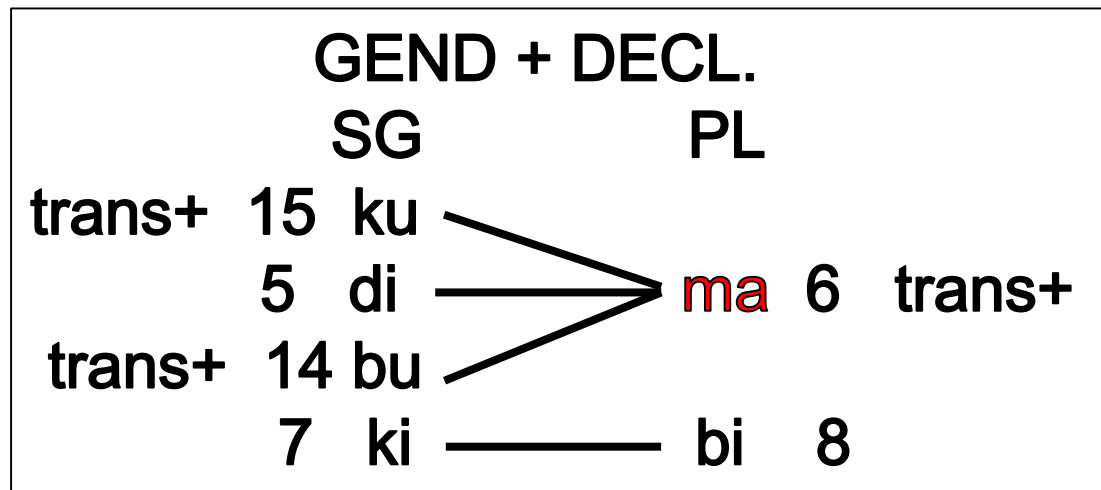
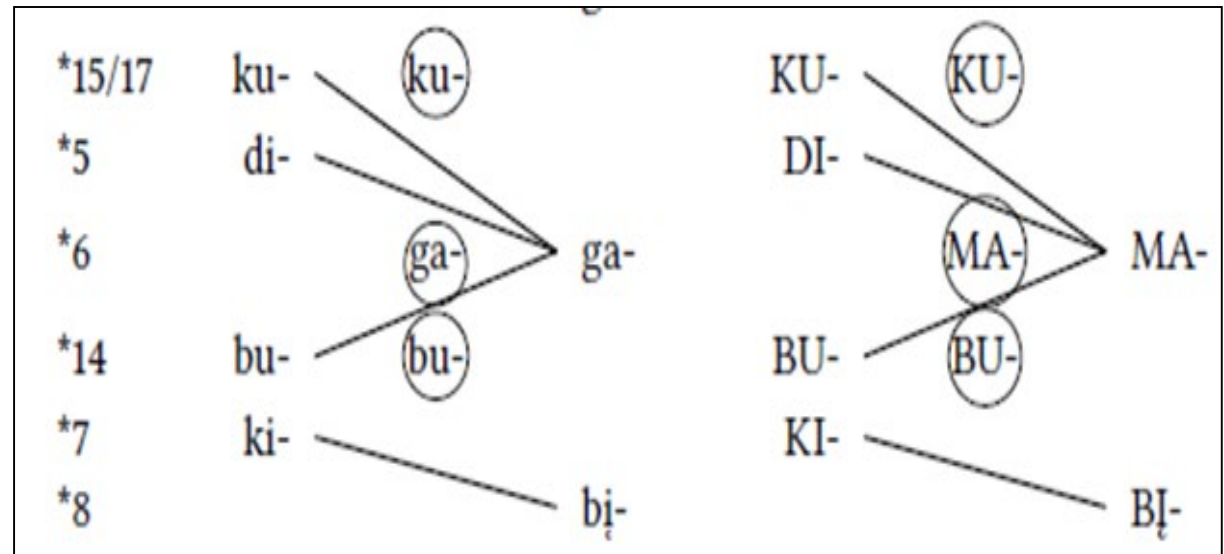
If we search for the best graphical representation :

	SG		PL
GO1	<i>e-</i>	AN	
GO2			<i>bo-</i>
GO3	<i>ki-</i>	IAN	
GO4			<i>a-</i>

Figure 11: Gender system of Gonja (based on Painter 1970).

SG		PL
GO1	<i>e-</i> ———	<i>bo-</i> GO2
GO3	<i>ki-</i> ———	<i>a-</i> GO4

If we search for the best graphical representation :



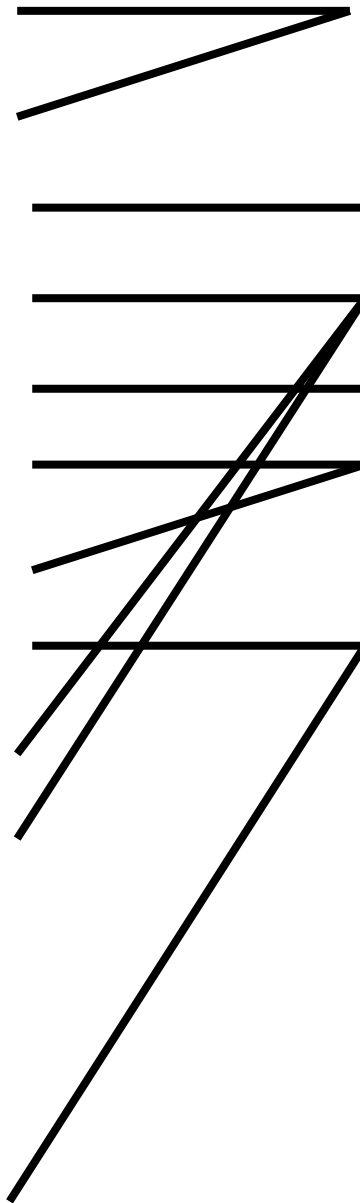
Proto-Bantu

	<i>Noun</i>	<i>Agr.</i>
1	*mù	*ù
1a	∅	*ù
3	*mù	*gù
5	*ì	*lí
7	*kì	*gí
9	*Ñ	*jì
11	*lù	*lù
12	*kà	*ká
14	*bù	*bù
15	*kù	*kù
16	*pà	*pá
17	*kù	*kù
18	*mù	*mù
19	*pì	*pí

	<i>Noun</i>	<i>Agr.</i>
2	*bà	*bá

4	*mì	*gí
6	*mà	*gá
8	*bì	*bí
10	*Ñ	*jí

13	*tù	*tù
----	-----	-----



Proto-Bantu

If we reconstruct

« Prototypical » is an ambiguous term:

- 1) diachronical
- 2) synchronical
- 3) « pseudo-prototypes »

A « prototypical » bird – sparrow –





Proto-birds



The problem is what is the « prototypical »
diachronically –
Proto-Bantu or some Atlantic-like systems?

What was the NC noun system look like?

Special workshop?