From differential grammatical treatment to gender: animacy-based noun classification in Central Africa and its typological significance

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1 Introduction

1.1 Gender in Central Africa

\+ Africa as a global hotspot of languages with gender (Heine 1982, Nichols 1992), notably:

a) complex systems with non-sex-based gender in Niger Congo languages in western, central and southern areas of the continent known under the term “noun classes

b) bi- or tripartite systems with sex-based gender in Afroasiatic languages of northern and northeastern Africa

c) less known but typologically rare system type in Kalahari Basin Area (Güldemann 2000)

\> accounts for large majority of gender languages in Africa

\+ far less known system type found in Central Africa: bipartite with animacy-based genders

\> e.g., Vorbichler’s (1963) description for the Ituri Bantu language Beeke:

(1)a.	*nyama*	***ndzo***	*ba-nyama*	***mbaa***
	animal	this	PL-animal	this
	this animal		these animals	
b.	*bitu*	***ni***	*ba-bitu*	***ni***
	bow	this	PL-bow	this
	this bow		these bows (Vorbichler 1963: 33)	
(2)a.	*seki*	***e**ndi*	*seki*	***b**endi*
	tortoise	**SBJ**:go	tortoise	**SBJ**:go
	the tortoise went		the tortoises went	
b.	*singa*	***e**sei*	*ba-singa*	***e**sei*
	trap	**SBJ**:sleep	PL-trap	**SBJ**:sleep
	the trap “slept” (= remained set up)		the traps “slept” (Vorbichler 1963: 33)	
(3)a.	*mè-**m̀**-èní*	*tò*	*mè-**ḿ**-èní*	*tò*
	1S-**OBJ**-see	?	1S-**OBJ**-see	?
	I saw him/[her]		I saw them	(animal, human)
b.	*mè-**é**-ènì*	*tò*		
	1S-**OBJ**-see	?		
	I saw it/them (thing, tree) (Vorbichler 1963: 33)			

Agreement class	Adjective/ numeral	Possessor pronoun	Demon-strative	Subject on verb	Object on verb
1	*ma-*	*yV-*	*ndzo*	*a-*	*-m̀-*, *-ǹ-*
2	*ba-*	*(m)bV-*	*mbaa*	*ba-*	*-ḿ-*, *-ń-*
3	*a-*	*Ø*	*(i)ni*	*e-*	*-é-*

Table 1: Agreement classes according to agreement targets in Beeke

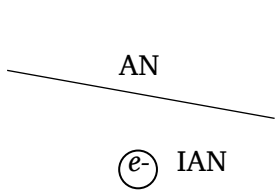


Figure 1: The animacy-based gender system of Beeke (after Vorbichler 1963)

> few other sufficiently transparent descriptions of such animacy-based gender systems in Central Africa unless there are further semantic elaborations of a core system as in Figure 1 (as, e.g., in Zande - see §2.3 below)

\+ gender = noun classification expressed by morphosyntactic agreement (Corbett 1991)
> in line with Corbett (1991) and others, includes pronominal gender systems!
\+ ±animate categorization is a cultural phenomenon - cf., e.g., discussion of animacy-based system in Algonquian by Black-Rogers (1982), Straus and Brightman (1982)
> +animate ≠ human+animal nouns, as in Bantu "animate concord" where animals are treated to different degrees as nouns of human gender 1/2 (cf., e.g., Wald 1975)
\+ linguistic categorization of nouns into classes can be conveyed by various grammatical phenomena other than gender in the above technical sense
> turns out to be highly relevant in the area dealt with here!
\+ **goal of the paper:**
(I) survey the types of noun classification in the languages of Central Africa straddling the wider zone of the northern rainforest transition
> focus on gender systems but include signs of animacy-based grammatical behavior
(II) trace the diachronic evolution of this animacy-based noun classification
(III) discuss its relevance for a general theory of gender typology and evolution

\+ Vorbichler (1963: 23-4, 27, 34; 1968: 414-5; with reference to Schebesta 1952: 435-7, 450)) with a concrete hypothesis about some prehistorical substrate interference in the specific context of the northeastern Ituri rainforest potentially related to languages spoken by "Pygmy" forager groups before their shift to languages of food-producing groups that colonized the area later

Die Entdeckung dieser Unterscheidung für das Sua-Kango ist das Verdienst Schebestas. Eine noch zu lösende Frage bleibt es, ob und wie diese Unterscheidung in der ostsudanischen Gruppe Mamvu-Lese-Bvuba-Efe durchgeführt ist und wie sich die Verhältnisse in dem den Mangbetu-Dialekten nahestehenden Asua-ti darbieten. Bewahrheitet sich die Zweiteilung von Lebewesen und Nichtlebewesen für alle Gruppen der Waldneger- und Pygmäendialekte des Ituri-Waldes, so kann diese nur aus einer dritten, noch immer wirksamen Sprachschicht erklärt werden, denn weder die Bantu- noch die Ostsudansprachen kennen sie von Haus aus. [We owe the discovery of this (animacy-based gender) distinction in Sua-Kango (part of Bira-Komo Bantu) to Schebesta. A problem still to be resolved is whether and how this distinction is made in the East Sudanic Mangbutu-Efe group and what the situation is in Asua-ti, the close relative of the Mangbetu dialects (all part of Central Sudanic!!!). Should the division into animate and inanimate entities be shown to hold for all groups of rainforest-farmer and Pygmy forager languages of the Ituri, it can only be explained by means of a third still active language stratum, as neither Bantu nor East (aka Central) Sudanic languages know it.]

1.2 Language survey and classification

\+ above substrate hypothesis assumes 3 linguistic “layers”: “Pygmy”, “East Sudanic”, Bantu

\> profile in need of assessment according to modern genealogical language classification

\+ widely accepted African classification by Greenberg (1963) methodologically and empirically not robust (cf., e.g., Campbell and Poser 2008) > Güldemann (2018)

\+ Vorbichler’s “East Sudanic” = Tucker’s (1940) areal-linguistic concept: comprises Central Sudanic and Ubangi, which itself subsumes independent Gbayaic in the west

\> at least 5 language groups: Bantu, Central Sudanic, Gbayaic, Ubangi, “Pygmy substrate”

1.2.1 Bantu

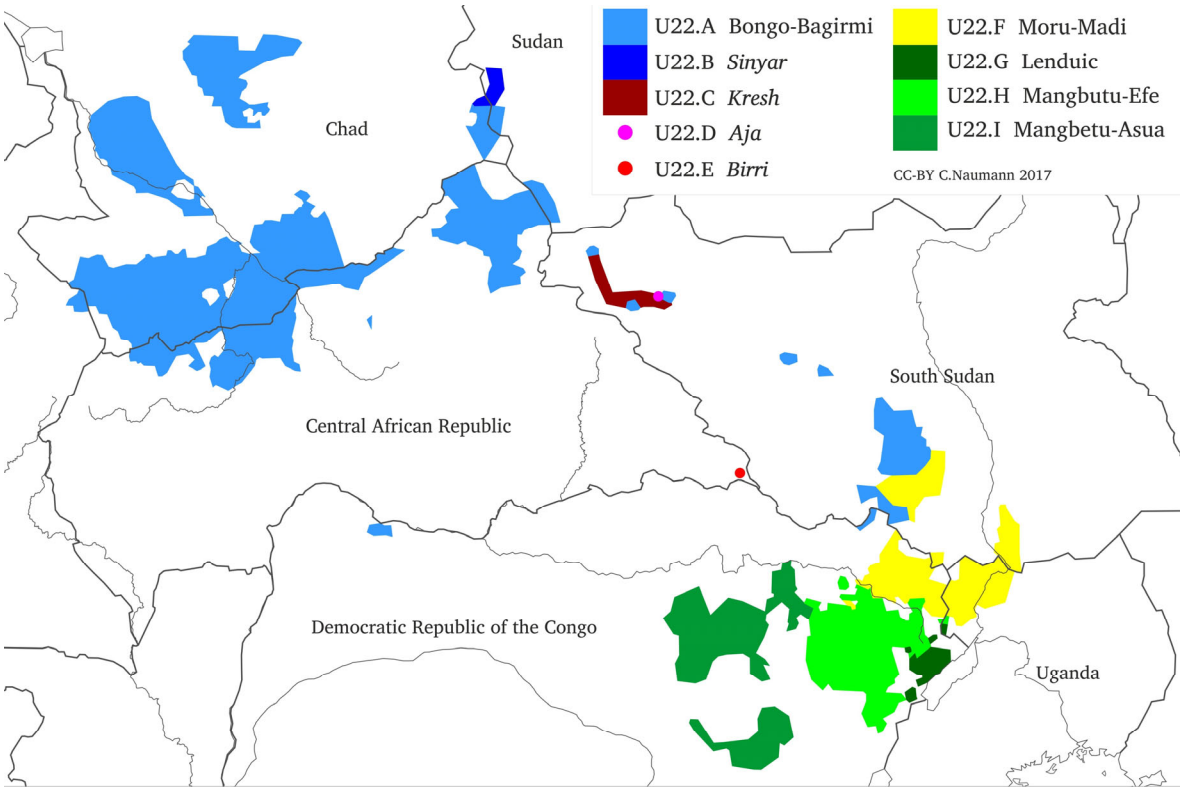
\+ largest language family within Niger-Congo with origin around the Nigeria-Cameroon border area

\+ inconclusive sub-classification but progress with Grollemund et al. (2015)

1.2.2 Central Sudanic

\+ independent family rather than proven constituent group of Nilo-Saharan

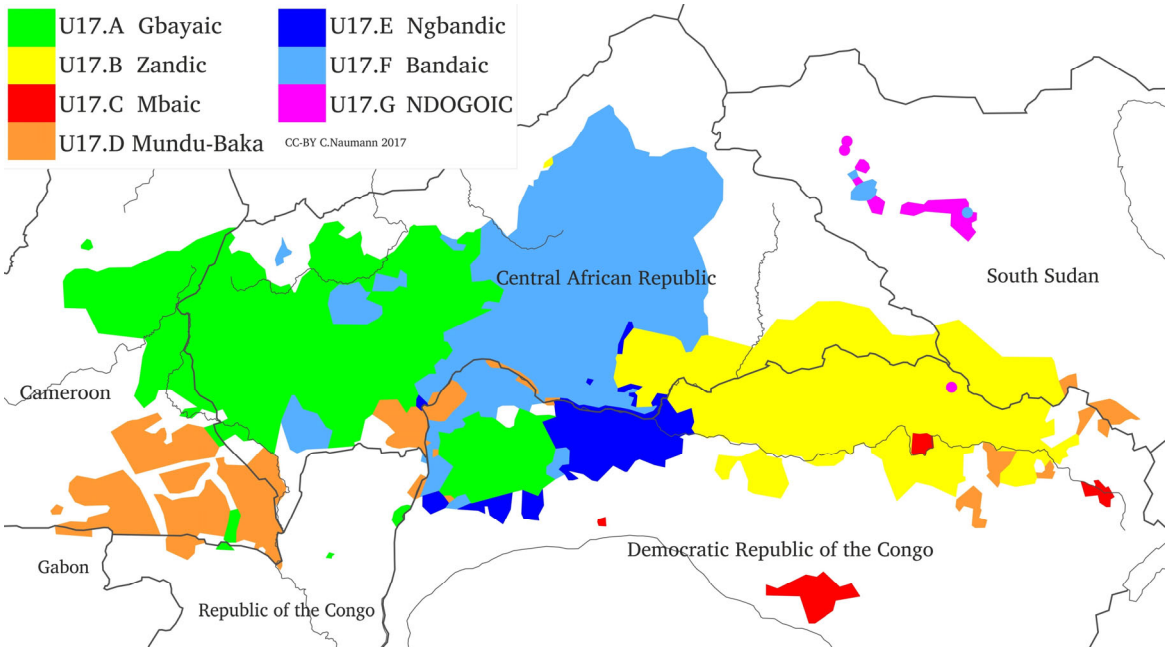
\+ close to ten subgroups: Bongo-Bagirmi, Sinyar, Kresh, Aja, Birri, Moru-Madi, Lenduic, Mangbutu-Efe, Mangbetu-Asua > Map 1



Map 1: Central Sudanic language groups (Güldemann 2018)

1.2.3 Ubangi (including Gbayaic)

+ robust Niger-Congo member but not proven as a single clade in the family tree > Map 2
+ particularly Gbayaic in the west not closely related to Ubangi core (Moñino 2010b)
+ Ubangi core comprises more than half a dozen subgroups: Mbaic, Ngbandic, Zandic, Mundu-Baka, Bandaic, NDOGOIC: heterogeneous in comprising Narrow Ndogoic, Feroge-Mangaya, Togoyo, and Indri whose relation to each other is unclear



Map 2: Ubangi language groups (Güldemann 2018)

1.2.4 Pygmy languages

+ all groups assumed to have shifted to farmer languages, often not their current neighbors

a) Central Sudanic:	Mangbutu-Efe	*Efe*
	Mangbetu-Asua	*Asua*
b) Niger-Congo:	Ubangi (Mundu-Baka)	*Baka*
	Gbayaic	*Bofi*
	Bantoid (Non-Bantu)	*Bezan*
	Bantoid (Narrow Bantu)	many and in numerous sub-groups, e.g.:

A *Kola~Gyeli* (A801)

B *Koya* (B221), *Bongwe* (B303)

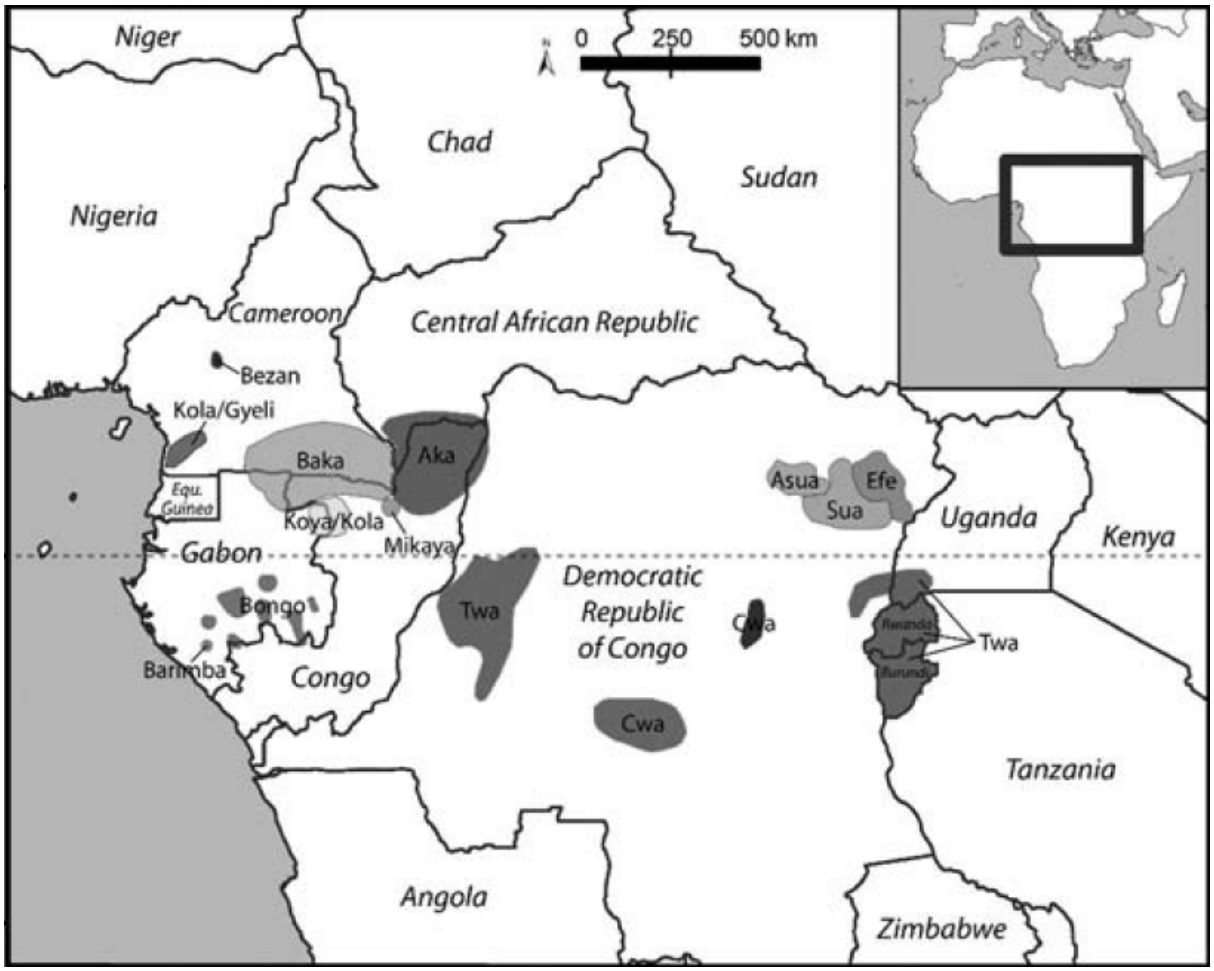
C *(Y)aka* (C104), *Nkundo Twa*, *Konda Twa*, *Foto*, *Jofe* (all C60)

D 4 varieties in 3 sub-groups: *Kango* and *Sua 1* in Bira-Komo, *Tchwa* in Huku, *Sua 2* in Liko-Bali (Demolin 2008)

J Interlacustrine Twa

+ overall poor and partly outdated linguistic documentation:

- few relatively comprehensive grammars: Efe~Mvuba?, Baka; Bantu: Gyeli, Yaka
- sketches: Asua; Bantu: Bongwe, several Twa varieties in former Equateur province



Map 3: Pygmy groups in Central Africa (Bahuchet 2012: 12)

2 Nominal classification in Central Africa

2.1 Central Sudanic

\+ no signs of animacy-based gender and noun behavior in Lenduic (Deleu 1934, Tucker 1940, Kutsch-Lojenga 1994) and Mangbetu-Asua (Larochette 1958)

2.1.1 Moru-Madi

\+ no signs of gender but some behavioral animacy

\> Ma'di: some postpositions with ±animacy restrictions, but arguably due to nominal grammaticalization source (Blackings and Fabb 2003: 363, 378, 399)

2.1.2 Mangbutu-Efe

\+ no signs of gender but some behavioral animacy (Vorbichler 1968: 414)

\> Lese (Vorbichler 1965)

a) genitive constructions interact with animacy features of possessor (Vorbichler 1965; 1968: 410-footnote 2, 414)

b) goal postposition *-ni* with inanimates vs. *-ɓɔ* for animates (Vorbichler 1965: 90-1)

(4)a. *mɛsà-ni*
table-IAN.DIR
to/away from the table

b. *àfa-ɓɔ*
father-AN.DIR
to my father

c. *u̲ra-ɓɔ*
animal-AN.DIR
to the animal (Vorbichler 1965: 90-1)

2.1.3 Kresh, Aja, Birri

\+ Kresh: "neuter" pronoun behavior amounts to inanimate reference (Santandrea 1976: 98)

> The following may be taken as general rules about the matter, with a great allowance for exceptions. "Our" neuter pronoun is normally left out in these languages, both as a subject and as an object. If stress is laid on it, a suitable demonstrative may replace it. When speaking of a particular object, the word "thing" is frequently heard, usually followed by a demonstrative. For the plural, the pers.[onal] pron-[oun] is employed when clarity of speech is required. This is always done when speaking of animals, unless there are other terms which replace it: e.g. a demonstrative.

\+ Aja: apparently similar situation as in Kresh (Santandrea 1976: 244-text 5, footnote 4)

\+ Birri: no sign of animacy-based noun distinction (Santandrea 1966: 203)

2.1.4 Bongo-Bagirmi

\+ no salient signs of animacy-based gender and noun behavior except for one language
> Furu spoken on the Ubangi River in the vicinity of Ubangi and Bantu languages
\+ animacy-based singular pronoun distinction at least in possessives: mid-tone suffix for animate vs. *ná* for inanimate possessor (*ná* also grammaticalized as DEF ?!from DEM, which complicates the picture) (Boyeldieu 2000: 74-5, 86-92, 98, 118-20)

(5)a. *tàlā* < [*tàlà-¯*]
mouth:3SG.AN.POSSR
sa bouche [his/her mouth]
b. *tàlà* *ná*
mouth 3SG.IAN.POSSR
le/la/son bord, ouverture, tranchant [the/its edge]
c. *tàlā* *ná*
mouth:3SG.AN.POSSR DEF
sa bouche en question [his/her mouth (already referred to)] (Boyeldieu 2000: 91)

\+ behavioral animacy:
a) no pronominal resumption of inanimate noun as verbal object in relative clause (Boyeldieu 2000: 111-3) and clause chaining subject (Boyeldieu 2000: 151, 211)
b) demonstratives partly select noun according to animacy (Boyeldieu 2000: 121)

2.2 Gbayaic

\+ recurrent animacy-based gender distinction in 3rd-person singular pronoun forms
- attested in all major branches of the family
- particularly in the southern and eastern languages spoken also in the rainforest

Family sub-classification			**Language variety**	**AN**	**IAN**
Southern-Western	Western	Northwest	Yaayuwee	*ʔà*	*-à*
		Bokoto-Gbeya	Gbeya	*ʔǎ*	*-à*
	Southern		’Buli	*ʔà*	*yò*
Eastern			Manza	*ʔà*	*mâ*
			Ngbaka Minagende	*ʔà*	*má*

Table 2: Gender distinction in 3rd-person singular pronouns across Gbayaic (after Moñino 1995: 65, 98, 169, 227, 242, 421-2; 2010a: 89)

Ngbaka Minagende (Eastern)

(6)a. *mbáláwálá yú, à úsú tí bùlúkù*
monitor.lizard escape 3SG.AN hide under gras
le varan s'enfuit, il se cacha sous les herbes.

b. *tè má tɨ́á*
tree 3SG.IAN fell
l'arbre est tombé (Maes 1959: 19-20, 34, 120)

'Buli (Southern)

(7)a. *ʔà gàsá*
3SG.AN be.big
S/he is big.

b. *yò gàsá*
3SG.IAN be.big
It is big. (Moñino 1995: 98)

Yaayuwee (Western, Northwest)

(8)a. *ʔám zɔ̀ká ʔà*
1SG see 3SG.AN
I have seen him/her.

b. *ʔám zɔ̀káà*
1SG see:3SG.IAN
I have seen it. (Moñino 1995: 65)

Gbeya (Western, Bokoto-Gbeya)

(9)a. *dŏŋ-ʔɛ̂* [dɔ̀ŋɑ́ɛ̂]
back-3SG.AN
his/her back ~ behind him/her

b. *dŏŋ-à* [dɔ̏̀ŋɑ́ɛ̂]
back-3SG.IAN
its back ~ after it (Moñino 1995: 169)

2.3 Narrow Ubangi

+ members of NDOGOIC treated separately:

- Narrow Ndogoic: not yet surveyed but see Santandrea (1961: 30-1, 52-4, 71, 108) on "neuter pronoun"
- three so-called Raga language groups should be viewed as independent

2.3.1 Raga

+ Feroge-Mangaya (Santandrea 1969: 106-8): 3rd-person pronouns for humans + animals, opposed to various reference devices for inanimate nouns, partly depending on morpho-syntactic context:
  - normally Ø
  - "neutral~inanimate" pronoun *a* or demonstrative
  - occasional use of animate pronoun in Mangaya

> personal pronouns are in fact pronouns referring to animate entities

+ Togoyo (Santandrea 1969: 110): demonstrative as "neutral"~inanimate pronoun

+ Indri (Santandrea 1969: 108-9): 3rd-person pronouns distinguish animacy and for animates also number, a "neutral" pronoun predominantly but not universally for inanimates

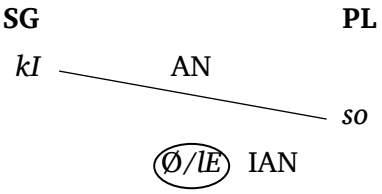


Figure 2: Animacy-based pronominal gender system of Indri (after Huber 2017)

- also behavioral animacy: plural prefix *cu-* only for animate nouns (Santandrea 1969: 76)

2.3.2 Bandaic

+ 3rd-person pronouns distinguish animacy and for animates also number, e.g., in Mono (Kamanda Kola 2003: 269-79, 443-7)

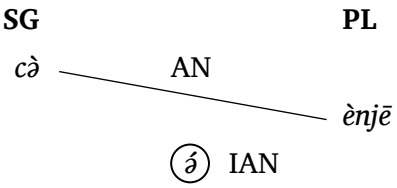


Figure 3: Animacy-based pronominal gender system of Mono (Kamanda K. 2003)

+ various types of behavioral animacy, e.g., in Mono:

a) plural marking (by prefix *à-/àlà-*) restricted to animate nouns or their quality attributes (Kamanda Kola 2003: 180, 247-259, 281-2, 288-9)

b) constructions with genitive linkers interact with animacy features of both nouns (Kamanda Kola 2003: 324-46)

c) 'many' = *àgà* for inanimate vs. *úkpú/ɨ̄lɨ̄* for animate nouns (Kamanda Kola 2003: 318)

+ largely parallel situation in all better described Bandaic languages - see Tingbo-nyi-Zonga (1978: 68-9, 82-8, 94-6, 98-102) for Mbandja, Cloarec-Heiss (1986: 45, 58, 71, 81, 95, 100-1, 104, 203-6, 218) for Bambari-Linda, Sampson (1997) for Ndele-Tangbago
+ behavioral animacy:
- inanimate zero pronominalization with prepositions (Santandrea 1965: 64-7)

2.3.3 Mundu-Baka

+ Winkhart (2015) without any hint toward a gender distinction in pronouns or in any other way but situation appears in fact to be similar to Gbayaic, Raga, Bandaic etc.:
- basic 3rd-person pronouns for animates (humans, animals, personified objects etc.) as opposed to absence of overt reference to inanimates or reference by means of deictic elements, a generic noun or repetition of identical noun
- behavioral animacy
> Monzombo (Boyi 1983)
+ explicit animacy-based gender by means of distinct pronouns

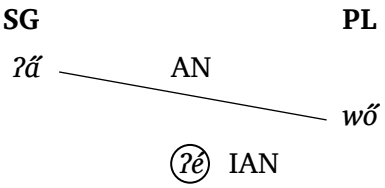


Figure 4: Animacy-based pronominal gender system of Monzombo (Boyi 1983: 148)

+ behavioral animacy: plural enclitic *-ō* less restricted with animate nouns (Boyi 1983: 245)

> Baka (Djoupée 2017):
+ 3rd-person pronouns *ʔé/wó* with default animate reference, *ʔé* with inanimate reference only under specific conditions, generally zero for inanimate objects (Djoupée 2017: 96-9, 198, 274, 281, 283)

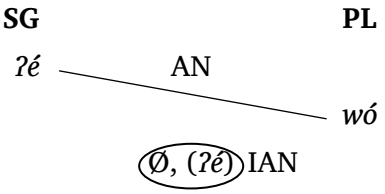


Figure 5: Animacy-based pronominal gender system of Baka (Djoupée 2017)

+ behavioral animacy: genitive linker *-á* restricted to animate possessors (Djoupée 2017: 140-1, 176-8)

+ for languages of eastern branch see §3.2.2 below

2.3.4 Ngbandic

+ 3rd-person pronouns refer largely to animate entities, while Ø (or other proforms like demonstratives) refer to inanimates (Toronzoni (1998: 271-92) on Ngbandi, Samarin (1963: 127, 135-46) on Sango, ?Boyd (1988: 44) on Gbayi - see below)

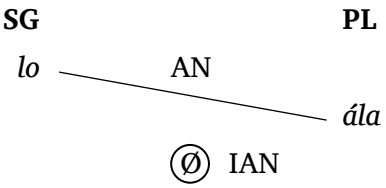


Figure 6: Animacy-based pronoun system of Ngbandi (after Toronzoni 1989)

+ various types of behavioral animacy:

a) plural word~prefix *á* restricted to or at least strongly biased toward animate nouns (cf. Toronzoni (1989: 208-14) on Ngbandi, Samarin (1963: 127, 132-4) on Sango)

b) genitive linker *tí* for inanimate vs. *té* for animate possessor nouns (Toronzoni 1989: 313-6; but potential counterexamples in Lekens 1923: 16)

c) Wh-elements and construction divided according to animacy (Toronzoni 1989: 493-4)

(10)a. *zɛ̃ hándà nákó*
leopard outwit turtle
Le léopard a trompé la tortue.

b. ***zo*** *hándà nákó* ***nà?***
person outwit turtle AN.INTERR
Qui a trompé la tortue? (Toronzoni 1989: 493-4)

(11)a. *nzɛ́ngɔ́ ho lɔ́ngɔ* (proverb)
fatigue kill snake
La fatigue a tué la vipère.

b. ***yé*** *ho lɔ́ngɔ* ***nɛ?***
thing kill snake IAN.INTERR
Qu'est-ce qui a tué la vipère? (Toronzoni 1989: 494)

Gender-number		Pronoun	Interrogative
AN	SG	*lo*	*zo … nà*
	PL	*ála*	
IAN		*Ø*	*yé … nɛ*

Table 3: Animacy-based agreement system in Ngbandi

2.3.5 Zandic

+ less common system with semantic sex-based elaboration within animate gender domain

> more extensive treatment of semantics of animate gender: Gore (1931), Claudi (1985)

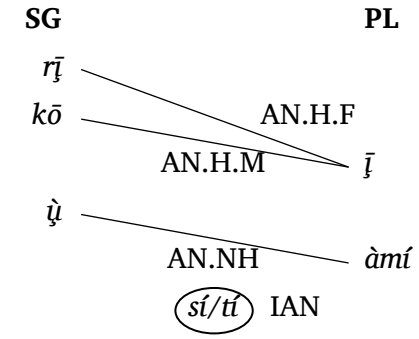


Figure 7: Animacy-based pronoun system of Zande (after Boyd n.d.)

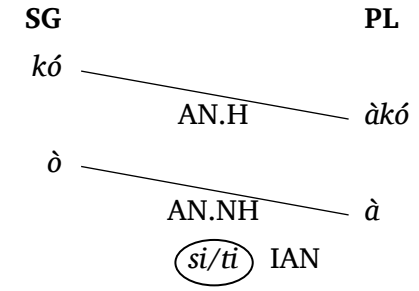


Figure 8: Animacy-based pronoun system of Nzakara (after Tucker 1956: 126)

+ inconclusive description and analysis of Barambu and Pambia regarding non-human nouns in relation to the meaning of *mbá* and the possible existence of zero for inanimate (cf. Tucker 1956: 184-92, 221, 223-7):

a) *mbá/ámbá* for non-human nouns or

b) *mbá/ámbá* for animate and Ø for inanimate nouns

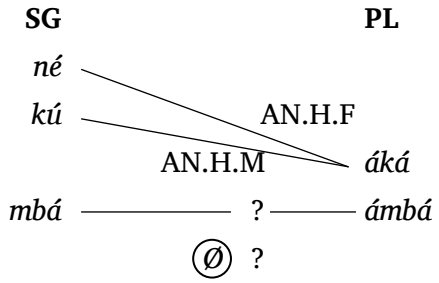


Figure 9: Pronoun system of Barambu-Pambia (after Tucker 1956)

+ behavioral animacy:

- plural prefix *à-* with bias toward animate nouns in Nzakara (Tucker 1959: 119, 140-1)
- inanimate zero pronominalization with prepositions across Zandic (Santandrea 1965: 64-6)

2.3.6 Mbaic

+ unique among Non-Bantu Niger-Congo of the area (cf. Pasch 1986, Corbett 1991: 184-8):

a) all 4 member languages with gender (or at least inflection) system typical for Niger-Congo, neither obviously let alone established to be cognate with rest of NC nor due to Bantu contact

b) 3 of 4 languages with additional normally animacy-based pronominal gender system untypical for Niger-Congo but typical for the area

> each language with its own complex configuration of nominal classification, original situation assumed to be still represented by Mba

Language	Ndunga	Mba	Dongo	Ma
Niger-Congo type noun inflection	Yes	Yes	Yes	Yes
Niger-Congo type gender	±human	±human	±animate	-
Pronominal gender	±human	±animate	±animate	±animate

Note: frame = typical for Niger-Congo, shading = untypical for Niger-Congo

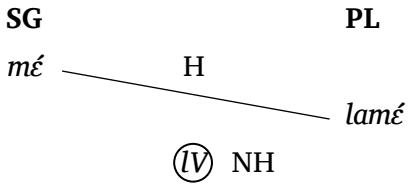
Table 4: Overview of noun classification in Mbaic

Ndunga

- only language with a **human-based pronominal** gender system in addition to human-based Niger-Congo type system!!!

- but language is most strongly exposed to contact with Bantu languages with particularly notable effects on the nominal system (cf. Pasch 1987, 1988)

> possible contact-induced change of an earlier Mbaic-typical animacy-based gender system to a Bantu-typical human-based one



Note: non-human nouns are further sub-classified within the inherited “noun class” system

Figure 10: Human-based pronominal gender system of Ndunga (after De Boeck 1956)

Mba

- two gender systems, one semantic-formal human-based of the Niger-Congo type, the other pronominal with animacy- **and sex-based** semantics similar to Zandic

> results in so-called “concurrent noun classification” (Fedden and Corbett 2017)

> pronominal system encroaches on agreement contexts of Niger-Congo type system (Fiedler, Güldemann and Winkhart forth.)

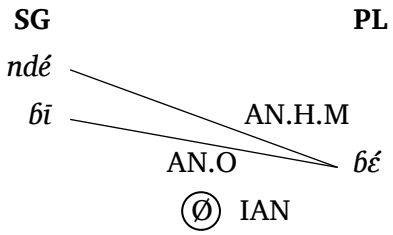
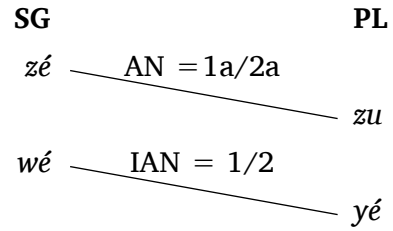


Figure 11: Animacy-based pronoun system of Mba (Fiedler, G. and W. forth.)

Dongo

- 1 gender system by streamlining Niger-Congo type system according to animacy-based pronoun system - *wé/yé* pronouns are demonstratives of major inanimate gender 1/2



Note: inanimate nouns are further sub-classified within the inherited “noun class” system

Figure 12: Animacy-based pronoun system of Dongo (after Pasch 1986)

- Niger-Congo type system based on elaborate agreement beyond pronouns but semantically parallels pronoun system: *zé/zu* corresponds to 1a/2a but *wé/yé* to all other genders

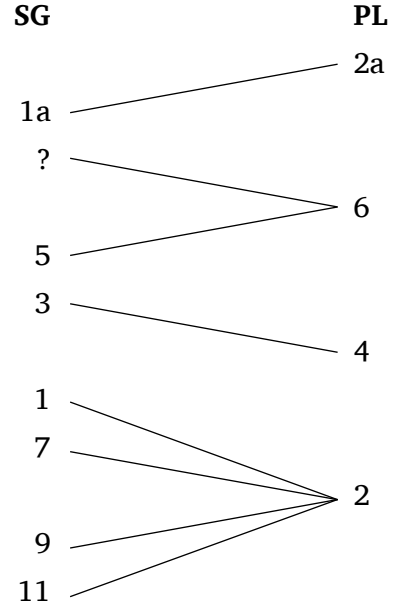


Figure 13: Formal gender system of Dongo with 10+ agreement classes

Ma

- loss of Niger-Congo type agreement system under retention of nominal inflection
- animacy-based pronoun system with additional sex-based human animate distinction

> highly similar to Zandic - ?contact-induced

- animacy-based gender accompanied by parallel binary agreement:

a) animate agreement *ɓ/ɗ* formally reminiscent of exponents of genders 12/8 and 12/10 that have a strong bias toward animate nouns (Pasch 1986: 309-13)

b) inanimate agreement *w/y* formally identical with exponents of 7/2 as abnormal and historically old inanimate gender of Mbaic (Pasch 1986: 305-6)

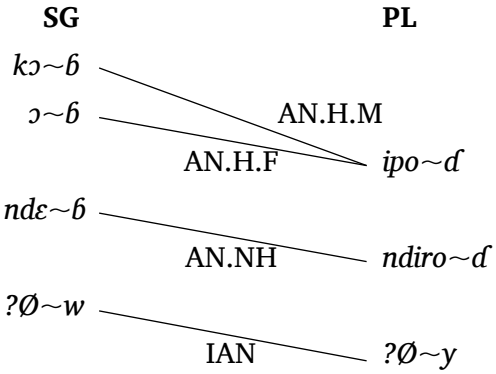


Figure 14: Animacy-based pronoun and agreement system of Ma (after Pasch 1986)

2.4 Bantu

+ Bantu languages known for an elaborate gender system of a particular semanto-syntactic profile to be reconstructed for Proto-Bantu: semantic trait of ±human due to human gender 1/2 vs. all other genders, which are essentially non-human

+ many languages in Central Africa with gender systems that are considerably restructured (see Di Garbo and Verkerk 2020, Verkerk and Di Garbo 2020)

> two major changes that are in principle independent of each other but can co-occur:

a) reduction of gender inventory - up to complete loss

b) macro-gender distinction shifts to different degrees from ±human to ±animate

+ four basic types within “deviant” Bantu languages:

Type I: Inherited gender system with partial animacy-based agreement - “animate concord”

Type II: System with one animate vs. many inanimate genders - similar to Dongo in §2.3.6

Type III: Bipartite animacy-based gender system - similar to areal mainstream, see Beeke §1

Type IV: No gender system - unclear whether present in the area at issue

> no further discussion here (see Güldemann, Di Garbo and Verkerk in prep.)

2.5 Pygmy languages

\+ four types of languages regarding noun classification

a) only Bantu: typical gender system without animate agreement and behavioral animacy
Bongwe (B303) (Walker 1937), Yaka (C104) (Thomas and Bahuchet 1991), Nkundo Twa (C61) (Hulstaert 1948), Foto (C611) (Hulstaert 1978), Jofe (C) (Hulstaert 1986)
> **outside the geographical area focused on here**

c) only Bantu: typical gender system but many non-human animates agree in gender 1/2
Gyeli (A801) (Grimm 2015: 128): with recurrent inflection change
Konda Twa (C61E) (Motingea M. 1994: 358-9): without inflection change
> **outside the geographical area focused on here**

d) both Non-Bantu and Bantu: bipartite animacy-based gender system
Baka (Mundu-Baka) (Djoupee 2017)
Kango and Sua 1 aka "Mbuti" (Bantu D311): no concrete linguistic documentation but so reported explicitly by Vorbichler (e.g., 1968: 412-5)

a) only Non-Bantu: no/few signs of animate gender and marked behavioral animacy
Efe (Mangbutu-Efe) (Smith 1938), Asua (Mangbetu-Asu) (Beltrame 1876-7)

> **all types are inconspicuous vis-à-vis their closest relative among farmer varieties**

3 Discussion

3.1 The areal pattern and its historical source

\+ northern rainforest-savannah transition in Central Africa with a clear bias toward animacy-based noun classification of different types

\- widely attested in all language families present in the area at issue

Language group / Feature	*Proto-Bantu*	Local Bantu	Ubangi	*Pre-shift "Pygmy"*	Gbayaic	Central Sudanic	Modern "Pygmy"
Behavioral animacy	NO	(YES)	YES	?	YES	(YES)	<
Animacy-based gender	NO	(YES)	YES	?	YES	NO	<

Table 5: Animacy-based noun classification in language groups of Central Africa

\+ animacy-based noun classification in Central Africa with hierarchy of strength:

\- certainly innovative in Bantu

\- not obviously entrenched deeply in Central Sudanic and modern "Pygmy" varieties

> does not exclude but certainly does not support Vorbichler's substrate hypothesis

\- widespread in Ubangi and Gbayaic with possibility of some proto-stage reconstructions

3.2 Diachrony of noun classification in Central Africa and beyond

+ basic hypothesis about diachronic typology of gender in Central Africa:

Stage A Behavioral noun classification targeting animate referents

Stage B Binary animacy-based pronominal gender

Stage C Possible semantic and structural system expansion

3.2.1 Behavioral noun classification

+ central role of animacy in grammatical domains other than gender as defined by Corbett (1991) etc. ~ "behavioral animacy"

- differential treatment of groups of nouns in connection with their semantic features is attested in a wide range of nominal constructions cross-linguistically and in the area at issue (cf. already Corbett 1991: 31-2):

a) number marking, before the background that number marking on nouns in the Non-Bantu languages of the area is generally rare

b) adpositional constructions

c) possessor-centered split in attributive possession (cf., e.g., Güldemann 1999)

d) distinction in interrogative pronouns 'who' vs. 'what'

> Eurocentric perspective implies ±human but see §2.3.4 for Ngbandi

e) reference tracking by means of overt pronouns and zero pronominalization

> **reference tracking as the source of grammatical gender**

3.2.2 Animacy-based gender and its elaboration

+ basic scenario of gender expansion in Central Africa (?and beyond)

(I) overt pronoun(s) for animate vs. Ø for inanimate nouns

(II) overt pronoun(s) for inanimate nouns

(III) sex-based elaboration of the marked animate gender

I Overt pronoun(s) for animate vs. Ø for inanimate

+ emergence of simple binary pronominal gender system from behavioral animacy by turning a statistical tendency in discourse to a categorical distinction in grammar

> scenario explains naturally why hardly any language has "canonical" phrasal gender agreement beyond animacy-based pronoun system

+ reiterates the already recognized role of grammatical "zero" in paradigmatic contrasts:

> Zero, or the absence of form, is a member of a set of (meaningful) linguistic elements (only) if
>
> a. there are other elements in the set;
>
> b. at least one of the other elements is not a zero element; and
>
> c. zero is related to each of the other elements in the set in the same way that each of the other elements is related to each of the other elements in the set. (Sanders 1988: 164-165)

> current findings bring together two so far separate strands of relevant research:
a) possible “grammaticalization of zero” (e.g., Bybee 1990)
b) central role of grammatical zero in anaphor and pronominalization (e.g., Givón 2017)
> apparently new scenario for the ultimate emergence of a gender system (cf., e.g., discussion in Corbett 1991, Luraghi 2011)

\+ in line with basic typological findings in that semantic distinction relates to general animacy scale: Human > Animal > Inanimate > Abstract
> two cross-linguistically recurrent choices where the most basic distinction of a gender system is made ~ called “macro-gender” (Nichols 1996):
(I) Non-human (subsuming all nouns to the right of Human) vs. **Human**
(II) Inanimate vs. **Animate** (subsuming Human + Animal + other culture-specific nouns)

\+ methodological challenge: all systems with inanimate zero pronominalization are hard to detect due to descriptions that are not alert to the possibility of a strong trend to or even a categorical distinction in pronominalization strategies

Mundu (East Mundu-Baka)

\+ no reference to differential treatment of nouns in Vallaeys (1991), however:
- inanimate reference by Ø, DEM, noun *’ɛ* ‘thing’ rather than ordinary pronouns (Santandrea 1969: 111)

(12)a. *ma* *mèrè* *Ø* *mɛ́-rá*
1SG make self-1SG
b. *ma* *mɛrɛ* *’ɛ* *me-ra*
1SG make thing self-1SG
c. *ma* *mɛrɛ* = *nɛ* *me-ra*
1SG make = DEM self-1SG
I did/made it myself. (Santandrea 1969: 111)

- 3SG pronouns *ngu/ah* indeed for animate referents in more extensive natural data of Jeffreys (1984)

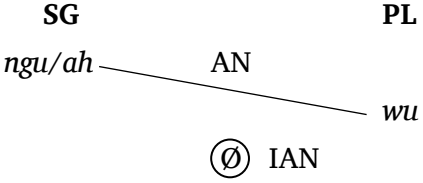


Figure 15: Animacy-based pronoun system of Mundu

Mayogo (East Mundu-Baka)

+ no reference to noun classification in Sawka (2001), however:
- simple pronoun system with two 3rd-person forms conveying a number distinction with no reference to any animacy-based gender distinction
- survey of the data do not furnish a single example for pronominal reference to inanimates while non-human animates are regularly resumed by 3rd-person pronouns
- term “(in)animate” in connection with an apparent grammatical distinction occurs twice

a) “inanimate pronoun” (Sawka 2001: 75): rather elements with a primarily deictic import that fill an obligatory clause-initial subject topic position not resuming in the context an animate antecedent

b) locative expressions with pronominal possessors, about which Sawka (2001: 89) writes:

> locative prepositions can undergo reduplication of the first syllable to form locative nouns. […] Reduplicated locative nouns are only used to replace inanimate beings as shown in (153) [= (13)a.] but not for animate beings as shown in (154) [= (13)b.].

(13)a. *sa* *ndula* > *sa-sa*
under tree REDUP-under
under the tree under it
b. *sa* ***anɨ*** **sa-sa*
under 3[AN.]SG
under him[/her] (Sawka 2001: 89)

> (13)a. reflects in fact zero pronominalization with inanimate referents in conjunction with a phenomenon of a certain class of nouns: *sa-Ø* for ‘under it (= tree)’ in (13)a. ungrammatical - only alternative in context is reduplication (cf. Sawka 2001: 51-4)

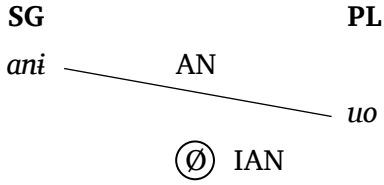


Figure 16: Animacy-based pronoun system of Mayogo (after Sawka 2001: 68)

Komo (Bira-Komo Bantu)

+ yet sparser information for Ituri Bantu language Komo
- complete loss of complex array of Bantu-typical agreement, brief reference to animacy-sensitive demonstratives by Thomas (1992: 5, 23), however:
- object-prefix indexation on the verb for 3rd-person referents with a three-way contrast (cf. Beeke)

(14)a. *ɓá-m-ɓɛ́ti*
3PL.SBJ-3SG.OBJ-hit:PFV
They hit him/her. [him/her = segmental object prefix *m*]

b. *ɓɛ́-ɓɛ́ti*
3PL.SBJ:3PL.OBJ-hit:PFV
They hit them. [them = vowel change on subject prefix]

c. *nɛ-ɓɛ́ti*
1SG.SBJ-hit:PFV
I hit it. [it = Ø]

d. *nɛ́-ɓɛ́ti*
1SG.SBJ:3PL.OBJ-hit:PFV
I hit them. [them = high tone overlaying subject prefix] (Thomas 1992: 77-8)

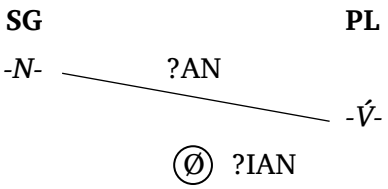


Figure 17: Apparent gendered object verb-prefix system of Komo (after Thomas 1992)

Gbayi (Ngbandic)

\+ available information in source even potentially misleading regarding the potentially subtle semantic difference of ±animate vs. ±human

\- Gbayi reported by Boyd (1988: 44) to have overt pronouns that are used restrictedly for human referents as opposed to alternative means for non-human nouns but in p.c. the author admits that the pronouns could in fact encode a ±animacy distinction

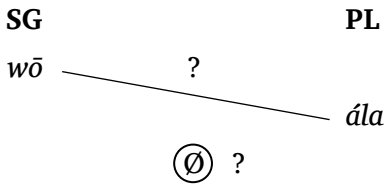


Figure 18: Pronoun system of Gbayi (after Boyd 1988: 44)

II Overt pronouns for inanimate

Figure 19: From covert to overt animacy-based pronoun system

+ sources for overt inanimate pronoun that were earlier facultative substitutes for zero:
    generic noun ‘thing’: Zandic (??)
    demonstrative(s): ?Dongo and other Mbaic
    other determiners: Eastern Gbayaic *ma* ‘certain (one)’ (Moñino 2010: 2)
+ often number-insensitive > see below
> accounts for the current systems in Indri, Gbayaic, Bandaic, Monzombo of Mundu-Baka

III Sex-based elaboration in the marked animate gender

+ elaboration of marked animate gender by further sex-based distinction with human nouns
> accounts for the current systems in Zandic, Ma (contact-induced?), and Mba

+ interesting question of whether this scenario is a more general cross-linguistic pattern:
- Ijoid in West Africa with animacy- and sex-based genders
- ?Australian: family internal elaboration of animacy-based to additional sex-based genders
- Nakh-Dagestanian in Caucasus with animacy- and sex-based genders and with elaborate agreement (cf. diverse examples in Corbett 1991)
- !!! Krongo (Kadu) with elaborate agreement and language-internal transition from semantic animacy-based system to a formal exclusively sex-based system without an animacy opposition (Reh 1985, Güldemann and Junglas in prep.)
- Indo-European today largely with formal sex-based systems but with a precursor of an animacy-based gender system (e.g., Luraghi 2011)

3.2.3 Gender conflated with number

+ recurrently number-insensitive pronouns without overt plural counterpart
> overt plural form for number-insensitive pronoun as form of system elaboration
> develops in line with animacy hierarchy: bias of number marking for nouns high on the animacy hierarchy (Smith-Stark 1974) and as reported above for the area at issue
a. through plural suppletive form - recurrent unremarkable option
b. through plural morphology

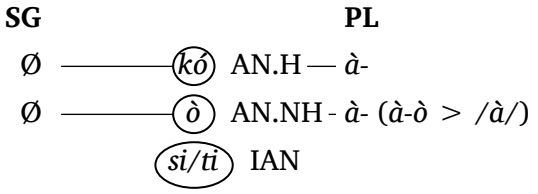


Figure 8a: Animacy-based pronoun system of Nzakara

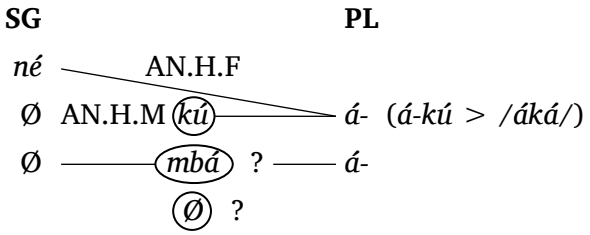


Figure 9a: Pronoun system of Barambu-Pambia

Ma

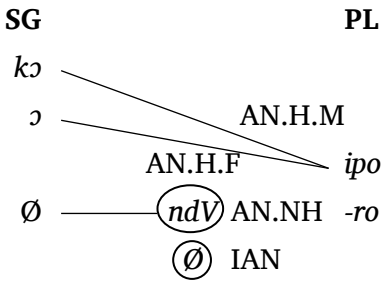


Figure 14a: Animacy-based pronoun system of Ma

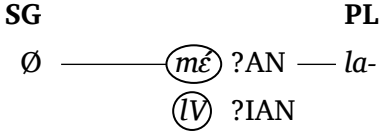


Figure 10a: Animacy-based pronoun system of Pre-Ndunga

\+ in Ngbandi, the basic macro-gender distinction still today only displays number marking in the marked animate gender exponents but it was arguably added on a gender marker that originally also lacked it

\> earlier noun classification boils down to a single pronoun for animates as opposed to zero for inanimates

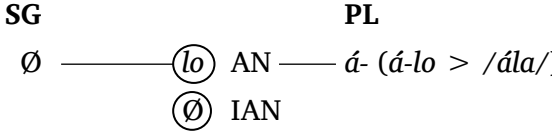


Figure 6a: The animacy-based pronoun system of Ngbandi