

## The gender system of Laal in typological and areal perspective

Florian Lionnet (Princeton University)  
flionnet@princeton.edu

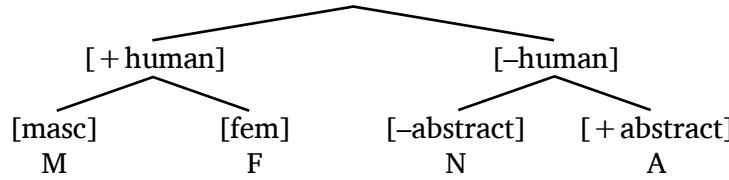
### 1 Introduction

- (1) Laal (all data are from my own field notes, which confirm and expand on Boyeldieu 1982a):
  - a. ca. 800 speakers in two villages in Southern Chad
  - b. Unclassified, several hypotheses:
    - Chadic with strong Adamawa (Boua and non-Boua) influence;
    - Niger-Congo (not Boua, perhaps Adamawa) with Boua and Chadic influence;
    - Mixed language (Chadic + Adamawa);
    - Isolate with Chadic and Adamawa (Boua or non-Boua) influence.
    - Cf. Boyeldieu (1977; 1979:11-13; 1982:3; 1985:14,29), Blench (2006), Dimmendaal (2008), Lionnet (2010).
- (2) Goals:
  - a. Describe the gender system of Laal, using Güldemann & Fiedler's (to appear) framework
  - b. Compare with other African systems (in particular today Niger-Congo, esp. Adamawa), and show that the Laal gender system is unique in Africa
  - c. Evaluate claims of traces of a Niger-Congo "noun class" system
  - d. Give weight to the isolate hypothesis
- (3) Interesting:
  - a. Areal: Gender system unrelated to any other in the region, or in Africa
  - b. Genealogical: can be used as an argument supporting the isolate hypothesis
  - c. Synchronic:
    - Complete disconnect between nominal morphology and gender system
    - Two different agreement paradigms, morphologically unrelated, structurally partly different
  - d. Diachronic: A case of complexification of the agreement classes through the innovation of a subgender within an agreement sub-paradigm

### 2 The gender system of Laal

#### 2.1 Genders

- (4) Four genders:
  - a. Masculine: human male
  - b. Feminine: human female
  - c. Neuter: non-human (+ non-abstract, cf. below)
  - d. Abstract: deverbal nouns, clauses (not identified by Boyeldieu 1982a, difficult to identify as we will see)
- (5) "Strict semantic system" (Corbett 1991), with four semantic features:
  - a. One primary distinction: [ $\pm$ human]
  - b. Two secondary distinction:
    - Sex distinction: [feminine] vs. [masculine] among [+human]
    - [ $\pm$ abstract] among [-human]



- (6) Sex difference only among [+human]:

a.	nīnī	jí	gūdā		'big woman'	
	woman	CON.F.SG	be.big			
b.	nāārā	já	gūdā		'big man'	
	man	CON.M.SG	be.big			
c.	biāāg	má	gūdā		'big dog'	
	dog	CON.N.SG	be.big			
d.	biāāg	má/*jí	nīnī	má/*jí	gūdā	'big female dog'
	dog	CON.N.SG /*F	woman	CON.N.SG /*F	be.big	
e.	biāāg	má/*já	nāārā	má/*já	gūdā	'big male dog'
	dog	CON.N.SG /*M	man	CON.N.SG /*M	be.big	

- (7) Covert system:

- a. No overt marking of gender on the noun
- b. Gender is only marked on agreeing elements: pronouns and determiner-like items.
- c. Consequence: no noun form classes or declension → evidence that:
  - Noun form class ≠ agreement class
  - Gender system ≠ declension

- (8) Gender and number are conflated.

- a. Each gender is characterized by the association of a singular and a plural agreement pattern (agreement classes, AGR),
- b. Each agreement class is realized differently depending on the target of agreement: two subsystems, morphologically unrelated, structurally partly different:
  - Determiner paradigm
  - Pronominal paradigm

## 2.2 Pronominal system

Gender [± human] Secondary		Subject	Indep.	Suffixes		
				Poss 1	Poss 2	Object
Sg.	1	+ M F	já jí	-ér	-i	-én ~ -ér
	2		ò uǎy	-à	-ua	-uán ~ -uá
	3	+ M F - (N + A)	à ìñ àñ ăy ìñí àñí	-är -ò(g) -àñ -ar -òn(ó) -àñ(á)	-ar -ón(ó) -àñ(á)	-án ~ -ár -òn ~ -ò -àñ ~ -àr
Pl.	1ex		ùrú	-rú	--	-nùrú ~ -nú ~ -rú
	1in		ăŋ	-ráŋ	--	năŋ ~ -răŋ
	2		ùn ùnún	-rún	--	núŋ ~ rúŋ
	3	+ (M + F) - (N + A)	ì uàñ ìrí uàñí	-rí -uàñ -uàñá	-- -uàñá	-nìrí ~ -ní ~ -rí -uàñ ~ -uàr

Table 1 Personal pronouns and pronominal suffixes

- (9) Three persons (1, 2, 3) + inclusive/exclusive distinction in 1<sup>st</sup> pers. pl.
- (10) Gender distinctions across the board only in 3<sup>rd</sup> person:
- a. 3sg: M vs. F vs. non-human (=N+A)
  - b. 3pl: Human (=M+F) vs. Non-human (=N+A)
- (11) F/M distinction in 1sg subject/independent = recent innovation (grammaticalization from connective markers já/jí, cf. 2.3)
- a. No gender distinction elsewhere in 1sg or 1pl
  - b. Form já/jí unrelated to other 1sg forms
  - c. No difference between subject and independent forms
- (12) Conflations:
- a. No abstractness distinction at all in the pronominal system: “neuter” = non-human
  - b. No sex distinction in 3pl human (neutralization of [fem] and [masc])
  - c. i.e. in 3pl, the only distinction is Human (M+F) vs. Non-human (N+A)
- (13) Suppletion:
- a. Two series of Possessive suffixes (unpredictable, Poss 2 less regular, probably older)
  - b. Two series of Object suffixes (mostly unpredictable)

### 2.3 Determiner system (determiners and determiner-like functional words)

- (14) Determiner-like elements are all based on five morphological bases /ja/, /ji/, /ma/, /yi/, /ya/, associated with different agreement classes.
- (15) Not only determiners:
- Indefinite jàñ, = determiner
  - Partitive indefinite jánàn (“one/some of X”) = determiner and pronoun
  - Demonstrative juáñā = adnominal (determiner) and pronominal
  - Demonstrative juàñá = predicative
  - Connective já
  - Focus marker jà
  - Topic marker juāñ

	Connective	Focus	Indef.	Partitive Indef.	Topic	Demonstrative (ad/pronominal)	Demonstrative (predicative)
	H	L	L-n	<sup>HL</sup> -nan	<sup>M</sup> [rd]-ŋ	<sup>HM</sup> [rd]-ŋV <sub>copy</sub>	<sup>LH</sup> [rd]-ŋV <sub>copy</sub>
/ja/	já	jà	jàñ	jánàn	juāñ	juáñā	juàñá
/ji/	jí	jì	jìn	jínàn	jūñ	júñū	jùñú
/ma/	má	mà	màn	mánàn	muāñ	muáñā	muàñá
/yi/	yí	yì	yìn	yínàn	(*yūñ)	yúñū	yùñú
/ya/	yá	yà	yàn	yánàn	(*yuāñ)	(yuáñā?)	(yuàñá?)

Table 2 Gender sensitive determiners and determiner-like markers in Laal

## 2.4 Agreement classes and gender

- (16) There are 6 attested agreement classes in Laal (7 with so far unattested abstract plural):

AGR	Semantics	Determiners (base)	Pronouns			
			Ind.	Sbj (3 <sup>rd</sup> pers.)	Obj (3 <sup>rd</sup> pers.)	Poss
1	M.SG	ja	ăy	à	-ár~-án	-àr
2	F.SG	ji	ìní	ìn	-ò~-òn	-ò~-òg
3	N.SG	ma~yi	àní	àn	-àr~-àn	-àn
4	A.SG	yi	àní	àn	-àr~-àn	-àn
5	MF.PL	yi	ìrí	ì	-nìrí~-ní	-rí
6	N.PL	ya~yi	uàní	uàn	-uàr~-uàn	-uàn
(7?)	(A.PL?)	(yi)	(uàní)	(uàn)	(-uàr~-uàn)	(-uàn)

Table 3: Laal agreement classes

- (17) Singular Agreement classes illustrated (Connective + Object pronoun):

- a. AGR1: nāārā      já      dāñ,      já      yìr      -      ár  
man      CON.M.SG      there      I      know      -      3M.SG  
'That man, I know him.'
- b. AGR2: niīnī      jí      dāñ,      já      yùr      -      ù  
woman      CON.F.SG      there      I      know      -      3F.SG  
'That woman, I know her.'
- c. AGR3: bīāag      má ~ yí      dāñ,      já      yìr      -      àr  
dog      CON.N.SG      there      I      know      -      3NA.SG  
'That dog, I know it.'
- d. AGR4: nyúnún      yí/\*má      Kábó,      já      càr      -      àr  
departure      CON.A.SG      Kabo      I      want      -      3NA.SG  
'Kabo's departure/leaving, I want it.'

- (18) Plural Agreement classes illustrated (Connective + Object pronoun):

- a. AGR5: yinān/wūrā      yí      dāñ,      já      yìr      -      rí  
women/men      CON.MF.PL      there      I      know      -      -3MF.PL  
'Those women/men, I know them.'
- c. AGR6: bīg-āny      yá ~ yí      dāñ,      já      yùr      -      àr  
dog-PL      CON.N.PL      there      I      know      -      -3N/AB.PL  
'Those dogs, I know them.'
- d. AGR7? No abstract plural example. Predicted agreement:  
?? X      yí/\*yá      dāñ,      já      yùr      -      àr  
X.PL      CON.A.PL      there      I      know      -      -3N/AB.PL

*NB: Unattested AGR7 (abstract plural) is henceforth ignored*

- (19) Headless relative clause → abstract agreement

[yí/\*má      bèèwàr      káàn      yì/\*mà]      já      bīlā  
CON.A.SG      my.gd-father      do-3N.SG.OBJ      FOC.A.SG      I      speak  
'It is (only) what my grand-father used to do that I (will) talk about.'

- (20) Clause → abstract agreement

[ì	nyúnì	sêw	yì/*mà]	béé	ì	míwì
3.MF.PL	go	abroad	FOC.A.SG	or	3.MF.PL	die
‘Did they go abroad, or did they die?’						

- (21) Pronominal system: Agreement patterns are regular

- a. NB: lexically determined suppletive allomorphy in object suffixes and 3F.SG poss. sfx)
- b. “Convergent” type (Sg > Pl) (Heine 1982: 196-198; Corbett 1991: 154-158)

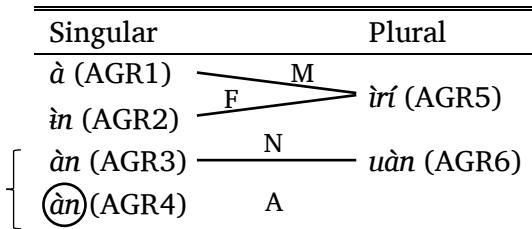


Figure 1: Gender agreement in the pronominal system (illustrated with subject pronouns)

- (22) Determiner paradigm:

- a. More complex
  - Syncretism of /yi/ forms
  - Free variation involving /yi/ forms in N
- b. “Crossed” type (Heine 1982: 196-198; Corbett 1991: 154-158)

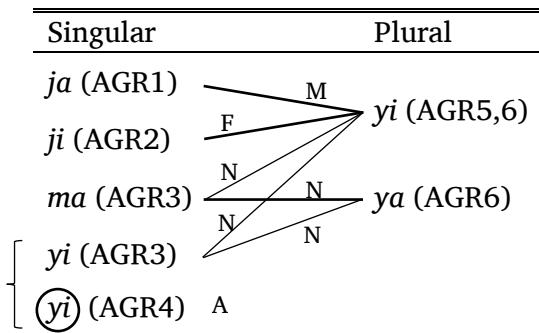


Figure 2: Gender agreement in the determiner system

- (23) Neuter and Abstract are only minimally different

- a. Pronominal system: undistinguished
- b. Determiner system: minimally different
  - N.SG triggers both *ma*- and *yi*-agreement
  - A.SG triggers exclusively *yi*-agreement

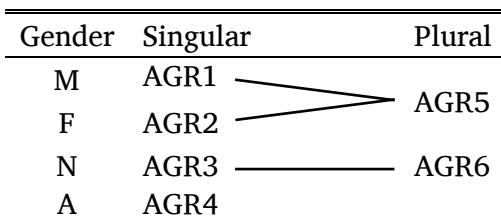


Figure 3: Gender and agreement classes in Laal

### 3 Diachronic evolution

- (24) Originally: M vs. F vs. Non-human
- (25) Innovations: [ $\pm$  abstract] distinction within non-human & extension of *yi*-forms in Determiner system. Arguments for innovation of Abstract:
- it has no specific form in either Determiner or Pronominal systems
  - there is no N/A distinction in the pronominal system
  - Neuter and Abstract agreement classes are only minimally distinct

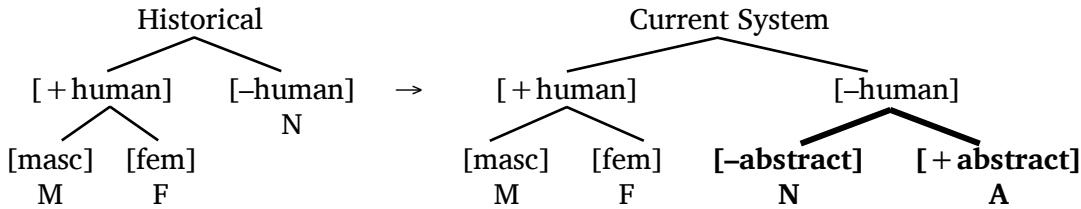


Figure 4: Diachronic evolution of Laal gender system

- (26) Three historical stages (+ possible future)
- Identical to current pronominal system
  - Current system:
    - Innovation of [ $\pm$  abstract]
    - Recruitment of *yi*-form for A
    - yi*-expansion to all but M/F SG, in free variation with N *ma* and *ya*
  - Future system (?): Loss of N *ma* and *ya*, replaced by *yi*, causing loss of abstractness distinction

a. Original system			b. Current system			d. Future system?		
	SG	PL		SG	PL		SG	PL
M	ja	yi	M	ja	yi	M	ja	yi
F	ji		F	ji		F	ji	
N	ma	ya	N	ma~yi	ya~yi	N	yi	
			A	yi	?			

### 4 The gender system of Laal compared to other African sex-based gender systems

- (27) Other sex-based systems in Africa
- Afro-Asiatic, in particular Chadic (cf. 4.1)
  - Ijoid (cf. 4.2)
  - Zande (Ubangian) (cf. Appendix)
  - Eastern Nilo-Saharan (cf. Appendix)
  - Khoe-Kwadi (cf. Appendix)

#### 4.1 Chadic (Afro-Asiatic)

- (28) General structure and semantics are different from Laal: “Gender in Chadic is (and always was) a two-term opposition: masculine vs. feminine. There are no Chadic languages with a neuter as opposed to m/f.” (Newman 1990:6)

- (29) “Morphological system” (Corbett 1991), i.e. only partially semantic: all nouns are either masc. or fem., including inanimate.

	Singular		Plural	
	ANIMATE	INANIMATE	ANIMATE	INANIMATE
Masculine:	male	various, arbitrary		
Feminine:	female	various, arbitrary	all	

Table 4: Semantics of proto-Chadic gender system (simplified)

- (30) Gender distinctions marked on
- Nouns (in a number of Chadic languages gender can also be mostly covert on nouns)
  - Adjectives
  - Pronouns
  - Some determiners

- (31) Examples from Ndam (Chadic, East-A; Bross 1988), one of the two Chadic languages spoken around and in the Laal villages (the second one is Boor)

a. <i>Masculine nouns</i>	b. <i>Feminine nouns</i>
gòn ‘man’	jām ‘woman’
dān ‘water turtle’	bād’ ‘arm’
dáy ‘pot’	àdū ‘tree’
c. <i>Adjectives:</i>	
masc. sg. -e	fem. sg. -a
dēmny-é	dēmny-á
dùw-ē	dùw-ā
pér-é	pér-ā
	pl. -o
	dēmny-ō ‘weak’
	dùw-ō ‘white’
	pér-ō ‘red’

- (32) Gender distinctions in pronouns: 2nd and 3rd pers. sg only (proto-Chadic, proto-AA).

	Proto-Chadic		Laal	
			Object (simplified)	Subject
Sg	1	*ní	1	já
	m			jí
	2	*ka	2	ò
	f	*ki		
	3	*nì	3	à
	m			ìn
Pl	f	*ta		àn
	1ex	*na	1ex	ùrú
	1in	*mun		ăŋ
	2	*kun	2	ùn
	3	*sun		
	m/f		3	ì
	n			uàñ

Table 5: Proto-Chadic and Laal pronouns (Newman 2006)

- (33) Pronouns in a sample of Chadic languages (Table 6 and Table 7)

- Hausa (West) (Newman 2000:486)
- Kera (East A.3) (Ebert 1979:130)

- c. Ndam (East A.1) (Bross 1988:59)  
     → spoken in villages close to Laal speaking villages
- d. Tumak (East A.1) (Caprile 1975)
- e. Mafa (Biu-Mandara) (Barreteau and Le Bleis 1990)

		Laal				
Sg	1 m f	já jí				
	2	ò				
	3 m f n	à ìn àn				
Pl	1ex	ùrú				
	1in	ăŋ				
	2	ùn				
	3 m/f n	ì uàn				

Table 6: Subject pronouns in Hausa, Kera, Ndam, Tumak and Mafa

		Laal				
Sg.	1	-án ~ -ér				
	2	-(u)án				
	3 m f n	-án -òn -àn				
Pl.	1ex	-nùrú, -nú, -rú				
	1in	-năŋ, -răŋ				
	2	năŋ, -răŋ				
	3 m/f n	-nìrí, -ní, -rí (u)àn				

Table 7: Object pronouns in Hausa, Kera, Tumak and Mafa

- (34) 1ex, 1in, and 2 (perhaps 3pl?) are likely Chadic borrowings in the plural (already identified in Boyeldieu 1982b):
- Strong similarity with Kera
  - Would explain a few specificities of these forms
    - Absence of subject/independent difference for 1ex and 1in
    - They do not regularly trigger the expected vowel harmony processes,
    - Complex LH tone pattern (vs. other pronouns = H or L)
    - Disyllabic suffixes (with a reduced monosyllabic variant)

- (35) Gender distinctions in determiner-like elements in Hausa (Newman 2000: 147)

	Maculine sg. n(a)	Feminine sg. t(a) ~ ţ ~ c	Plural (da)n
Genitive	na ~ -n	ta ~ -ř	na ~ -n
Def	‘n	‘ř	‘n
‘this (by me)’	wannàn		wadàñan
‘that (by you)’	wànnan ~ wânnan		wadànan ~ wadànan
‘that there’	wancàn	wacnàn	wadàncân
‘that (distant)’	wàncan ~ wâncan	wàccan ~ wâccan	wàdàncan ~ wadàncan
‘which?’	wànè	wàcè	wàdànnè
‘which one’	wànnē	wàccē	wàdànnē
REL	wândà ~ wandà ~ wandà	wâddà ~ waddà ~ wàddà ~ waccè ~ waccè	wadàndà ~ wàdàndà
some/other	wani	wata	wa(dan)su
so-and-so	wānè	wancè	su wānè / su wancè

Table 8: Determiners and determiner-like elements in Hausa

- (36) Conclusion: Laal does not have a Chadic/Afro-Asiatic gender system. Both systems seem to have two different origins, with possible signs of interference.
- Differences in semantics
  - Differences in agreement targets, both in pronouns and determiner-like systems
  - Differences in form (except some pronominal plural forms, possibly borrowed from East Chadic)

## 4.2 Ijoid

- (37) Ijoid (possibly Niger-Congo?): no noun classes, but interesting gender system (considerable dialectal variation)
- Animacy: human vs. non-human, animate vs. inanimate
  - Sex: masculine vs. feminine vs. neuter

	HUMAN	ANIMAL	INANIMATE
Masculine:	male human	all animals (incl. female)	
Feminine:	female human		
Neuter:	sex unknown or ignored		inanimate

Table 9: Summary of gender distinctions in Ijò languages (Jenewari 1989:114)

- (38) Active, grammaticalized system, covert on nouns, but agreement targets:
- Pronouns
  - (Definite) article
  - Demonstrative

		Okrika Subject	Kalabari Subject	Laal	Object	Subject / Indep.
Sg	1	à ~ arí	arí	1 M F	-én	já jí
	2	íy ~ íyí	íyé	2	-(u)án	ò / uăy
	3 M F Comm	ò ~ òrì	orí	3 M F	-án -òn	à / ăy ìn / ìní
		á ~ árì	árí			
		imbo				
	N	àní	aní	N + A	-àn	àn / àní
Pl	1	wá	wá	1 ex in	-nùrú, -năŋ	ùrú ăŋ
	2	ó	ómíní	2	-nűŋ	ùn / ùnúnj
	3 Anim	ìní	iní	3 M/F	-nìrí	ì / ìrí
	Inan	àrí	aní	N + A	-uàn	uàn / uàní

Table 10: Pronouns in Okrika (Orupabo and Williamson 1980) and Kalabari (Jenewari 1977:228), and Laal

(39) Expression of gender in determiners in Laal vs. Kalabari (Jenewari 1977)

		Singular			Plural	
		M	F	N		
Kalabari	Definite	bé	má	mé	má	
	Proximal Dem	bí	má	mí	má ~ míñā	
Laal	Determiner base	ja	ji	ma	yí (M + F) ya (N + A)	

(40) Ijoid = closest to Laal

- a. mostly sex-based, although complications
- b. Gender distinctions in third person pronouns only + determiners
- c. Same merger masc/fem merger in third person plural:
- d. Form matches:
  - 3rd pers N sg: Ijoid àní - Laal àn(i)
  - 3rd pers. human or animate pl.: Ijoid iní - Laal ì(rí) (weak)
  - 3rd pers N sg: Ijoid àrí~àní - Laal uàn(i) (< \*òn(i))

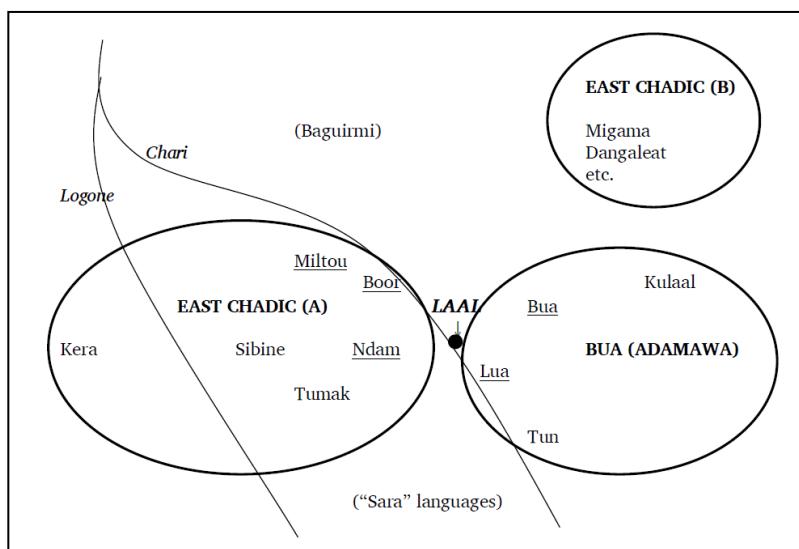
(41) However:

- a. Ijoid and Laal are in general very different in almost all other aspects
- b. Most probably independent innovations

#### 4.3 Conclusion:

- (42) The Laal gender system is unique in Africa.
  - a. Different from the complex “noun class” system characteristic of (much of) Niger-Congo
  - b. Different from, albeit similar to, other African sex/animacy-based gender systems
- (43) Laal and other sex-based systems are (at least partly) different in:
  - a. Type (semantic ~ morphological)
  - b. Organization and number of genders (except perhaps Ijoid)

- c. Gender categories:
  - d. Gender distinctions in pronominal system
  - e. Gender distinctions in determiner system
  - f. Forms in both pronominal and determiner systems (except look-alikes in Ijoid, and Chadic loans in plural series)
- (44) The Laal gender system is not inherited from known phylum:
- Niger-Congo
  - Chadic/Afro-Asiatic
  - Nilo-Saharan (or any subgroup therein)
  - “Khoisan” (Khoe-type or Non-Khoe systems)
- (45) Hypothesis 1: the Laal gender system is inherited from proto-Laaloïd phylum (isolate hypothesis)
- (46) Hypothesis 2: the Laal gender system is an innovation within a known phylum, e.g. Niger-Congo (see next section)
- (47) Signs of possible innovative nature of the Laal gender system:
- a. Strict semanticism (semantic transparency): hasn't had the time to become irregular
  - b. Complex nominal morphology unrelated to gender system (covert system) might be the trace of a former, very different system
- (48) But if the gender system of Laal is an innovation, it is a relatively old one
- a. Gender markers grammaticalized into affixes
  - b. Heavy morphologization
  - c. High degree of suppletion in pronominal affixation
- (49) Local languages:
- a. Chadic: different gender system
  - b. Bua (Adamawa): “noun class” system (mostly fossilized in modern Bua languages)
  - c. SBB (Central Sudanic): no gender system



## 5 Traces of a former Niger-Congo “noun class” system?

### 5.1 Nominal number marking

- (50) Number marking on nouns is
- very complex, partly irregular
  - reminiscent of number marking in neighboring Bua languages Ba and Lua, where number marking morphology is what remains of a former Niger-Congo “noun class” system (Boyeldieu 1986, Boyeldieu et al. to appear)

1050	Total monomorphemic nouns		
467	Nouns that vary in number		
66	Suffix in sg. only	súm-ál / súm	‘palm tree sp.’
193	Suffix in pl. only	áár / éér-ù	‘sauce’
116	Suffix in both sg. and pl.	bìg-ál / bìg-ù	‘tree bark’
83	Suprasegmental marking	ndáár/ndéér	‘whip’
9	Suppletion	nō / muāŋ	‘person’

Table 11: Nominal number marking

- (51) Cumulative marking:

sōol	/ suáá-r-á	‘spear’
mī-l-äl	/ mí-n-í	‘eye’
tàg-á	/ tūg-r-āny	‘fish sp.’
tūgū-1	/ tūgù-r ~ tūg-r-á	‘oxbow lake’

Overall shape	Suf.	#	Notes
L-suffixes	-al	134	semi-productive singulative
	-l	12	
V-suffixes	-a	30	
	-o	9	ethnonyms (7/9)
	-i	5	
	-e	3	
N-suffixes	-n	3	
	-un	1	
R-suffix	-ər	1	

Table 12. Singular suffixes (Laal)

<b>Overall shape</b>	<b>Suffix</b>	<b>#</b>	<b>Semantics</b>	<b>Vowel harmony</b>
V suffixes:	-u	85		
	-a <sub>1</sub>	69		
	-o	52		
	-i <sub>1</sub>	42	body parts (27/45)	
	-a <sub>2</sub>	4	animals (4/4)	irregular
	-i <sub>2</sub>	4		irregular
	-ə	2		
R suffixes:	-or	14		
	-r	12		
	-ri	5	animals (3/5)	irregular (3/5)
	-ər	2		
	-re	1		
M suffixes:	-mi	10	animals (6/10)	irregular
	-many	8	animals (5/8)	
	-ma	1		
N suffixes:	-n	3		
	-nu (-n-u?)	1		
Other:	-any, -nya, -iny (< *-iŋa)	30	animals (14/30)	
	-ga	3	fluids (3/3)	irregular
	-ŋu	1		irregular

Table 13: Plural suffixes in Laal

## 5.2 Comparison with neighboring Bua languages

- (52) Proto-Bua had a typical Niger-Congo (Gur/Adamawa) gender system
- Suffixes on nouns
  - Agreeing determiners
- (53) Agreement has been lost in most modern Bua languages (except Kulaal).

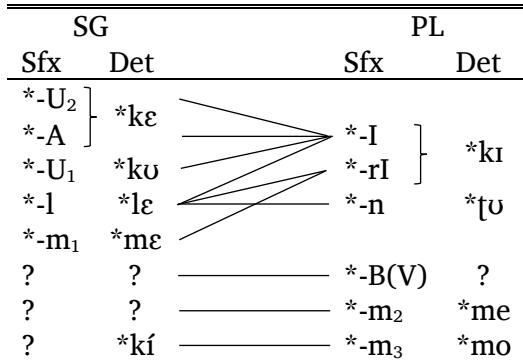


Table 14: Proto-Bua gender system (adapted from Boyeldieu et al. to appear)

- (54) There are a few similar suffixes between Laal and Proto-Bua:

	Proto-Bua	Laal
SG	*-U <sub>1</sub> (*kɪ)	-u (5), -o (9)
	*-U <sub>2</sub> (*kɛ)	
	*-A (*kɛ)	-a (30)
	*-l (*lɛ)	-al (134), -l (14)
PL	*-{↑}-I (*kɪ)	-i <sub>1</sub> (42)
	*-{↑}-rI (*kɪ)	{↑}-ri <sub>1</sub> (2) {↑}-ri <sub>2</sub> (3)
	*-n (*[v])	-n (3), -or (15)
	*-B(V)	—
	-m <sub>2</sub> (*me)	—
	-m <sub>3</sub> (*mo)	—

Table 15: Similarities in Proto-Bua and Laal noun suffixes

- (55) However, there are very few convincing sg/pl pairing correspondences:

- Laal has no systematic sg/pl pairings, contrary to what can be expected from Niger-Congo “noun class” systems
- There is a strong discrepancy between sg suffixes (fewer) and plural suffixes (more numerous)
- But there are a few regularities, detailed in Table 16

Proto-Bua		Laal			
Sg	Pl		Sg	Pl	# of Sg/Pl Notes
*-U <sub>1</sub> (*kɪ)	*-I (*kɪ)		—	—	
*-U <sub>2</sub> (*kɛ)	*-I (*kɪ)		—	—	
*-A (*kɛ)	*-I (*kɪ)		-a (30)	-i <sub>1</sub> (43)	3 Not robust
*-l (*lɛ)	*-I (*kɪ)	residual, 6 body part terms only	<div style="display: flex; align-items: center;"> <span style="margin-right: 10px;">[-al (134)]</span> <span style="margin-right: 10px;">[-i<sub>1</sub> (43)]</span> <span>19</span> <span>11 body parts</span> </div>	<div style="display: flex; align-items: center;"> <span style="margin-right: 10px;">[-∅]</span> <span style="margin-right: 10px;">[-i<sub>1</sub> (43)]</span> <span>18</span> <span>13 body parts</span> </div>	
*-l (*lɛ)	*-rI (*kɪ)		-l(-V) (13)	-r(-V) (14)	9
*-l (*lɛ)	*-n (*tʊ)		<div style="display: flex; align-items: center;"> <span style="margin-right: 10px;">[-al (134)]</span> <span style="margin-right: 10px;">[-or (14)]</span> <span>14</span> <span>(-or &lt; *-n-tʊ?)</span> </div>	<div style="display: flex; align-items: center;"> <span style="margin-right: 10px;">[-l(-V) (13)]</span> <span style="margin-right: 10px;">[-n(-V) (3)]</span> <span>3</span> <span>Very few</span> </div>	
*-m <sub>1</sub> (*mɛ)	*-rI (*kɪ)	residual, mass nouns	—	—	
?	*-B(V)	vestigial – human, kinship terms	—	—	
?	-m <sub>2</sub> (*me)	vestigial – kinship, relational terms	—	—	
?	-m <sub>3</sub> (*mo)	vestigial – ‘thing’, ‘place’	—	—	

Table 16: Proto-Bua genders and Laal singular/plural pairings

Singular	Plural	
-e	-u (possibly Chadic)	-re (-r-e?)
-i	-o (possibly Chadic)	-mi
-e	-a <sub>1</sub>	-many
-i	-a <sub>2</sub>	-ma
-n	-i <sub>2</sub>	-any, -nya, -iny (< Chadic)
-un	-ə	-ga
-ər	-ər	-ŋu

Table 17: Laal leftovers

(56) Body parts:

- a. Proto-Bua: \*-l (\*lɛ) / \*-i (\*ki) small gender, with only body part terms:
- b. Laal -i<sub>1</sub> is mostly used as plural of body part terms (37 out of 43). Singular is either -al (18 out of 100+ nouns in -al), or Ø (19)
- c. Comparison of actual forms: not conclusive:

	PBua (tentative)	Laal	sg/pl	Cognate?
'tooth'	*nV-l/*nV-i	yàm-ál/yèm-í	-al/-i	no
'breast'	*mâ:l/*mâ:i	tàw-ál/tèw-í	-al/-i	no
'belly'	*pū:l/pū:i	jìn-án/jìn-í~jǐn	-al/-i	no
'eye'	*jí:-l/*jí:-i (*?í:-l/*?í:-i?)	mīl-ā/mín-í	-a/-i	no
'foot/leg'	*na-l/*na-i	kúr-á/kúr-í	-a/-i	no
'back'	Korom: bì:lè/bì:	bērī	—	?

(57) NB: -al is very often a singulative suffix in Laal

jùùr-ál	/	jūūr-ū	'peanut'
jír-ál	/	jír-ā	'bean'
miààm-ál	/	miàām	'mosquito'
miàn-án	/	mèn-ú	'fly'
tūm-ál	/	tūm	'tree sp.'

(58) -al/-or - \*-l (\*lɛ) / \*-n (\*t̪u) correspondence:

- a. Proto-Bua: \*-l (\*lɛ) / \*-n (\*t̪u)
  - In some modern Bua languages (Kulaale, Zan Gula): -l-lɛ/ n-t̪u (integration of former Determiner as secondary suffix, stacking)
- b. Laal:
  - -l/-n (4)
  - -al/-or (15), (-or < \*-n + \*t̪u?): all nouns with pl. -or have a sg in -al.

(59) However: the comparison between Laal and Bua is not fully conclusive

- a. Comparing individual suffixes:
  - Too few potential cognate suffixes, possibly similar due to chance
  - Corollary: Too many suffixes in Laal with no equivalent in Bua languages, including very frequent ones
- b. Even fewer sg/pl pairings in common (structural factor that would help ascertain that some of these suffixes are cognate and not just look-alikes)
  - Possible structural similarity is limited, and could be the result of old borrowing from Proto-Bua, or a Pre-Bua Adamawa language.
- c. No regular root-suffix correspondences between Bua and Laal

(60) Additionally: some plural suffixes are likely of Chadic origin:

- a. Almost certain: plural suffixes -any, -nya, -iny (< \*-iŋa)
  - Boor -an (Lionnet field notes)
  - Miltu -en (Boyeldieu 1979: 2)
  - Ndam -an~-an (Bross 1988)
  - Tumak -an (Caprile 1975)
  - Possibly proto-Chadic \*-n- (Newman 2000: 21-26)
- b. Not unlikely: plural suffixes -o and -u (
  - Boor -aw (Lionnet field notes)

- Tumak *-aw* (Caprile 1975)
  - Ndam *-o* (Bross 1988)
  - Newman (2000: 36-37) says that modern Chadic plural suffixes of the form *-aw/-au/-o* are probably not cognates, but the result of various language-specific changes from different proto-Chadic forms (e.g. in Kera, *-aw* is hypothesized to be a reflex of *\*-aki*)
- c. Conclusion: Both the Chadic- and the Bua-looking suffixes could be borrowings
- (61) But most of what is Niger-Congo in Laal is essentially lexical, i.e. very easy to explain through borrowing (cf. Boyeldieu 1982b). There is no solid reason to favor the “innovation within NC” hypothesis rather than the isolate hypothesis
- (62) There are even less Chadic features in Laal, and an “innovation within Chadic” hypothesis seems even more unlikely

## 6 Conclusion

- (63) The gender system of Laal is unique in Africa, in its structure, semantics, and morphological expression
- (64) Could be an old innovation:
  - a. The semantic transparency and the mismatch between nominal morphology and agreement system points to innovation and restructuring
  - b. The degree of morphologization and morphological irregularity suggests to a not so recent innovation (?)
- (65) Genealogically, the gender system could have been:
  - a. Inherited from a Laaloid phylum, if not an innovation (isolate hypothesis)
  - b. Innovated within a Laaloid phylum (isolate hypothesis)
  - c. Innovated within Niger-Congo (NC hypothesis)
- (66) Irregular nominal number marking suffixes
  - a. Look like remnants of Niger-Congo “noun class” system
  - b. But the detailed comparison is not very conclusive, and the few convincing correspondences could easily be due to old borrowing from old Bua, proto-Bua or pre-Bua.
- (67) Given the number of idiosyncrasies found in the Laal lexicon and grammatical system, the best hypothesis so far is still the isolate hypothesis.

## References

- Barreteau, Daniel, and Yves Le Bleis. 1990. Lexique Mafa, langue de la famille tchadique parlée au Cameroun. Paris : Geuthner.
- Blench, Roger. 2006. Archaeology, Language and the African Past. Lanham, MD: Altamira Press.
- Boyeldieu, Pascal. 1977. "Eléments pour une phonologie du laal de Gori (Moyen-Charï), Etudes phonologiques tchadiennes. Paris: SELAF (Bibliothèque, 63–64), p. 186–198.

- Boyeldieu, Pascal. 1979. Présentation du láà:l ou “gori” (Moyen-Chari, Tchad). Unpublished manuscript, CNRS-LLACAN, Paris.
- Boyeldieu, Pascal. 1980. Niellim et tula (langues «adamawa»): concordances morphologiques (pluriels nominaux). in L. Bouquiaux, G. Guarisma, and G. Manessy, Eds. Problèmes de comparatisme et de dialectologie dans les langues africaines. Paris: SELAF, p. 43-51.
- Boyeldieu, Pascal. 1982a. Deux Etudes laal (Moyen-Chari, Tchad). Berlin: Dietrich Reimer Verlag.
- Boyeldieu, Pascal. 1982b. Quelques questions portant sur la classification du laal (Tchad). in H. Jungraithmayr, Ed. The Chad languages in the Hamito-Semitic-Nigritic Border Area (Papers of the Marburg Symposium, 1979). Berlin: Dietrich Reimer, p. 80-93.
- Boyeldieu, Pascal. 1983. Vestiges de suffixes de classes nominales dans les langues du groupe boua (Tchad, Adamawa-13 de J.H. Greenberg). Current Approaches to African Linguistics (Actes du 13ème Colloque Annuel de Linguistique Africaniste, Montréal, Canada). Dordrecht: Foris Publications, p. 3-15.
- Boyeldieu, Pascal. 1986. La formation du pluriel nominal en kulaal (Tchad): essai de systématisation des documents publiés par C. Pairault. *Afrika und Übersee*. Vol. 69(2), p. 209-249.
- Boyeldieu, Pascal. 1986. La formation du pluriel nominal en kulaal (Tchad), Essai de systématisation des documents publiés par C. Pairault. *Afrika und Übersee* 69(2): 209–249.
- Boyeldieu, Pascal. 2014. Les langues du groupe boua (Adamawa 13 de J.-H. Greenberg). Paper presented at the seminar Linguistique comparative historique au XXI<sup>e</sup> siècle : enjeux théoriques et méthodologiques (Konstantin Pozdniakov, IUF), Paris, 25 March 2014.
- Boyeldieu, Pascal, Raimund Kastenolz, Ulrich Kleinewillinghöfer, and Florian Lionnet. To appear. The Bua Group languages (Chad, Adamawa 13): A comparative perspective. To appear in *Afrika und Übersee*
- Bross, Michael. 1988. Materialen zur Sprache der Ndam von Dik. M.A. thesis, Philipps-Universität, Marburg.
- Caprile, Jean-Pierre. 1975. Lexique Tumak-français. Berlin: Reimer.
- Corbett, G. 1991. Gender. Cambridge: CUP.
- Ebert, Karen H. 1979. Sprache und Tradition des Kera (Tschad). Teil III: Grammatik. Berlin: Reimer.
- Güldemann, Tom. 2004. Reconstruction through ‘de-construction’: the marking of person, gender, and number in the Khoe family and Kwadi. *Diachronica* 21,2: 251-306.
- Güldemann, Tom and Ines Fiedler. forthcoming. Niger-Congo “noun classes” conflate gender with deriflection. In Di Garbo, Francesca and Bernhard Wälchli (eds.), Grammatical gender and linguistic complexity. Berlin: Language Science Press, 85–135
- Heine, Bernd. 1982. African noun class systems. In Hansjakob Seiler & Christian Lehmann (eds.), Apprehension: das sprachliche Erfassen von Gegenständen, 189– 216. Tübingen: Narr.
- Jenewari, Charles E.W. 1989. Ijoid. In J. Bendor-Samuel (ed.), The Niger-Congo languages: A classification and description of Africa’s largest language family. Lanham, MD: University Press of America. 105–118.
- Jenewari, Charles E.W. 1977. Studies in Kalabari Syntax. PhD dissertation, University of Ibadan, Nigeria.
- Job, Sylvanus. 2015. Gender system of Khoekhoeogowab. Paper presented at the Linguistisches Kolloquium, Humboldt Universität, Berlin, 27 Jan. 2015.
- Lionnet, Florian. 2010. Laal: a language isolate? Paper presented at the workshop Isolates in Africa, CNRS - Laboratoire Dynamique du langage, Lyon, 3-4 December 2010.

- Miehe, Gudrun. Forthcoming. Noun class systems in Gur and Plateau languages: comparing the diachronic developments. In Theda Schumann & Roland Kießling (eds.), *Endangered languages in contact: the Plateau languages of Nigeria*. Köln: Köppe.
- Newman, Paul. 1990. Nominal and Verbal Plurality in Chadic. Dordrecht: Foris.
- Newman, Paul. 2000. The Hausa Language: An Encyclopedic Reference Grammar. New Haven: Yale University Press.
- Newman, Paul. 2006. Comparative Chadic revisited. In West African Linguistics: Papers in Honor of Russel G. Schuh. Columbus: Ohio State University.
- Orupabo, G. J. & Kay [Ruth] [Margaret] Williamson (1980). Okrika. In Kropp Dakubu, M. E. (Ed), West African language data sheets, Legon & Leiden : West African Linguistic Society (WALS); Afrika-Studiecentrum (ASC)
- Pairault, Claude. 1966. *Boum le Grand : village d'Iro*. Paris: Institut d'Ethnologie.
- Pairault, Claude. 1969. *Documents du parler d'Iro, kùlál du Tchad*. Paris: Klincksieck (Langues et littératures de l'Afrique noire 5).
- Segerer, Guillaume. 2002-2007. Les marques personnelles dans les langues africaines, [online database]. <http://sumale.vjf.cnrs.fr/pronom/index.php> (last accessed 24 March 2015).
- Tucker, A.N. 1959. Le Groupe linguistique Zande. Annales du Musée Royal du Congo Belge, Tervuren (Belgique). Série in-8°. Sciences de l'Homme, Linguistique, Vol.22.

## Appendix 1: Zande

- (68) Mostly sex- and animacy based, with a few exceptions, i.e. “predominantly semantic” (Corbett 1991:14)
- masculine: human male
  - feminine: human female
  - animate: non-human animate (animal)
  - inanimate: everything else
- (69) Laal and Zande are different systems
- Different semantic categories
    - although human m/f vs. non-human in common
    - and masc/fem merger in plural
  - No striking morphological correspondences in the pronominal system
  - Different stages of grammaticalization (seems younger in Zande: restricted to 3rd person pronouns, “but agreement in gender is spreading to other sentence elements” (Corbett 1991:14))

		Zande		Laal	
		Subject	Object	Object	Subject / Indep.
Sg	1	mì	rè	1 <sup>m</sup> f	-én
	2	mò	rò	2	-(u)án
	m	kō	kō		já
	f	rī	rī		jí
	an	ù	rò		
	inan	nī	nī		
Pl	1	àní	rànì	3 <sup>m</sup> f n	-án -òn -àn
	2	èní	rèní	1 ex,in	-nùrú,-năŋ
	m/f	ī	(y)là	2	-nūŋ
	an	àmí	rà		
	inan	sí	é		
	log	àmí		3 m/f n	-nìrí -uàn

Table 18: Zande subject and object pronouns (Tucker 1959:126; R. Boyd's information in Segerer 2002-2007)

## Appendix 2: Khoe-Kwadi

- (70) Khoe gender system:
- “Morphological system”, i.e. only some semantic basis (Corbett 1991)
  - Three genders: masculine, feminine, “common”, but more complex than purely sex/animacy-based
  - In particular, “Common” is not a Neuter:
    - Empty, apart from mass nouns
    - Used for M/F nouns when reference to sex (or shape etc.) is unnecessary or unwanted.

	Sg	Du	Pl	ANIMATE	INANIMATE
Masc.	- <i>b</i>	- <i>kha</i>	- <i>gu</i>	male	<ul style="list-style-type: none"> <li>- big, high, long, thin, important</li> <li>- country names</li> <li>- abstract nouns derived with suffix -<i>si</i></li> </ul>
Fem.	- <i>s</i>	- <i>ra</i>	- <i>di</i>	female	<ul style="list-style-type: none"> <li>- small, round, short, wide, less important</li> <li>- nouns derived from other categories</li> <li>- city names</li> </ul>
Comm.	- <i>i</i>	--	- <i>n</i>	sex unknown or unspecified	- mass nouns (no plural), non-specific, generic, indefinite

Table 19: gender suffixes in Khoekhoe (adapted from Job 2015)

Person	Gender	Number			
		Common	Feminine	Masculine	
1	1st	* <i>tV</i>		Singular	
2	2nd		* <i>sV</i>	* <i>tsV</i>	
3	3rd		* <i>sV</i>	* <i>bV</i>	
4	1st	* <i>khV-m</i>	* <i>sV-m</i>	* <i>tsV-m</i>	Dual
5	2nd	* <i>khV-do</i>	* <i>sV-do</i>	* <i>tsV-do</i>	
6	3rd	* <i>khV-da</i>	* <i>sV-da</i>	* <i>tsV-da</i>	
7	1st	* <i>ta-e</i>	* <i>sa-e</i>	* <i>!a-e</i>	Plural
8	2nd	* <i>ta-o</i>	* <i>sa-o</i>	* <i>!a-o</i>	
9	3rd	* <i>nV</i>	* <i>di</i>	* <i>!u(a)</i>	

Table 20: Proto-Khoe pronominal system (Güldemann's (2004:265) revision of Vossen (1997:377))

(71) Proto-Khoe-Kwadi: only two genders (Güldemann 2004): M vs. F

(72) Clear differences with Laal in semantics, structure, realization and morphology.