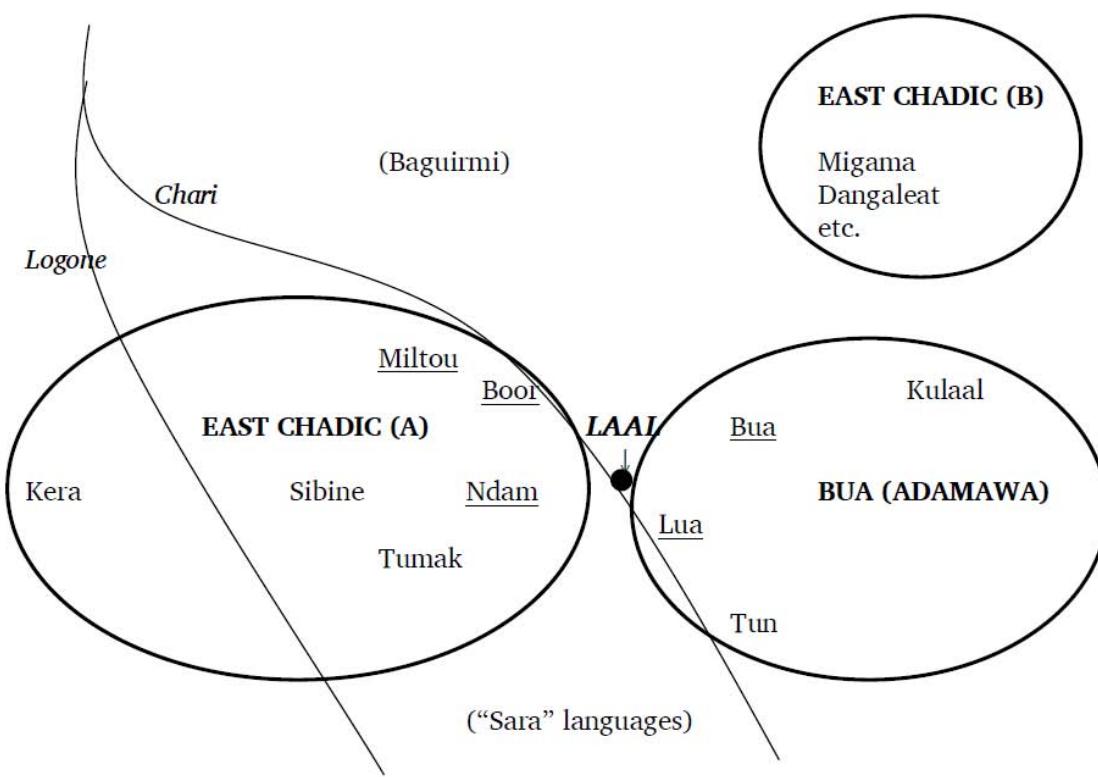


## Nominal classification in Laal: an African exception

### 1. Introduction

- (1) Laal (Boyeldieu 1982, Lionnet field notes, in prep.):
- ca. 800 speakers in two villages in Southern Chad
  - 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).



Map 1: Laal and the neighboring languages

- (2) Can the nominal classification system of Laal (gender, number marking suffixes on nouns) be used as an argument for classifying it into one of the known African phyla or families?
- (3) My answer: no
- The gender system is not similar enough to other African gender systems, in its semantics, its morphosyntactic realization (in particular in pronouns and determiners), and its morphological expression
  - There is no conclusive evidence that the (partly frozen) number marking suffixes on nouns are remnants of former Niger-Congo class markers

(4) Road map:

2. Description of Laal gender system
3. Comparison with other African sex/animacy-based systems
4. Number marking suffixes on nouns

## 2. The gender system of Laal

(5) Gender is not marked on nouns

Sg.	Pl.	
a. <i>nīnī</i>	<i>yīnān</i>	‘woman’
b. <i>nāārā</i>	<i>wūrā</i>	‘man’
c. <i>mār</i>	<i>mīr-ā</i>	‘cattle, cow’
d. <i>biāāg</i>	<i>bīg-āny</i>	‘dog’
e. <i>nyāw</i>	<i>nyuá-nyá</i>	‘house’
f. <i>kòög</i>	<i>kuāg-mī</i>	‘bone, thorn’
g. <i>sūnā</i>	--	‘blood’
h. <i>nyùnún</i>	--	‘departure, trip’ (< nyún ‘to go’ + deverbal sfx -Vn)

(6) But it is marked on pronouns and determiners: agreement in gender and number.

(7) Two subsystems (different morphology and agreement patterns):

- a. Personal pronouns
- b. Determiners and determiner-like markers

(8) Both subsystems: three genders, sex-based, “strict semantic system” (Corbett 1991).

- a. masculine = human male
- b. feminine = human female
- c. neuter = non-human (incl. male/female animals, etc.)

(9) “Determiner” subsystem:

- a. Additional subgender distinction within neuter: Abstract vs. non-abstract
- b. A lot of syncretism

### 2.1. Pronominal system

Sg.	1 <i>m</i> <i>f</i>	já jí	Suffixes		
			Poss 1	Poss 2	Object
2	ò	uăy	-à	-(u)a	-(u)án ~ -(u)á
	<i>m</i>	ă	ăr	-ar	án ~ ár
	<i>f</i>	ìn	ò(g)	-òn(ó)	-òn ~ -ò
Pl.	<i>n</i>	àn	àn	-àn(á)	-àn ~ -àr
	<i>1ex</i>	ùrú	-rú	--	-nùrú ~ -nú ~ -rú
	<i>1in</i>	ăŋ	-ráŋ	--	năŋ ~ -răŋ
	2	ùn	ùnúŋ	-rúŋ	núŋ ~ rúŋ
	<i>m/f</i>	ì	írí	-rí	-nírí ~ -ní ~ -rí
	<i>n</i>	uàn	uàní	-(u)àn	-(u)àn ~ -(u)àr

Table 1: Personal pronouns and pronominal suffixes

(10) Examples: 3<sup>rd</sup> pers. object suffixes (singular):

- |    |  |   |  |
|----|--|---|--|
| a. | nīnī<br>'woman'  | → | já      yùr-ù<br>I      know-3F.SG<br>'I know her.'  |
| b. | nāārā<br>'man'   | → | já      yìr-ár<br>I      know-3M.SG<br>'I know him.' |
| c. | biāāg/nyàw<br>'dog/house'                                      | → | já      yìr-àr<br>I      know-3N.SG<br>'I know it.'  |
| d. | biāāg má nīnī/nāārā<br>dog of female/male<br>'female/male dog' | → | já      yìr-àr<br>I      know-3N.SG<br>'I know it'   |
| e. | nyùnún<br>'departure'  | → | já      càr-àr<br>I      want-3N.SG<br>'I want it'   |

(11) Examples: 3<sup>rd</sup> pers. object suffixes (plural):

- |    |  |   |   |
|----|--|---|---|
| a. | yīnān/wūrā<br>'women/men'  | → | já      yìr-rǐ<br>I      know-3MF.PL<br>'I know her.' |
| b. | biīgāny/nyuányá<br>'dogs/houses'                                     | → | já      yùr-àr<br>I      know-3N.PL<br>'I know it.'   |
| c. | biīgāny yí yīnān/wūrā →<br>dogs of female/male<br>'female/male dogs' | → | já      yùr-àr<br>I      know-3N.PL<br>'I know it'    |

## 2.2. Determiners (and determiner-like functional words)

(12) Different morphology:

	Connective	Focus	Indef. det.	Indef. pronoun	Topic	Demonstrative	Locative
	H	L	<sup>L</sup> -n	<sup>HL</sup> -nan	<sup>M</sup> [rd]	<sup>HM</sup> [rd]-ŋV <sub>copy</sub>	<sup>LH</sup> [rd]-ŋV <sub>copy</sub>
/ja/	já	jà	jàn	jánàn	juāŋ	juáŋā	juàŋá
/ji/	jí	jì	jìn	jínàn	jūŋ	júŋū	jùŋú
/ma/	má	mà	màn	mánàn	muāŋ	muáŋā	muàŋá
/yi/	yí	yì	yìn	yínàn	(yūŋ?)	yúŋū	yùŋú
/ya/	yá	yà	yàn	yánàn	(yuāŋ?)	(yuáŋā?)	(yuàŋá?)

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

(13) Gender/number exponence:

	<i>ja ji ma yi ya</i>		singular	plural
singular	masculine	x	masculine	<i>ja</i>
	feminine	x	feminine	<i>ji</i>
	neuter	x x	neuter	<i>ma ~ yi</i>
	abstract	x	abstract	<i>yi</i> ( <i>yi?</i> )
plural	masculine			<i>yi</i>
	feminine			<i>yi</i>
	neuter	x x		<i>ya ~ yi</i>
	abstract			

(14) Note: 1<sup>st</sup> person sg. subject/independent pronouns *já/jí* are most likely derived from the masculine and feminine sg. forms *já/jí* of the connective → most probably recent innovation

(15) Subgenders: abstract vs. non-abstract distinction within neuter (Corbett 1991:163)

- a. Abstract: abstract notions, deverbal nouns, clauses etc.
- b. (Non-abstract) neuter: everything else (i.e. non-human, non-abstract)

(16) Connective + pronoun, Singular:

- a. *nīnī jí dāŋ, já yùr - ù*  
woman of there I know - 3F.SG  
'That woman, I know her.'
- b. *nārā já dāŋ, já yìr - ár*  
man of there I know - 3M.SG  
'That man, I know him.'
- c. *biāāg/nyàw má/yí dāŋ, já yìr - àr*  
dog/house of there I know - 3N/AB.SG  
'That dog/house, I know it.'
- d. *nyúnún yí Kábó, já càr - àr wó*  
departure of Kabo I want - 3N/AB.SG NEG  
'Kabo's departure/leaving, I don't want it'

(17) Connective + pronoun, Plural:

- a. *yīnān yí dāŋ, já yìr - rí*  
woman of there I know - -3MF.PL  
'Those women, I know them.'
- b. *wūrā yí dāŋ, já yìr - rí*  
men of there I know - -3MF.PL  
'Those men, I know them.'
- c. *būgāny/nyuányá yá/yí dāŋ, já yùr - àr*  
dogs/houses of there I know - -3N/AB.PL  
'Those dogs/houses, I know them.'
- d. (no abstract plural example)

- (18) Head-less relative clause → abstract agreement

[yí/*má	bèəw-àr	káàn	]	yì/*mà	já	bílā
CON	gd.father-my	do-3N.SG.OBJ	FOC	I		speak
'What my grand-father used to do, I can talk about it.'						

- (19) Clause → abstract agreement

ì	nyúni	sêw	yì/*mà	béē	ì	míwì
3.MF.PL	go	abroad	FOC	or	3.MF.PL	die
'Did they go abroad, or did they die?'						

- (20) Historical hypothesis:

- a. yí expansion
- b. Innovation of abstract/non-abstract distinction

Former system			Current system		
	sg	pl		sg	pl
M	já	yí	M	já	yí
F	jí		F	jí	yí
N	má	yá	N	má/yí	yá/yí
			A	yí	

→

*5 forms*  
6 gender/number categories  
(same as 3<sup>rd</sup> person pronouns)

*5 forms*  
8 gender/number categories

### 2.3. Summary

- (21) Sex-based, strict semantic system (semantically transparent and exceptionless)

- a. In the pronominal system (to be reconstructed as the general gender system of the language in not so distant history):

	Singular		Plural	
	HUMAN	NON-HUMAN	HUMAN	NON-HUMAN
<i>Masculine:</i>	male			
<i>Feminine:</i>	female		all human	
<i>Neuter:</i>		all non-human		all non-human

Table 3: Semantics of Laal gender system

- b. In the determiner system: innovation of abstract subgender

	Singular		Plural	
	HUMAN	NON-HUMAN	HUMAN	NON-HUMAN
<i>Masculine:</i>	male			
<i>Feminine:</i>	female		all human	
<i>Neuter:</i>	<i>Abstract</i>	abstract nouns, relative clauses etc.	?	?
	<i>Other</i>	all other nouns		all other nouns

Table 4: Semantics of Laal gender system

- (22) Relatively old gender system:
  - a. fully grammaticalized
  - b. object and possessive pronouns have had the time to become suffixes
  - c. High level of suppletion among suffixes (Poss 1 and 2, Obj 1 and 2)
- (23) Oldest features: Strict semantic system
  - a. Three genders: masculine vs. feminine vs. neuter
  - b. Gender distinction in 3<sup>rd</sup> person
  - c. Masc/fem. syncretism in the plural (both pronouns and determiners)
- (24) Recent innovations:
  - a. 1<sup>st</sup> person sg. masc./fem. distinction (*já/jí* < connective)
  - b. Syncretism of *yi*-form of determiners
  - c. Subgender within neuter, most probably a recent innovation

### **3. The gender system of Laal compared to other African sex-based gender systems**

- (25) Other sex-based systems in Africa
  - a. Afro-Asiatic, in particular Chadic
  - b. Ijoid (Niger-Congo)
  - c. Zande (Ubangian?)
  - d. Khoe-Kwadi

#### **3.1. Chadic (Afro-Asiatic)**

- (26) General structure and semantics are different from Laal:
  - a. “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)
  - b. “Morphological system” (Corbett 1991), i.e. only partially semantic: all nouns are either masc. or fem., including inanimate nouns (cf. Table 5, compare with Table 3 above)

	Singular		Plural	
	ANIMATE	INANIMATE	ANIMATE	INANIMATE
<i>Masculine:</i>	male	various, arbitrary		
<i>Feminine:</i>	female	various, arbitrary		all

Table 5: Semantics of proto-Chadic gender system (simplified)

- (27) Gender distinctions marked on
  - a. nouns (although in a number of Chadic languages gender can also be mostly covert on nouns)
  - b. adjectives
  - c. pronouns
  - d. some determiners
- (28) 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. Masculine nouns	b. Feminine nouns
<i>gòn</i> ‘man’	<i>jām̄</i> ‘woman’
<i>dān</i> ‘water turtle’	<i>bād̄'</i> ‘arm’
<i>dáy</i> ‘pot’	<i>àdū</i> ‘tree’

b. Adjectives:	
masc. sg. - <i>e</i>	fem. sg. - <i>a</i>
<i>dēmny-é</i>	<i>dēmny-á</i>
<i>dùw-é</i>	<i>dùw-ā</i>
<i>pèr-é</i>	<i>pèr-ā</i>

pl. - <i>o</i>	
<i>dēmny-ō</i>	‘weak’
<i>dùwō</i>	‘white’
<i>pēr-ō</i>	‘red’

- (29) Gender distinctions in pronouns: 2<sup>nd</sup> and 3<sup>rd</sup> pers. sg only (proto-Chadic, proto-AA).

		Proto-Chadic		Laal	
				Object (simplified)	Subject
		1	ní		
Sg	1	m	ka		já
	2	f	ki	-én	jí
	3	m	nì		
Pl	1ex	m	ta		
	1in	f		-áñ	ò
	2	n		-án	à
	3			-òn	ìn
	1ex			-àñ	àn
	1in			-nùrú	ùrú
	2			-năñ	ăñ
	3	m/f		-nǚñ	ùn
		n		-nìrí	ì
					uàñ

Table 6: Proto-Chadic and Laal pronouns (Newman 2006)

- (30) Subject pronouns in a sample of Chadic languages (Table 7 and Table 8)
- Hausa (West) (Newman 2000:486)
  - Kera (East A.3) (Ebert 1979:130)
  - Ndam (East A.1) (Bross 1988:59)  
→ spoken in villages close to Laal speaking villages
  - Tumak (East A.1) (Caprile 1975)
  - Mafa (Biu-Mandara) (Barreteau and Le Bleis 1990)

		Laal	Hausa	Kera	Ndam	Tumak	Mafa
Sg	1	<i>m</i> <i>f</i>	já jí				
	2		ò				
	3	<i>m</i> <i>f</i> <i>n</i>	à ìn àn				
Pl	1ex		ùrú				
	1in		ăŋ	mu(n)	áŋ	nà	ng-
	2		ùn	ku(n)	áré	dì	nd-
	3	<i>m/f</i> <i>n</i>	ì uàn	su(n)	aŋ	nè	kín-
				té ~ ye	mà	kē	t-

Table 7: Subject pronouns in Hausa, Kera, Ndam, Tumak and Mafa

		Laal	Hausa	Kera	Tumak	Mafa
Sg.	1	-én ~ -ér	ni	-n	-n	-ye
	2	-(u)án	ka ki	-m -i	-m -i	-ka
	3	<i>m</i> <i>f</i> <i>n</i>	-án -òn -àn	shi ta	-u -(r)a	-l, -r, -o -d
Pl.	1ex	-nùrú, -nǔ, -rǔ	mu	áré	nán	
	1in	-năŋ, -răŋ		áŋ	ní	-ŋga
	2	năŋ, -răŋ	ku	-ŋ	nín / nén	-kíné
	3	<i>m/f</i> <i>n</i>	-nírí, -nǐ, -rǐ -(u)àn	su	-i	-g

Table 8: Object pronouns in Hausa, Kera, Tumak and Mafa

- (31) 1ex, 1in, and 2 (perhaps 3pl?) are likely Chadic borrowings in the plural:
- 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
    - disyllabic suffixes (with a reduced monosyllabic variants)

- (32) Gender distinctions in determiners and determiner-like elements in Hausa (Newman 2000: 147)

	<b>Maculine sg. <i>n(a)</i></b>	<b>Feminine sg. <i>t(a) ~ ţ ~ c</i></b>	<b>Plural <i>(da)n</i></b>
<i>Genitive</i>	na ~ -n	ta ~ -ř	na ~ -n
<i>Def</i>	-n	-ř	-n
'this (by me)'	wannàn		wadànanâ
'that (by you)'	wànnan ~ wânnan		wadànan ~ wadànan
'that there'	wancàn	wacnàn	wadàncân
'that (distant)'	wàncan ~ wâncan	wàccan ~ wâccan	wàdfâncan ~ wadàncan
'which?'	wànè	wàcè	wàdfânnè
'which one'	wànnē	wàccē	wàdfânnē
<i>REL</i>	wândà ~ wandà ~ wandà	wâddà ~ waddà ~ wàddà ~ waccè ~ waccè	wadàndà ~ wàdfândà
<i>some/other</i>	wani	wata	wa(dan)su
<i>so-and-so</i>	wānè	wancè	su wānè / su wancè

Table 9: Determiners and determiner-like elements in Hausa

- (33) Conclusion: Laal does not have a Chadic/Afro-Asiatic gender system:

- a. Important differences
  - in semantics
  - in realization, both in pronouns and determiner-like systems
  - in forms (except some pronominal plural forms, possibly borrowed from East Chadic)
- b. Both systems seem to have two different origins, with possible signs of interference

### 3.2. Ijoid

- (34) Ijoid (thought to be Niger-Congo): no noun classes, but interesting gender system (considerable dialectal variation)

- a. Animacy: human vs. non-human, animate vs. inanimate
- b. Sex: masculine vs. feminine vs. neuter

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

Table 10: Summary of gender distinctions in Ijô languages (Jenewari 1989:114)

- (35) Active, grammaticalized system → manifestations of gender (covert on nouns):

- a. pronouns
- b. (definite) article agreement
- c. demonstrative agreement

- (36) Subject pronouns in Okrika (Orupabo and Williamson 1980) and Kalabari (Jenewari 1977:228), compared to Laal:

		Okrika Subject	Kalabari Subject	Laal		
				Object	Subject / Indep.	
Sg	1	à ~ arí	arí	1 <i>m</i> <i>f</i>	-én	já jí
	2	íy) ~ íyí	íyé	2	-(u)án	ò / uăy
	3 <i>m</i>	ò ~ òrí	orí	3 <i>m</i>	-án	à / āy
	<i>f</i> common	á ~ árí	árí	<i>f</i>	-òn	ìn / ìní
Pl	1	wá	wá	<i>n</i>	-àn	àñ / àní
	2	ó	ómíní	1 <i>ex,in</i>	-nùrú,-năj	ùrú, āj
	3 <i>anim</i>	ìní	iní	2	-năj	ùn / ùnún
	<i>inan</i>	àrí	aní	3 <i>m/f</i> <i>n</i>	-nìrí -uàn	ì / ìrí uàn / uàní

- (37) Expression of gender in determiners in Kalabari (Jenewari 1977)

	<i>masc. sg</i>	<i>fem. sg</i>	<i>neut. sg</i>	<i>plural</i>
<i>Definite</i>	bé	má	mé	má
<i>Proximal Dem</i>	bí	má	mí	má ~ míñā

- (38) 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:
  - 3<sup>rd</sup> pers neut. .sg: Ijoid àní - Laal àn(i)
  - 3<sup>rd</sup> pers. human or animate pl.: Ijoid iní - Laal i(rí) (weak)

- (39) However:

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

### 3.3. Zande languages (Ubangian)

- (40) Mostly sex- and animacy based, with a few exceptions, i.e. “predominantly semantic” (Corbett 1991:14)
- a. masculine: human male
  - b. feminine: human female
  - c. animate: non-human animate (animal)
  - d. inanimate: everything else

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

		Zande		Laal		
		Subject	Object	Object	Subject / Indep.	
Sg	1	mì	rè	1 <i>m</i>	-én	já jí
	2	mò	rò	2	-(u)án	ò / uăy
	<i>m</i>	kō	kō	<i>m</i>	-án	à / ăy
	<i>f</i>	rī	rī	<i>f</i>	-òn	ìn / ìní
	<i>an</i>	ù	rù	<i>n</i>	-àn	àñ / àní
	<i>inan</i>					
Pl	1	àní	ràñì	1 <i>ex,in</i>	-nùrú,-năŋ	ùrú, ăŋ
	2	èñì	rèñì	2	-nǚŋ	ùn / ùnúŋ
	<i>m/f</i>	í	(y)là	<i>m/f</i>	-nìrí	ì / ìrí
	<i>an</i>	àmí	rà	<i>n</i>	-uàn	uàñ / uàní
	<i>inan</i>	sí	é			
	<i>log</i>	àmí				

- (42) Laal and Zande are different systems

- a. Different semantic categories
  - although human m/f vs. non-human in common
  - and masc/fem merger in plural
- b. No striking morphological correspondences in the pronominal system
- c. Different stages of grammaticalization (seems younger in Zande: restricted to 3<sup>rd</sup> person pronouns, “but agreement in gender is spreading to other sentence elements” (Corbett 1991:14)

### 3.4. Khoe(-Kwadi)

- (43) Khoe gender system:

- a. “Morphological system”, i.e. only some semantic basis (Corbett 1991)
- b. Three genders: masculine, feminine, “common”
- c. Reconstructed for Proto-Khoe (Vossen 1997)

- (44) Example: gender suffixes on nouns (and other elements as well) in Khoekhoe (Job 2015, modified)

	Sg	Du	Pl	ANIMATE	INANIMATE
<i>Masc.</i>	- <i>b</i>	- <i>kha</i>	- <i>gu</i>	male	- big, high, long, thin, important - country names - abstract nouns derived with suffix - <i>si</i>
<i>Fem.</i>	- <i>s</i>	- <i>ra</i>	- <i>di</i>	female	- small, round, short, wide, less important - nouns derived from other categories - city names
<i>Comm.</i>	- <i>i</i>	--	- <i>n</i>	sex unknown or unspecified	- mass nouns (no plural), non-specific, generic, indefinite

- (45) “Common” gender:

- a. Empty, apart from mass nouns
- b. used for masc./fem nouns when reference to sex (or shape etc.) is unnecessary or unwanted.

- (46) Proto-Khoe pronominal system (Güldeman's (2004:265) revision of Vossen's (1997:377), reconstruction)

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>la-e</i>	Plural
8	2nd	* <i>ta-o</i>	* <i>sa-o</i>	* <i>la-o</i>	
9	3rd	* <i>nV</i>	* <i>di</i>	* <i>lu(a)</i>	

- (47) Proto-Khoe-Kwadi: only two genders (Güldemann 2004)

- a. masculine
- b. feminine

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

### **3.5. Local conclusion:**

- (49) The Laal gender system is unique in Africa.
  - a. Very different from the noun class systems characteristic of (much of) Niger-Congo
  - b. different from, albeit similar to, other African sex/animacy-based gender systems
- (50) Different semantic/morphological type
  - a. Laal: strict semantic
  - b. vs. predominantly semantic in Zande
  - c. vs. morphological in Afro-Asiatic and Ijoid
- (51) Different organization (except perhaps Ijoid)
  - a. number of genders
    - three in Laal (and Khoe-Kwadi)
    - vs. two in Afro-Asiatic,
    - vs. up to four in Ijoid and Zande
  - b. Gender categories:
    - masculine/feminine are common to all systems (but not defined in the same way)
    - Laal neuter vs. Khoe-Kwadi common vs. Zande/Ijoid animate-inanimate etc.
  - c. Gender distinctions in pronominal system
    - only in third person (all systems)
    - additionally in 1<sup>st</sup> person (recent Laal innovation)
    - additionally in 2<sup>nd</sup> person (old Afro-Asiatic feature)
  - d. Gender distinctions in determiner system
    - Very rich and grammaticalized in Laal and (at least some) Chadic
    - relatively limited in Ijoid
    - None in Zande
- (52) Different forms
  - a. Pronominal system (except possible Chadic cognates in plural series, likely borrowed)
  - b. Determiner system: the *ja/ji/ma/yi/ya* paradigm does not seem to have any equivalent elsewhere
- (53) Conclusion: the gender system of Laal
  - a. cannot be used as argument in favor of classifying Laal in one of the recognized African families/phyla
  - b. One the numerous elements that suggest that Laal is an isolate (without being an argument: could be an innovation)

#### 4. Former traces of noun classes in Laal?

	Front		Central	Back
	-rd	+ rd		+ rd
Hi	i	ü [y]	i	u
Mid	e	üo [uo]	ə	o
Lo	ia (<ε)	üa [ua]	a	ua (<ɔ)

Table 11: Laal vowel system

#### 4.1. Number marking suffixes on nouns in Laal

<b>1050</b>	<b>Total monomorphemic nouns</b>		
<b>467</b>	<b>Nouns that vary in number</b>		
66	Suffix only in sg.	sím-ál / sím	'palm tree sp.'
193	Suffix only in pl.	áár / áár-ù	'sauce'
116	Suffix in both sg. and pl.	bìg-ál / bìg-ü	'tree bark'
83	Sg/pl. marked by suprasegmental changes	ndáár/ndáár	'whip'
9	Suppletion	nō / mōj	'person'

Table 12: Nominal number marking

Suf.	Nb.	Ex. (sg)	(pl)	Notes
-al	139	luààr-ál bàg-àl	lòòr bùg-ór	'ant sp.' 'head' <i>semi-productive singulative</i>
-l	15	tūgū-l	tùgù-r	'oxbow lake'
-a <sub>sg</sub>	32	bìr-à	bùr-ú	'fishing hook'
-o	13	cún-ó	cáñ	'Sar person'
-u	7	sū-l-ü	sū-n	'antelope sp.'
-i <sub>sg</sub>	5	pèér-í	piār-nyā	'snake'
-e	4	súgl-é	súgúl	'guineafowl'
-ər	1	bàgy-ər	bàgy-à	'fish sp.'
-ur	1	tūg-ūr	tūg-māny	'fish sp.'
-un	1	múr-ún	múr(-ány)	'bird sp.'

Table 13: Singular suffixes

Suf.	#	Ex. (sg)	(pl)	Notes
-u	73	mià̄n	mèn-ù	'hoe'
-o	45	ndiá̄w	ndéw-ò	'knife'
-i <sub>1</sub>	45	mā̄l	mèl-í	'tongue' <i>body parts</i> (21/33)
-a <sub>1</sub>	58	cèw	cā̄w-ā̄	'harpoon sp.'
-ə	2	kà̄ám	kèm-é	'tamarind' <i>trees</i> (2/2)
-or/-ur	14	mà̄m-ál	mòm-ór	'grand child' - sg. = -al - animals (5/10)
-ər	2	nyā̄w	nyèw-ér	'hunger'
-r	18	tūgū-l	tùgù-r	'oxbow lake' sg = -l
-re	1	nyīgā̄	nyìg-ré	'canoe'
(-)n	3	mī(-)l-ā̄	mí(-)n-í	'eye' sg = (-)l
-ga	3	sū̄	sū-gā̄	'water' <i>fluids</i>
-ma	1	ndíí (< *ndír?)	ndír-má̄	'bird'
-many	8	ngií̄	ngií-mā̄ny	'cricket' <i>animals</i> (4/4)

Table 14: Plural suffixes (expected vowel harmony)

Suf.	#	Ex. (sg)	(pl)	Notes
-a <sub>2</sub>	5	mā̄r	mīr-ā̄	'cattle' <i>animals</i> (4/4)
-i <sub>2</sub>	4	tóog	tuāāg-ī	'fishing basket'
-mi	10	lóog	luág-mí	'pigeon' <i>animals</i> (4/7)
-ri	5	lō̄	luàà-rí	'tree sp.'
		dēē	duāā-rí	'sheep'
		mōō	mùù-rí	'hippo'
-nya	10	sér	siár-nyá̄	'plant sp.' <i>animals</i> (4/9)
		nyé	nyuá-nyá̄	'elephant'
-any	16	?ìm	?ìm-àny	'tree sp.' = <i>animals</i>
		bìāāg	bìig-āny	'dog' (6/13)
		tàg-á̄	tùg-r-āny	'fish sp.'

Table 15: Plural suffixes (unexpected vowel assimilation/dissimilation)

(54) Cumulative marking:

- a. sōōl / suáá-r-á ‘spear’
- b. mī-l-āl / mí-n-í ‘eye’
- c. tūgū-l / tūgù-r ~ tūg-r-á ‘oxbow lake’
- d. buán-àn / bôn-n-ó ‘insect’

(55) Internal reconstruction(s), from least to more daring:

		Reconstruction 1	Reconstruction 2	Reconstruction 3	
Sg.	-al	*-al	*-al	*-al	
	-l	*-l			
	-ər, -ur, -un	*-Vr			
	-a <sub>sg</sub>	*-a <sub>sg</sub>		*-i <sub>sg</sub>	
	-e	*-e	*-e		
	-i <sub>sg</sub>	*-i <sub>sg</sub>	*-i <sub>sg</sub>		
	-o	*-o	*-O	*-O	
Pl.	-u	*-u			
	-i <sub>1</sub>	*-i <sub>1</sub>	*-i <sub>1</sub>	*-i <sub>1</sub>	
	-u	*-u	*-O	*-Or	
	-o	*-o			
	-or ~ -ur	*-Or			
	-ər	*-ər	*-Or		
	-r	*-r			
	-a <sub>1</sub>	*-a <sub>1</sub>	*-a <sub>1</sub>	*-a <sub>1</sub>	
	-ə	*-ə	*-ə	*-ə	
	-i <sub>2</sub>	*-i <sub>2</sub>	*-i <sub>2</sub>	*-i <sub>2</sub>	
	-a <sub>2</sub>	*-a <sub>2</sub>	*-a <sub>2</sub>	*-a <sub>2</sub>	
	-n	*-n	-n	*-n	
	-nya	*-nyɔ/*-ɔny	*-nyɔ/*-ɔny	*-nyɔ/*-ɔny	
	-any				
	-ri	*-ri	*-ri	*-ri	
	-ga	*-ga	*-ga	*-g + -a <sub>2</sub>	
	-many	*-many	+ *-ɔny -*m + *-i <sub>2</sub> + *-a	+ *-ɔny -*m + *-i <sub>2</sub> + *-a	
	-mi	*-mi			
	-ma	*-ma			

Table 16: Reconstruction(s) of Laal number marking suffixes

(56) Sg/pl pairings (If cumulative marking, only first suffix taking into account)

Sg.

Pl.

<b>-al</b>	(61/139)	-i <sub>1</sub>	(19/45)
		-u	(16/73)
		-or ~ -ur	(12/14)
		-o	(5/45)
		-r	(4/18)
		-i <sub>2</sub>	(2/4)
		-mi	(2/10)
		-any	(1/16)
		-ə	(1/2)
<b>-l</b>	(15/15)	-r	(11/18)
		-any	(1/16)
		-n	(3/3)
<b>-a<sub>sg</sub></b>	(21/32)	-u	(13/73)
		-o	(3/45)
		-i <sub>1</sub>	(3/45)
		-many	(1/8)
		-re	(1/1)
<b>-o</b>	(4/13)	-a <sub>1</sub>	(2/58)
		-ri	(1/5)
		-r(-a <sub>1</sub> )	(1/18)
<b>-u</b>	(5/7)	-i <sub>1</sub>	(2/45)
		-many	(2/8)
		-r(-a <sub>1</sub> )	(1/18)
<b>-e</b>	(2/4)	-u	(1/73)
		-nya	(1/10)
<b>-i<sub>sg</sub></b>	(4/5)	-nya	(2/10)
		-many	(1/8)
		-a <sub>1</sub>	(1/58)

	Sg.	Pl.
<b>“Solid” pairings</b>	-al	$\Leftarrow$ -or ~ -ur
	-(a)l	$\Leftrightarrow$ -r
	-l	$\Leftarrow$ -n
<b>Strong tendencies</b>	-al	$\Rightarrow$ -i <sub>1</sub>
		$\Rightarrow$ -u
		$\Rightarrow$ -or ~ -ur
	-a <sub>sg</sub>	$\Rightarrow$ -u

Rec. 1	Rec. 2	Rec. 3
*-a / *-u	*-al / *Or	*-al / *Or
*-al / *-Or	/ *-n	/ *-n
*-al / *-u	/ *-O	
*-l / *-r		
*-l / *-n		
*-al / *-i <sub>1</sub>	*-al / *-i <sub>1</sub>	*-al / *-i <sub>1</sub>

Table 17: Stable pairings and their reconstructions

## 4.2. Former noun class suffixes in Boua

Proto-Boua	Ba (personal notes)	Lua (/386)	Tun (/56)	Kulaal (/395)
*-A/*-I	-a/-e = -ɛ = -i <i>gùmà/gùmì</i> 'chin'	-a/-i (63) <i>tīlā/térī</i> 'tree'	-a = -ɛ/-i (5) <i>sèé/sií</i> 'fish'	-a/-e (106) <i>hàápá/hàápé</i> 'fish'
*-U/*-I	--	--	--	-u/-i (83) <i>tùlù/tùlì</i> 'animal sp.'
*-L/*-N	-l(-)/-n(-) <i>hóól/hóón</i> 'mortar'	-l(-)/-n(-) (15) <i>kūlā/kōnī</i> 'pot'	-n=y=∅/-n, (12) <i>hōy/hōn</i> 'mortar'	-l/-n, -il/-un, -el-on (96) <i>fṓl/fóón</i> 'mortar'
*-L/*-R /*-RI ?	-l(-)/-r(-) <i>wáál/wórgí</i> 'field' <i>būl/būr</i> 'bone'	-l(-)/-r- (20) <i>wáál/wórgí</i> 'field'	-n=-y /∅ ? (3) <i>wāy/wāā</i> 'field' <i>mān/máári</i> 'breast'	-l/∅ ? (3) -l/-te (1) <i>máál/móó</i> 'breast'
*M/*(M)RI	-m/-- <i>súm</i> 'smoke' <i>hùmā</i> 'blood'	-m/-- (4) <i>hùm</i> 'flour' <i>hám/hámngí</i> 'beer' <i>sí́m</i> 'smoke' <i>hímá</i> 'blood'	-m/ri (or --) (3) <i>sām</i> 'beer' <i>sēm</i> 'smoke' <i>sīrī</i> 'blood'	-m/ ũ-te (4) <i>fōm/fōrè</i> 'flour' <i>hám/hótì</i> 'beer' <i>héém/héén̄tē</i> 'smoke' <i>hétē</i> 'blood' (no sg)
*XXX/*-KI	∅/-gì <i>mìnā/mìngí</i> 'bottom'	∅/-gì (62) <i>dáān/dápnngí</i> 'leg'	xxx/-ngi=ngu (3) <i>dāñp/dínḡt</i> 'leg'	∅/-kì (4) <i>tōñ/tòyķì</i> 'house'
*XXX/*-M /*-BV?	xxx/-m, -n <i>bá:/búm</i> 'child' <i>wān/mīn</i> 'thing'	xxx/-m (3) <i>bá:/búm</i> 'child' <i>wāñp/mūm</i> 'thing' <i>wāñp/wòm</i> 'chief'	∅/-m (26) <i>bāt̄/bāt̄óm</i> 'child' <i>i/òm</i> 'thing'	xxx/-m (5) <i>pòñ/pòñm</i> 'man' <i>wòsà/pìsè(m)</i> 'person'
		xxx/-oybi <i>kúā:/kóybí</i> 'uncle' <i>wáā:/wóybí</i> 'sister -in-law'		

Table 18: Proto-Boua noun class suffixes (Boyeldieu 1983, unless otherwise stated)

Proto-Boua (Boyeldieu 1983.)	Tula (Boyeldieu 1980, 1983)		Notes
<i>class pairing    suffix pairings</i>			
*-A/*-I	W/Y (57)	-V/-Vti -V/-Vni -ɛ/-i -e/-i -V/-Vi	(19) <i>ku/kuti</i> ‘tortoise’ (6) (6) (5) (5) <i>nam/nai</i> ‘animal’
	K/Y (8)	-a/-i xxx-ni	(4) (3)
*-U/*-I	?		
*-L/*-N	D/T (28)	-r/to -n/-ni xxx/-bi	(8) <i>dur/duto</i> ‘head’ (6) (4)
*-L/*-R		∅/-ən -r/-ri	(3) <i>cwon/cwonən</i> ‘nose’ (2)
/*-RI ?	D/Y (2)	-r/-ni	(2) <i>fur/funi</i> ‘stomach, belly’
*-M/*(M)RI	B/Y (14)	-m/-nti	(11) <i>mim/minti</i> ‘flour’ <i>yim/yinti</i> ‘beer’ <i>yɛm/yɛnti</i> ‘milk’ <i>kotom/konti</i> ‘blood’
*XXX/*-KI	?		
*XXX/*-M /*-BV ?	W/B (15)	xxx/-bo xxx/-m	(9) <i>kwarta/kwartabo</i> ‘man’ <i>ni/nəbo</i> ‘person’ (6) <i>bwɛ/bwɛzim</i> ‘child’ <i>mai/matəm</i> ‘chief’
?	K/T (19)		
?	K/B (1)		

Table 19: Comparison Proto-Boua / Tula (Adamawa) (Boyeldieu 1980, 1983)

### 4.3. Comparison Laal - Boua

	<b>Laal 1</b>	<b>Laal 2</b>	<b>Laal 3</b>
*-A/*-I	*-a <sub>sg</sub> /xxx xxx/*-i <sub>1</sub> → Only 3 -a/-i pairings in Laal	*-al <sub>sg</sub> /xxx xxx/*-i <sub>1</sub>	*-al <sub>sg</sub> /xxx xxx/*-i <sub>1</sub>
*-U/*-I	*-o/xxx *-u/xxx xxx/*-i <sub>1</sub> → Only 2 u/i pairings in Laal	*-O/xxx xxx/*-i <sub>1</sub>	*-O/xxx xxx/*-i <sub>1</sub>
*-L/*-N	*-l/*-n → Only 3 nouns	*-l/*-n	*-l/*-n
*-L/*-R	*-l/*-r; *-al/*-Or /*-RI ? xxx/*-ri → Vowel discrepancy between PB *-RI and Proto-Laal *-Or → Laal *-ri triggers vowel lowering + rounding	*-al/*-Or xxx/*-ri	*-al/*-Or xxx/*-ri
*-M/*(M)RI	-- → No sg. in -m in Laal (+ no semantic match)		
*XXX/*-KI	--		
*XXX/*-M	-- /*-BV ? → None of the plurals in -m... matches		
<i>Leftovers:</i>	*-u *-o *-e <sub>sg</sub> *-i <sub>sg</sub> *-i <sub>2</sub> *-a <sub>1</sub> *-a <sub>2</sub> *-ə *-nyɔ~*-ɔny *-ga *-many *-mi *-ma	*-u *-o *-e <sub>sg</sub> *-i <sub>sg</sub> *-i <sub>2</sub> *-a <sub>1</sub> *-a <sub>2</sub> *-ə *-nyɔ~*-ɔny *-ga -*m	*-e <sub>sg</sub> *-i <sub>sg</sub> *-i <sub>2</sub> *-a <sub>1</sub> *-a <sub>2</sub> *-ə *-nyɔ~*-ɔny *-g -*m

Table 20: Comparison Proto-Boua / Laal

## 5. General Conclusion

- (57) Laal gender system:
- unique
  - relatively old
- (58) Number marking suffixes on nouns:
- Frozen morphology
  - Older
- (59) Looks like former noun classes
- general structural similarities with Boua languages / Tula (Adamawa)
  - Tentative comparison reveals similarities and look-alikes
  - But not conclusive
    - Only “daring” reconstructions look encouraging
    - Many old Laal suffixes have no equivalent in Boua
    - none of the Boua pairings are solidly attested in Laal (except -l/-r and -l/-n, which are attested in relatively few pairs, which could turn out to be borrowings)
- (60) More research is needed
- Careful and extensive lexical comparison with Boua languages (to be documented...)
  - Careful comparison with more Adamawa and Gur languages with (remains of) noun class suffixes
- (61) For the time being, neither the extant gender system nor the partly frozen number marking suffixes on nouns can be used to classify Laal into one of the recognized African families.

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