The gender and deriflection system of Miyobe[1]

Ines Fiedler, Benedikt Winkhart

1 Introduction

1.1 The language

+ small language spoken in Northern Benin and Togo in a mountainous region
- number of speakers: ca. 16.250 (Eberhard et al. 2019)
- name means: 'language of the mountain people' (Heyder, p.c.)

(1)	ti-yɔ́pɛ	'mountain'
	u-yɔ́pɛ	'person (sg)'
	pi-yɔ́pɛ	'person (pl)'
	ku-yɔ́pɛ	'place of the Piyobe'
	mɛ-yɔ́pɛ	'language of the Piyobe'

- speakers of Miyobe in Togo are at least bilingual with Kabiye (Gurunsi) (???source) – other neighboring languages are Ditammari, Nawdm and Yom (Oti-Volta), Lama and Lukpa (Gurunsi)

+ only scarcely documented
- de Lespinay (2004): lexical and some grammatical data collected in 1962
- Eneto (2004): account on nominal morphosyntax and word formation
- Lébikaza (2004): description of few aspects of the language
- Rongier (1996): short grammatical description with text and word list
- Pali (2011): grammatical description (PhP thesis)
- Urike Heyder (SIM Benin): working on a bible translation

+ for our analysis we use data provided by U. Heyder (personal communication), and other taken from Rongier (1996) and Pali (2011)
- Heyder describes the Miyobe spoken in Benin, Rongier and Pali the one spoken in Togo, but apparently there are no big dialectal differences

[1] This presentation is based on the analysis of the Miyobe gender system undertaken in the frame of the seminar on 'Gender in African languages', held by Tom Güldemann in 2017. The analysis was further developed within the project 'Nominal classification in Africa between gender and declension' (PI: Tom Güldemann), funded by the DFG (2017-2020). We are very grateful for this funding, and also want to express our gratitude to the students of the above-mentioned seminar and the members of the project, including Tom Güldemann, for fruitful discussions on the topic. Special thank we owe to Michael Schulze who helped us with the lexical comparison. We are especially indebted to Ulrike Heyder (SIM Benin) who answered our questions at any time we needed her help.

+ different orthographies used in sources that are not harmonized here (Heyder: practical orthography, Rongier: orthography follows basically IPA with some adjustions, Pali: IPA in phonetic description, practical orthography in rest of the text)

+ classification: Niger-Congo > Atlantic-Congo > ?Gur
- Naden (1989): established a group of Central Gur, including Oti-Volta, Koromfe, Grusi …, and claims for the others, incl. Miyobe:

> "The remaining languages listed below …, may well be no more closely related to Central Gur than to Guang or Togo Remnant, or than those to Central Gur or Volta-Comoe." (Naden 1989: 143)

+ there were several attempts to classify Miyobe

Gurma	(Person 1955, Takassi 1983, and adopted by Pali 2011)
Oti-Volta	(Manessy, p.c. in Naden 1989: 150, FN. 13)
Gurunsi	(???, see Pali 2011: 22)

+ as all these attempts were not based on substantial language data, Miehe et al. (2012) clearly points to the still controversial status of Miyobe within Gur as unclassified
+ Güldemann (2018: 197) in a revised account on the language states that Miyobe is undoubtedly Niger-Congo, while its affiliation with the Gur Family cannot be safely assumed

+ typological profile of Miyobe
- ATR harmony (Rongier 1996: 117, Pali: 2011: 69) no longer distinctive vocalic feature for high vowels ([i] and [ɪ], as well as [u] and [ʊ] are regarded as allophones of /i/ and /u/), but for mid vowels (/e/ and /ɛ/ and /o/ and /ɔ/)
- Rongier (1996: 117) establishes only voiceless plosives and fricatives that are realized voiced in intervocalic position (Heyder (1998 (Ms.): 1) points to the voiceless realization in all environments)
- tone language with two tonemes and downstep (Rongier 1996: 118), but Pali (2011: 150) describes it as having three tonemeswith lexical and grammatical function
- SOV word order, head-initial in nominal phrase, but rectum-regens order in associative constructions
- aspectual system, with aspect expressed b different verb forms; TAM marking by preverbal particles

+ goal of the talk
1. to describe the gender and deriflection system of Miyobe
2. to bring light into the problem of Miyobe's classification

1.2 A cross-linguistic approach to gender

(cf. Güldemann and Fiedler 2019)

+ gender = classification of noun (trigger) reflected by agreement on another word (target)
- but very often also other features are present in the agreement system, most often gender being conflated with number
> full understanding of gender system requires that all agreement features other than gender are analyzed exhaustively and "subtracted": **Gender = Sum of agreement features minus Number etc.**
+ agreement of target(s) with a nominal trigger determined by:
- semantic properties mostly of a noun lexeme as an abstract item in the lexicon
AND/OR
- formal properties of a concrete noun form in the grammatical agreement context
> 4 concepts (cf. Corbett 1991, 2006; Evans, Brown and Corbett 1998; Güldemann 2000):
a) GENDER (CLASS) = class of nouns in the lexicon - central goal of analysis
b) AGREEMENT CLASS (abbreviated here as AGR) = class of concrete nominal forms established on account of identical behavior across all agreement contexts
c) NOMINAL FORM CLASS (abbreviated here as NF): = class of concrete nominal forms established on account of identical properties in their own morphological form
d) DERIFLECTION (CLASS): = class of nouns in the lexicon with reference to nominal form marking (replaces the term 'declension' formerly used by us; deriflection = declension + derivation)

(2) Swahili (Tom Güldemann, personal knowledge)

a.	***m****-toto*	***yu****-le*	***m****-moja*	***a****-me-anguka*
	m(w)-child.**1**	**1**-D.DEM	**1**-one	**1**-PERF-fall
	'that one child has fallen'			
b.	***wa****-toto*	***wa****-le*	***wa****-wili*	***wa****-me-anguka*
	w(a)-child.**2**	**2**-D.DEM	**2**-two	**2**-PERF-fall
	'those two children have fallen'			

+ 2 subject noun forms *m.toto* 'child (SG)' vs. *wa.toto* 'children (PL)' with 3 agreement targets
a) 2 **agreement classes** with 2 sets of exponents: AGR1 *yu-/m-/a-* vs. AGR2 *wa-/wa-/wa-*
b) 1 **gender (class)** abstracted from number variation: pair AGR1/AGR2 for human nouns,
> some genders only with transnumeral (TN) nouns and hence just a single agreement class
c) 2 **nominal form classes** with the nominal prefix exponents NF *M(W)-* vs. NF *W(A)-*
d) 1 **deriflection (class)** abstracted from number variation: pair *M(W)-/W(A)-*

Relates to:	Concrete noun in a morpho-syntactic context = nominal form	Abstract noun in the lexicon = lexeme
Syntax	a. AGREEMENT CLASS (abbreviated as AGR and Arabic number)	b. GENDER
Morpho(pho-no)logy	c. NOMINAL FORM CLASS (abbreviated as NF)	d. DERIFLECTION

Table 1: The four concepts used for analyzing gender systems

2 The gender system of Miyobe

2.1 Nominal forms and morpho-syntax: Lexicalized and inflectional morphology

	NF	**Allo-morphs**	**Number**	**Examples**	**Semantics**
1	Ø		?TN	tele ‘télévision’	borrowings
			SG	Bawa ‘PN’	proper nouns
2	U-	u-, ʊ-	SG	u-yɔ́pɛ ‘Sola person’, u-sáà ‘father’, ù-nyɔ́nsɛ̀ ‘fitter’	humans, incl. kinship terms, gods
3	PI-	pi-, pɪ-	TN	pì-nyɔ́nsɛ̀ ‘fitting’	infinitives
			SG	pi-tɛ ‘medicine, drug’, pì-tɛ̀nɛ́ ‘palm tree’	plants (rare), fetish
			PL	pi-yɔ́pɛ ‘Sola persons’, pì-nyɔ́nsɛ̀ ‘fitters’	humans, incl. kinship terms, gods
4	KE-	kɛ-, ka-, kɔ-	SG	kà-yomɛ̀ ‘song’, ké-yɔ ‘house’, kɛ̀-wā́ ‘child’	small negligible things, unimportant persons, artefacts, physical environment, body parts, result nouns
5	SI-	si-, sɪ-, su-, sʊ-	TN	sí-nɔ̀ ‘yams’	?
			PL	sì-yomɛ̀ ‘songs’, sí-yɔ ‘houses’, sì-wā́ ‘children’	plural of KE-
6	KU-	ku-, kʊ-	TN	ku-yɔ́pɛ ‘land of the Sola’, kù-tóyì ‘heat’	abstract nouns, quality nouns, places
			SG	kú-yú ‘big head’, ku-léé ‘tree’, kʊ-tɛ̀nɛ́ ‘palm tree’, kù-nírì ‘devil’	big, important things, body parts, trees
7	A-	a-	TN	á-nyɔ ‘smoke’	
			PL	a-léé ‘trees’, à-lénbí	plural of PI-, KU-, TI-, I-, and ME-

				‘tongues’, á-sù ‘elephants’, à-tɛ́ ‘drugs’, a-yúi ‘grass’	
8	TI-	ti-, ʈi-	SG	ti-yɔ́pɛ ‘mountain of Sola’, tì-lénbí ‘tongue’, ʈì-kùmɛ ‘silk-cotton tree’	part-whole-relations, body parts, tall/high things
9	N-	n-, m-, ŋ-	TN	ǹ-nìrɛ̀ ‘thirst’, ǹ-kú ‘hunger’	abstract nouns
			SG	n-nyɛnɛ ‘sand’, n-kɔ́pí ‘louse’, n-ŋmánɛ̀ ‘clairvoyance’	singulative form of mass nouns, tiny objects
10	I-	i-, ɪ-	TN	ì-lùkɛ̀ ‘food’, ì-náà ‘cow(s)’, i-na ‘wood’	(domestic) animals, nature
			SG	í-sù ‘elephant’, í-pú ‘penis’	?
			PL	i-nyɛnɛ ‘sands’, i-kɔ́pí ‘lice’, i-nípɛɛ ‘eyes’,	plural form of mass nouns (NF N- and ME-)
11	ME-	mɛ-, mi-, mo-, mɔ-	TN	mi-ni ‘water’, mɛ-yɔ́pɛ ‘language’, mɛ́-nyúwɛ́ ‘knowledge’	liquids, feelings, uncountable things (i.e. language), abstract nouns
			SG	mɛ-nípɛɛ ‘eye’, mɛ-yúi ‘grass’	singulative form of mass nouns

Table 2: Nominal form classes of Miyobe

+11 nominal form classes found in Miyobe (including Ø)
- most of these classes have clear semantic content, i.e. they classify nouns into different sets according to semantic criteria (cf. also §2.4)
- eight of them are express different number values
- nominal forms PI- and I- are even used for all three number values, probably due to the merger of two nominal form classes (cf. §3)
- nominal forms are characteristic for Niger-Congo

+the vowel of the nominal exponent is subject to different assimilations in most cases not reflected in the orthography
- Rongier (1996: 117) points to the fact that all prefixes with front vowels have allomorphs with back vowels when the stem also has a back vowel (often only in the speech of young people)
- according to Pali (2011: 199) the vowel [ɛ] of the prefix is assimilated to the vowel of the subsequent syllable

(3) /kɛ-tẽ/ [kètẽ̄] ‘earth, soil’
/mɛ-ni/ [mínì] ‘water'
/mɛ-lo/ [mòlő] ‘toxin, venom’

2.1.3 Agreement

+ Miyobe shows a complex agreement system consisting of 11 agreement classes and numerous agreement targets (cf. Table 3)
- agreement is strongly morphologically assigned, i.e. the system is completely alliterative
- thus, all nouns agree, except 'television' (Heyder, p.c.) and a handful of other loan words exhibiting a Ø-prefix (proper nouns with Ø-prefix are assigned to AGR class 1 on semantic grounds)
- most AGR classes occur with different number values
- AGR class 11 is used for neutral agreement in the sense of Corbett (1991: 204f., 2006: 97f.), i.e. in cases where the gender of a trigger is unclear (Heyder (Ms.) and Pali (2011:187))
+ the modifier always follows the head noun within the noun phrase

(1) Narrow agreement within noun phrase

(4) Proximal demonstrative (other demonstratives are built by adding an adverbial)

a. á pì-kɛ̄yì **m̀-bí** ʈìyá
2SG PI-travail.2 DEM.PROX-2 abandonner[2]
'Abandonne ce travail!' (Pali 2011: 223)

b. mí-nì **ǹ-mɛ́**
ME-water.10 DEM.PROX-10
'this water' [cette eau] (Rongier1996: 119)

(5) Definite article
u-ŋmánɛ **uyɛ̃**
U-boy.1 1:DEF
'the boy' (the boy I'm talking about) [le garçon (dont je parle)] (Heyder Ms.: 4)

(6) Indefinite article
kɛ-léé **kɛ-nyinɛ**
KE-frog.3 3-IDEF
'a frog' [une certaine grenouille] (Pali 2014:43)

(7) Low numerals show agreement with the head noun which is given in plural (except for numeral 'one'). But even mass nouns can be counted, as in (b), even though Pali considers it to be singular. True for all of this kind, also for water?

[2] Glossing follows mainly the source, with some adaptations concerning our scheme of indicating agreement and nominal form, as well as the translation of grammatical elements. In verbal clauses we mention the perfective/imperfective distinction of the verb only where it was given in the source.

a. Countable noun + numeral

a-kulɛ	**a-páha**
A-turtle.6	6-eight

'eight turtles' [huit tortues] (Pali 2014: 37)

b. Mass noun + numeral:

mɛ̀-márɛ̀	**mɛ̀-kpū:lū**
ME-birth.10	10-five

'five births' [cinq naissances] (Pali 2011 : 258)

(8) Interrogative 'which'

pi-sòyi	**pí-yè**	yɛ́	yóm
PI-person	2-INTRR	IPFV	sing

'Which people are singing?' [Quelles personnes chantent-elles?] (Pali 2011: 247)

(9) Interrogative 'how many'

ì-sáŋ̀	**ì-lɛ́**	kɛ̀	áá	yâ:
I-mouton.9	9-combien	that	2SG.DEP	vendre

'Combien de moutons as-tu vendus?' (Pali 2011: 246)

(10) Possessive pronouns

- have the same form as anaphoric pronouns, but differ in tone
- differences in structure:
  with 1st and 2nd persons, the possessive comes after the nominal prefix (except 2PL)
  with 3rd persons, the possessive precedes the noun, incl. prefix
- differences in writing: Rongier (1995) writes all morphemes separately, Pali (2011) and Heyder (Ms.) indicate them as affixes of the nominal stem

a.

ƭí-nḯ	'dent'
ƭì-**né**-nì	'ma dent'
ƭì-**bɔ́**-nì	'ta dent'
ú-ɖì-nì	'sa dent'
pí-ɖì-nì	'leur dent'
	(Pali 2011: 71, 239)

b.

tí.tɛ́lɛ̀	'book'
tì **né** tɛ̀lɛ̀	'my book'
tì **bɔ́** tɛ̀lɛ̀	'your (sg.) book'
ù tì tɛ̀lɛ̀	'his book'
pí tí tɛ̀lɛ̀	'their book'
	(Rongier 1996: 120)

(11) Possessum pronouns follow the same structure but here the possessed noun is expressed by *-kɔ́*, AGR indicated by the NF marker

mɛ̀-níbɛ̀	'eye'
mɛ̀-**né**-kɔ́	'mine'
mɛ̀-**bɔ́**-kɔ́	'yours' (sg.)

ù-mɛ̀-kɔ́ ‘his, hers’ (Pali 2011: 240f.)

(12) Relative pronoun

pì-kpɛ́ɛ	**pɛ̃̀**[3]	kàm	ǹ	lè
PI-dough.2	2:REL	that:1SG	?N	eat:IPFV

‘the dough I am eating’ (Heyder Ms.: 19)

(2) Intrasentential agreement

(13) Dependent pronoun

nɛ́	là	(sì-núyìbì)	**á-sí**	yő
1SG:IPFV	vouloir	SI-oiseau.4	DEP.PRO-4	chanter

‘Je veux que les oiseaux chantent. / Je veux qu‘ils chantent.’ (Pali 2011: 234)

(14) Negative subject pronoun

pì-ŋmánɛ̀	**á-bì**	pì-nɔ́sì	félèyí
PI-young.man.2	NEG-2	PI-woman.2	give.dowry

‘The young men don’t give (a dowry) to the women.’ (Pali 2011: 496)

(15) When the subject is expressed by a proper name without any nominal marking, then verbal agreement of class 1 has to be overtly expressed

yó	kɛ̀	Báwá	**ù**	sé	wà
what	that	PN.1	1	yesterday	do

‘What did Bawa do yesterday?’ [Qu’est-ce que Bawa a fait hier?] (Rongier 1996: 124)

(16) Identificational marker

a.

tɔ-ɔ	**bí**
1PL-FOC	2:ID

‘{Qui parle?} Nous sommes ceux-là. /C‘est nous.’ (Pali 2011: 222)

b.

kɛ̀-bɔ́-wɑ̃́	yɛ́	pɔ́:lʊ.	kɛ́-yè
KE-POSS:2SG-enfant.3	IPFV	être.malade	3-quel
‘Ton enfant est malade.’			‘lequel?’

kɛ́	yɛ́	**kɛ́**
3:PRO	COP	3:ID

‘C‘est lui.’ (Pali 2011: 231)

[3] Heyder itself gives two different forms for the relative pronoun: with long vowel in the table, short and nasalized (as Pali 2011) in the example.

(17) Emphatic pronoun, here used in topic position, resumed by subject pronoun

ù-yɛ́,	ú	ì-sáŋ̀	má
1-EMPH	1:IPFV	I-mouton.9	avoir

'Lui, il a des moutons.' (Pali 2011: 231)

(18) Predicative adjectives: adjective has function of predicative noun and agrees with the noun it refers to

à-bɔ́-nɛ̂:ri	yɛ̀	**à-tòmɛ̄**	lɛ̀
A-POSS:2SG-chaussure.7	être	7-blanc	CERT

'Tes chaussures sont blanches.' (Pali 2011: 379) (lit. : Your shoes are the white ones.)

(3) Intersentential agreement

(19) Subject pronouns: no pronominal subject agreement when the subject is overtly expressed in the clause

a.

pì-tìsì	yɛ́	kàḿ		**pì**	yɛ́	kàḿ
PI-homme.2	IPFV	venir		2	IPFV	venir
'Les hommes viennent.'				'Ils viennent.' (Pali 2011: 191)		

b.

lì	tómɛ́
11	be.white

'Ça, c'est blanc.' (Rongier 1996: 125)

(20) Object pronouns

sì-lɔ́ŋ̀	yɛ	à-púsìrɛ́	cà:yī.	nɛ́	**sì**	kòbú	nɛ̀
SI-singe.4	IPFV	A-maïs.6	ravager	1SG:IPFV	4	tuer	CERT

'Les singes ravagent le (champ de) maïs. Je les tuerai.' (Pali 2011: 159)

(21) Indefinites can be used used without head noun, referring to a noun in the linguistic or extra-linguistic context

a.

ù-nyìnɛ̀	yɛ̀	kpù
1-IDEF	PFV	mourir

'Quelqu'un est mort.' (Pali 2011: 235)

b.

pì-nyìnɛ̀	yɛ́	ì-kàrɛ̀	má
2-IDEF	PFV	I-courage	avoir

'Certains sont courageux.' (Pali 2011: 235)

c. lí-nŋ́ínɛ̀ 'thing' (Rongier 196: 131) > 'something'

(4) No agreement

- there is no agreement between the head noun and the adjective neither in gender nor in number > NF marker functions here as marker of the whole noun phrase

(22)a. kɛ̀-wɑ́ fàlɛ̀
KE-child.6 new
'newly-born baby' (Pali 2014: 32f.)

b. *kɛ̀-wɑ́ kɛ̀-fàlɛ̀

- example (23a) shows a compound where the modifying noun is not marked for agreement (similar to other Gur languages), different to the associative construction in (23b)

(23)a. à-yɔ̂:bì nɛ̂:rì
A-chief.1 shoe.6
'the chiefs shoes' [les chaussures du chef] (Pali 2014: 370)

b. ù-yɔ̂:bì à-nɛ̂:ri
U-chief.1 6-shoe.6
'the shoes of the chief' [les chaussures du chef] (Pali 2014: 370)

2.1.4 Nominal form classes vs. agreement

+Miyobe shows a nearly perfect matching of agreement and nominal form classes
- only deviation regards nouns with Ø-prefix that has no counterpart in agreement system – proper nouns show agreement in AGR class 1, whereas borrowings have no agreement
- the agreement class 11 (li-) has no counterpart amongst the nominal forms – neutral agreement (Corbett 1991: 204f, 2006: 87f)

AGR	NF	Number
X	Ø	TN (borrowings)
X	Ø	SG (proper nouns only)
1	U-	SG
2	PI-	TN, SG, PL
3	KE-	SG
4	SI-	TN, PL
5	KU-	TN, SG
6	A-	TN, PL
7	TI-	SG
8	N-	TN, SG
9	I-	TN, SG, PL
10	ME-	TN, SG
11	X	TN

Note: X = no independent counterpart

Figure 1: Mapping of agreement and noun form classes in Miyobe

2.2 Nouns and the lexicon

2.2.1 Deriflection

= declension + derivation

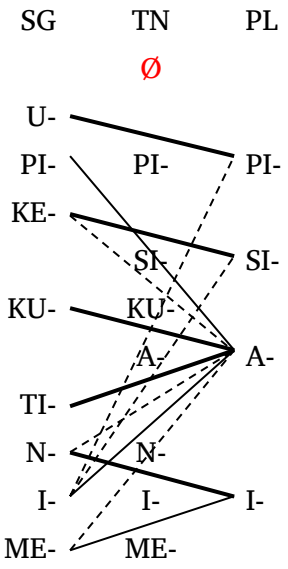

Figure 2: Deriflection system of Miyobe

crossed system:
5 paired deriflections
3 paired deriflections not in literature (I-/A-; PI-/A-, ME-/I-)
5 inquorate paired deriflections (N-/A-, I-/SI-, ME-/A-, KE-/A-, I-/PI-)
8 single deriflection, incl. 2 inquorate ones (A-, SI-)

2.2.2 Gender

= classification of noun reflected by agreement

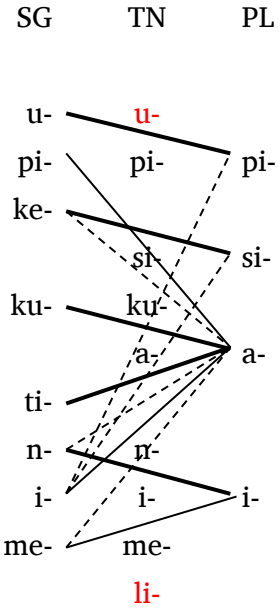

Figure 3: Gender system of Miyobe

crossed system:
5 paired genders
3 paired genders not in literature (i-/a-; pi-/a-, me-/i-)
5 inquorate paired genders (n-/a-, i-/si-, me-/a-, ke-/a-, i-/pi-)
9 single genders (+u-, li-, but without Ø), incl. 2 inquorate ones (a-, si-)

2.2.3 Deriflection vs. gender: summary

+ deriflections/genders marked by thick line indicate those that are acknowledged by former descriptions (Rongier 1996, Pali 2011, Heyder Ms.) as basic
- deriflections/genders marked by a thin line are productive but have not been noted in previous descriptions
- deriflections/genders marked by broken lines are existing as well, but only exemplified by some few examples (see term ‘inquorate’ as coined by Corbett (1991)) – these were left out by former descriptions

> […], inquorate genders are those postulated on the basis of an insufficient number of nouns, which should instead be lexically marked as exceptions. (Corbett 1991: 170)

+ Table 4 gives an overview of all deriflections/genders with examples

	DERF/GEND	Example SG	Example PL	Gloss	Reference
Productive + described	***U-/PI-***	ù-sáː	pì-sáː	father	Rongier 1996:131
	KE-/SI-	kɛ̀-wā́	si-wā́	child	Rongier 1996:131
	KU-/A-	kú-fɔ̀ŋ̀	á-fɔ̀ŋ̀	pork	Rongier 1996:131
	TI-/A-	ʈí-yɔ́bɛ̀	à-yɔ́bɛ̀	mountain	Rongier 1996:131
	N-/I-	ḿ-mùlɛ́	í-mùlɛ̀	ant	Rongier 1996:131
Productive + not described	***I-/A-***	ì-náà	à-náà	cow	Rongier 1996: 139
	PI-/A-	pì-kɛ̀yì	à-kɛ̀yì	workplace	Rongier 1996: 122
	ME-/I-	mɛ-nípɛɛ	i-nípɛɛ	eye	Heyder p.c.
Inquorate (not described)	***N-/A***	ǹ-kpíntòmɛ́	à-kpíntòmɛ́	fish	Rongier 1996: 137
	I-/SI-	i-poi	si-poi	goat	Heyder p.c.
	ME-/A-	mɛ̀-nìsèbì	à-nìsèbì	fingernail	Rongier 1996:136
	KE-/A-	kɛ̀-pàlabi	à-pàlabi	ring	Rongier1996: 129
	I-/PI-	ì-nyɔ́nsɛ̀	pì-nyɔ́nsɛ̀	sacrifice	Rongier 1996: 138

Table 4: Overview of paired deriflections/genders in Miyobe

+several class pairings have been found in the lexical data that is not reflected in the analyses of the cited works

- this is true for inquorate as well as several productive deriflection/gender pairings

+Table 5 below gives an overview of all single deriflections/genders

	DERF	GEND	Example	Gloss	Reference
Single + productive	***Ø***	***--***	tele	television	Heyder p.c
	Ø	***u-***	Báwá	(proper name)	Rongier 1996: 124
	PI-	***pi-***	pì-nyɔ́nsɛ̀	fitting	Rongier 1996: 138
	KU-	***ku-***	kù-yɔ̀bɛ̀	land of the Piyobe	Heyder p.c., Rongier 1996: 139
	N-	***n-***	ń-kpɔ́	the dead	Rongier 1996: 135
	I-	***i-***	ì-lùkɛ̀	food	Rongier 1996: 135
	ME-	***me-***	mí-nì	water	Heyder p.c.
	--	***li-***	X	-	-
Single + inquorate	***A-***	***a-***	á-nyɔ	smoke	Heyder p.c
	SI-	***si-***	sí-nɔ̀	yams	Rongier 1996: 134

Table 5: Overview of single deriflections/genders in Miyobe

+ both figures are nearly identical due to the perfect matching of AGR classes and NF classes
- only differences: NF Ø as single deriflection and AGR classes 11 (li-) as neutral agreement form without counterpart in the other system, AGR class 1 (u-) as single gender only
- both systems can be characterised as crossed according to Corbett's typology (1991: 155-157) when adopting Heine's (1982) classification
- when taking out the inquorate deriflections/genders added by us, the systems are convergent in one case: the two singular classes TI- and KU- both pair with plural class A- in deriflection and gender system
- but the inquorate deriflections/genders provide evidence that NF A- and AGR class a- possibly take the role of a default class for plural marking in both systems

+ whereas Rongier (1996), Heyder (Ms.) and Pali (2011) established a deriflection and gender I-/I- which consists mainly of domestic animals only occurring in one NF and AGR class we regard this as reflecting a single gender i- and single deriflection I-, which might go back to a use as generic form (?)

(24) i-náa ‘cow(s)’
i-sáŋ ‘sheep (sg/pl)’
i-wáa ‘snake(s)’ (Heyder p.c.)

- some of these nouns know another plural in A- which probably has to be regarded as innovation
- Rongier (1996) on the one hand and Heyder (Ms.) and Pali (2011) on the other hand contradict each other here (cf. examples (24) and (25)

(25) ì-náà / à-náà ‘cow(s)’
ì-wáà / à-wáà ‘snake(s)' (Rongier 1996: 131)

+ there is not always a one-to-one correspondence of SG and PL – some lexemes have several plural forms (cf. 26), whereas others have several singular forms (cf. 27)
> the number-insensitivity of NF I- and its attestation as plural only with singulatives allows the occurrence of something like ‘triple’ deriflections in Miyobe

(26) kù-nḯ ‘tooth’
i-nḯ ‘collectivity of teeth’ [l’ensemble des dents] (Heyder 2018, p.c.)
a-nḯ ‘(single) teeth’

+ besides this, we also find alternations in the singular for some nouns

(27) kù-sú
à-sú ‘flute(s)’ (Rongier1996: 133)
tì-sú

(same combination of nominal forms given for ‘tooth’ (Rongier 1996: 132))

2.3 Deriflection vs. gender

Deriflections	Corresponding AGR classes	Gender	Semantics
Ø	1	XXI	proper names
U-/PI-	1/2	I	humans
PI-	2	XX	verbal nouns
PI-/A-	2/6	XI	deverbal nouns, plants
KE-/SI-	3/4	II	small things
KE-/A-	3/6	XIV	? (only 2 ex.)
SI-	4	XVIII	‘yams’ (only 1 ex.)
KU-	5	IV	abstract nouns, derived places
KU-/A-	5/6	III	big, important things, body parts, trees, locations
A-	6	XVI	ˈsmokeˈ (only 1 ex.)
TI-/A-	7/6	V	part-whole relations, body parts, fruits, long, tall things
N-/A-	8/6	VII	mass nouns (only 1 ex.)
N-/I-	8/9	VI	mass nouns
N-	8	XVII	abstract deverbal nouns (only 3 ex.)
I-/A-	9/6	VIII	animals
I-/SI-	9/4	X	‘goat’ (only 1 ex.)
I-	9	IX	domestic animals, abstract nouns
I-/PI-	9/2	XV	ˈsacrificeˈ (only 1 ex.)
ME-	10	XII	liquids, uncountable things
ME-/A-	10/6	XIII	body parts, mass nouns (only 1 ex.)
ME-/I-	10/9	XXII	body parts, mass nouns (only 1 ex.)
--	11	XIX	derived nouns without reference
Ø	?no agreement	--	loan words (Heyder, p.c.)

Table 6: Mapping of genders and deriflections in Miyobe

Gender		Deriflection
--		Ø
XXI	———	Ø
I	———	U-/PI-
XX	———	PI-
XI	———	PI-/A-
II	———	KE-/SI-
XVIII	———	SI-
XIV	———	KE-/A-
III	———	KU-/A-
IV	———	KU-
V	———	TI-/A-
XVI	———	A-
VI	———	N-/I-
VII	———	N-/A-
XVII	———	N-
VIII	———	I-/A-
IX	———	I-
X	———	I-/SI-
XV	———	I-/PI-
XII	———	ME-
XIII	———	ME-/A-
XXII	———	ME-/I-
XIX		--

Figure 4: Mapping of genders and deriflections in Miyobe

+ note: no agreement for zero nouns when loan words and
no NF LI-
+ further description of mapping

2.4 Semantic basis of the Miyobe deriflection and gender system

+robust semantic core of individual deriflections and genders
- this is reflected in the strong derivational function NF markers (and AGR markers) have
- humans can be found only in U-/PI- (adults, kins and agent nouns, pejoratives) and KE-/SI- (child, dead person) deriflection and gender classes
- mass nouns are in most cases individualized, at least in Heyder (p.c.) - Rongier gives sometimes another plural form in a-

Deri-flection	Basic semantics	Derivational semantics	Example	Translation of example	Source or related

					lexeme
U-/PI-	humans, incl. kinship terms, gods	agent nouns	ù-nyɔ́nsɛ̀ /pì-nyɔ́nsɛ̀	‘fitter’	> nyɔ́nsɛ̀ ‘fit’
		person of ethnic group	u-yɔ́pɛ / pì-yɔ́pɛ̀	‘Sola person’	
PI-/A-	plants (rare)	places	pì-kɛ̀yì /à-kɛ̀yi	working place, factory	kɛ̀yì ‘work’
KE-/SI-	small negligible things, unimportant persons, artefacts, physical environment, body parts, abstract nouns	diminutives	ké-yú /sí-yú	‘small head, face’	tí-yú / á-yú ‘head’
		result nominalization	kà-yomɛ̀ /sì-	‘song, singing’	yómɛ̀ ‘sing’
		places of actions	kɛ̀-fînɛ̀	‘place for lying down’	fînɛ̀ ‘lie down’
		agent nouns	kɛ̀-có	cutter	có ‘cut’
KU-/A-	big, important things, body parts, trees, abstract nouns	augmentatives	kú-yú /á-	‘big head’	tí-yú / á-yú ‘head’
		quality nouns	kù-tóyì /-	‘heat’	tòyì ‘warm’
		area	kù-yɔ̀pɛ̀	‘place of the Sola people’	
		time, moment (of action)	kú-kpáá	‘the moment of harvest’	kpáá ‘harvest’
TI-/A-	part-whole-relations, body parts, tall/high things	fruits, seed	ƭì-tɛ̀nɛ́	bunch of palm kernels	pì-tɛ̀nɛ́ ‘palm tree’
N-/(I-)	mass nouns, tiny objects	abstract nouns	ǹ-nìrɛ̀	‘thirst’	nirɛ ‘drink’
			ń-kpɔ́	‘death’	kpí ‘die’
I-	(domestic) animals, nature	abstract nouns	ì-lùkɛ̀	‘food’	lúkɛ̀ ‘eat’
ME-	liquids, feelings, uncountable things (i.e. language)	abstract nouns	mɛ́-nyúwɛ́	‘kowledge’	nyúwɛ́ ‘know’
		action nouns	mɛ̀-lùkɛ̀	‘action of eating’	lúkɛ̀ ‘eat’
PI-	?	infinitives	pì-nyɔ́nsɛ̀	‘fitting’	
		action nouns	pì-nyɔ́nsɛ̀	‘sacrifice (pl)’ (Rongier, p. 137f.)	

Table 7: Semantic content of basic deriflections (and genders) in Miyobe

+ loan words seem to follow these semantic concepts and therefore are assigned to different nominal form classes (cf. Table 8)

NF	Semantics	Example	Meaning	Possible source
Ø	??	Ø-lahari	Sunday	Arabic
		Ø-television	film	English
U-/PI-	humans	ù-lɔ́kùrà / pì-lɔ́kùrà	doctor	French
		ù-sɔ́:ɟà / pì-sɔ́:ɟà	soldier	English
KE-/SI-	small things	ké-pɛ̄lɛ́ntɛ̀ / si-pɛ̄lɛ́ntɛ̀	plate	English
KU-/A-	places	kú-lɔ́kùrà / ?	hospital	French
	big things?	kù-bógóɖì / à-bógóɖì	bucket	English
	big things? wood?	kù-tábìlì / à-tábìlì	table	English
TI-/A-	tall things	ʈì-kpábílá / à-kpábílá	bottle	cf. Foodo kpaliba, i-
	fruits	tí-múrì / á-múrì	orange	cf. Hausa lemo
		tí-mínàŋ / á-mínàŋ	banana	cf. Yom amina-ŋʊ
I-	?	í-sūkūrì	school	English

Table 8: Loanword assignment in Miyobe

3 Discussion

3.1 Summary of the system

+ Rongier (1996: 118) and Heyder (Ms.: 1) distinguish seven genders and deriflections:

6 paired deriflections/genders: U-/PI-, KE-/SI-, TI-/A-, KU-/A-, N-/I-, I-/I-

1 single deriflection/gender: ME-

- both do not distinguish between gender and deriflection
- both overlook paired and single genders and deriflections that occur only rarely

→ system more complex than in descriptions

+ the Miyobe deriflection and gender system is extremely transparent

- by its complete alliterative agreement: NF markers don't show any sign of erosion, consonant loss etc., and are identical to the subject pronouns
- by providing a robust semantic basis for nominal classification (as seen with derivations and loan words)

+ on the other hand, NF exponents are not always present in some constructions, i.e. the nominal stem can be used without NF marker or the latter is detached from the stem
1. in possessive constructions with pronouns for 1st and 2nd persons, the possessor pronoun appears between NF marker and nominal stem (in 2nd plural it even occurs twice)

(28)		tì	nɛ́	tɛ̀lɛ̀	‘my book’
		NF	POSSR	book	
	nɔ́	tì	nɛ́	tɛ̀lɛ̀	‘your (pl.) book’ (Rongier 1996: 120)
	POSSR	NF	POSSR	book	

2. adjectives in attributive function do not agree with the head noun of the whole noun phrase

(29)	kɛ́-yɔ̀	kpùrɛ̀	‘ancienne maison’
	sí-yɔ̀	kpùrɛ̀	‘anciennes maisons’ (Pali 2011: 370)
	NF-stem	ADJ	
	KE-house.3	old	

3. in compounds, the modifying noun (N2) is used without NF marker, the whole construction belonging then to the deriflection of the head noun (N1) (as in other Gur languages)

(30)	à-yɔ́:bì-nɛ́:rì	‘les chaussures du chef’ (Pali 2011: 370)
	NF_1-$stem_2$-$stem_1$	
	A(6)-chief.1-shoe.6	

cf.	à-nɛ́:rì	‘shoes.6’
	ù-yɔ̂:bì	‘chief.1’

4. loanwords with Ø-prefix do not agree (Heyder, p.c.)
(31) example?

5. most prefixes of Miyobe occur with more than one number value > number-insensitivity of some NF and AGR classes

5.1 NF *PI-* in Miyobe occurs with three different number values and therefore in different deriflections/genders:

PI- as plural of nouns referring to humans	(U-/PI-)
PI- as transnumeral expresses verbal nouns	(PI-)
PI- as singular form of plants and some trees (rare)	(PI-/A-)

→ merger of formerly two different NF classes, namely *BA (plural of humans) and *BU
- *BU as verbal noun marker is attested in some Bantu languages (Meussen 1967: 111, regarding this as innovation), in Bainunk-Kobiana-Kasanga (Atlantic, Merrill, Ms.), in many

Oti-Volta languages, in Baatonum, in some Senufo languages and also in Foodo (as only Guang language)
- Byali (Oti-Volta) has an infinitive marker bə-, which, following Reineke (2012a: 86), does not belong to the deriflection system of the language, but is part of the verbal system; verbal nouns are indicated by suffix –M in Byali (which is not a reflex of *BU-)

5.2 NF *I-* occurs as well with three different number values and therefore in different deriflections/genders:

I- as plural of mass nouns	(N-/I-, ME-/I-)
I- as singular of animals	(I-/A-)
I- as transnumeral indicating animals	(I-)

→ possibly merger of classes 9 (*ì) and 10 (*í) of Proto-Benue-Congo (de Wolf 1971: 52) into one transnumeral NF and AGR class, having lost the tonal differentiation
→ or innovation of that transnumeral class
→ perhaps merger of plural classes 4 (*i) and 10 (*í) of Proto-Benue-Congo (cf. Miehe et al. 2012: 20) for expressing the plural of animals occurring in swarms and other mass nouns in deriflections/genders (N-/I-, ME-/I-)
- for some animals, NF I- pairs with plural NF A- - this has probably to be treated as innovation

> the NF markers in Miyobe function as markers for the whole construction, i.e. have to be considered as phrasal markers
> NF markers have to be treated rather as proclitica than as prefixes
> hint for their basic function as classifying the nominal system of Miyobe (cf. Güldemann & Merrill, in preparation)
> ?origin as classifiers or as later development out of demonstratives in the sense of Greenberg (1977) or as new development out of the pronominal system (cf. Ditammari)

3.2 Comparison with other Gur languages

+ Miyobe is unique within Gur in that it only uses prefixes for nominal form marking whereas for proto-Gur we had to assume suffixes as old, inherited form (Greenberg 1977: 99)
- reflex of former suffixes in stems ending in long vowels?

(32)	ti-fíí /à-fíí	‘navel
	kù-sáá / à-sáá	‘neck’
	n-taai /i-taai	‘sand’
	kù-léé / à-léé	‘tree’
	ì-wáà	‘snake(s)’

- a similar observation can be made for Akasele

(33) dí-jó-ò / á-jó ‘tail’ (Winkelmann 2012: 414)

- but at least part of the cases can be traced back to consonants or vowels belonging to the stem

(34)	ti-nɔ́ɔ /a-nɔ́ɔ	‘mouth’	cf. Proto-Bantu -nua, and Proto-Benue-Congo-–nuŋa
	tì-táá /à-táá	‘thigh’	cf. Proto-Benue-Congo -tak
	ì-náà	‘cow(s)’	cf. Proto-Benue-Congo -nak

> no reflex of suffixes analyzable

\+ Miyobe shares with other Gur languages (Ditammari – Oti-Volta, Akasele – Gurma, Kabiye – Gurunsi; Foodo – Guang) a number of deriflections and genders
- e.g. U/BA, DI/A, KA/SI, MA, KU/divers
- a neutral (‘thing’) form (mainly in agreement) is attested in Miyobe and Ditammari (and Foodo)
- deriflection BU/A is attested only in rudimentary form (leaving aside derivations) in Miyobe, and can also be found in Akasele, Ditammari, and Syer (Senufo)
- on the other hand, Miyobe also shows some peculiarities (deriflection I- for animals) that are not found in other Gur languages, but might be old NC heritage

> neither of these shared deriflections is conclusive for assuming a closer relationship to one or the other Gur subgroup or to Guang

> rather, these are unspecific similarities being shared across the whole Niger-Congo group

→ the comparison of deriflections just supports the observation that Miyobe is a Niger-Congo language, but does not allow to place it into one concrete genealogical pool of it

\+ lexical comparison

> “The only data available is a 100-word-list collected by John Callow, of which Manessy (personal communication) says ‘C’est surement une langue Oti-Volta’, while to my eye up to a quarter of the roots are not even Gur!” (Naden 1989: 150, FN. 13)

\+ based on this claim, we have undertaken a very rough comparison of the 80-word-list established for our project – as we are not going beyond these 80 words, results can only be very preliminary
- included are languages of assumed genealogical relationship spoken in the vicinity of Miyobe, namely the three Central Gur languages (Kabiye, Ditammari, and Akasele) and Foodo (Guang; which also shows pre- and suffixes, and is also spoken in the region)

+Table 9 shows the number of cognate forms that Miyobe shares with Ditammari, Akasele, Kabiye, and Foodo respectively

	Ditammari	**Akasele**	**Kabiye**	**Foodo**
number of cognates (Total = 80)	60	45	46	41

Table 9: Cognates of Miyobe with some selected Gur and Guang languages

+Table 10 shows a selection from the consulted comparative data

No.	**Lexeme**	**Miyobe**	**Ditammari**	**Akasele**	**Kabiye**	**Foodo**
2	mouth	-nɔ́ɔ	-nùù-	-mõ-	nɔ́-	-nɔ́-
11	tooth	-nḯ	-nìn-	-ńi-	ké-	-nyí-
14	foot	-nà	-naacɛ̀-	-nata-	nankpáń-	-yáá-
37	cow	-náà	-nàà-	-ná-	naa-	-náá-
49	seed	-pipi	-bii-	-bí-	pí-	-bí-
64	ground	-tẽ	-ten-	-te-	tɛ́-	-sí-
76	name	-nyíri	-yètì-	-yí-	hí-	-nyíń-

Table 10: Lexical comparative data in some selected Gur and Guang languages

+ the numbers do not show any clear affiliation of Miyobe
- Ditammari shows a slightly higher number of cognates with Miyobe
- this cannot be explained by closer vicinity between the two speech communities, as Kabiye is as close as Ditammari and second language of Miyobe speakers
- the results for Akasele, Kabiye, and Foodo are almost identical
> Miyobe as Oti-Volt-East?
- but numbers are not conclusive as many lexical cognates are simply inherited Niger-Congo roots

→ Our lexical comparison gives yet another reason for being cautious with a classification of Miyobe

3.3 Conclusion

+Miyobe has 11 nominal forms with fairly clear semantic content
- 8 of which express different / several number values
+ Miyobe has also 11 agreement classes which are very alliterative and strongly morphologically assigned.
- many of them express different / several number values similar to the NF
+a mapping of nominal forms and agreement classes result in a nearly one-to-one match
- exceptions are found with Ø-marked lexemes and the neutral agreement class li-

+ Miyobe shows 22 genders which are mapped with 21 deriflections – nearly a one-to-one correspondence similar to that between NF and AGR
- exceptions are found with Ø-marked lexemes and nouns without referents (LI-)
- a fair number of the presented genders/deriflections have not been mentioned in the literature before
+ the diachronic status of Miyobe nominal forms as former classifiers remains to debate
+ the curiosity of prefixed NFs rather than Gur-typical suffixes remains as well
+ In conclusion, Miyobe is an extraordinarily neatly organized language in terms of agreement and mapping of agreement and NFs
+ our comparison to other Gur-languages shows that a clear genealogical classification is not possible – this holds true on grammatical as well as lexical grounds.

Abbreviations

AGR	Agreement(class)	NF	Nominal form (class)
CERT	Certificatif (Certitude)	NUM	Numeral
COP	Copula	OBJ	Object
DEF	Definite	PFV	Perfective
DEM	Demonstrative	PL	Plural
DEP	Dependent	PN	Proper name
EMPH	Emphatic pronoun	POSSR	Possessor
FOC	Focus marker	PRO	Pronoun
ID	Identificational marker	PROX	Proximal
IDEF	Indefinite	REL	Relative pronoun
INTRR	Interrogative	SBJ	Subject
IPFV	Imperfective	SG	Singular
NEG	Negative	TN	Transnumeral

Arabic numbers (e.g. 2) indicate class marking on agreement target

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AGR	Number	SBJ/ OBJ	ID	EMPH	DEF	REL	IDEF	which?	NUM	how many?	PRO. NEG	PRO. DEP	DEM
1	TN, SG	ù	lò	u-yɛ́	u-yɛ̀	uyɛ̀ɛ	ù-nyìnɛ̀	ú-yè	u-		ú-ù	ú-ú	ǹ-kó
2	TN, SG, PL	pì	pì	pɛ́	pɛ̀	pɛ̀ɛ	pì-nyìnɛ̀	pí-yè	pi-	pì-lɛ́	á-pì	á-pí	m̀-pí
3	SG	kɛ̀	kɛ̀	kɛ́	kɛ̀	kɛ̀ɛ	kɛ̀-nyìnɛ̀	kɛ́-yè	kɛ-		á-kɛ̀	á-kɛ́	ǹ-kɛ́
4	PL	sì	sì	sɛ́	sɛ̀	sɛ̀ɛ	sì-nyìnɛ̀	sí-yè	si-	sì-lɛ́	á-sì	á-sí	ǹ-sí
5	TN, SG	kù	kù	kpɛ́	kpɛ̀	kpɛ̀ɛ	kù-nyìnɛ̀	kú-yè	kʊ		á-kù	á-kú	ǹ-kú
6	TN, PL	à	nyɛ̀	nyɛ́	nyɛ̀	nyɛ̀ɛ	à-nyìnɛ̀	á-yè	a-	à-lɛ́	á-à	á-á	ǹ-nyɛ́
7	TN, SG	tì	tì	tɛ́	tɛ̀	tɛ̀ɛ	tì-nyìnɛ̀	tí-yè	tɪ-		á-rì	á-rí	ǹ-tí
8	TN, SG	ŋ̀	mù	mmɛ́	mmɛ̀	mmɛ̀ɛ	ǹ-nyìnɛ̀	ń-yè	n-	ǹ/m-lɛ́	ńǹ/ḿm̀	ńń/ḿḿ	m̀-mú
9	TN, SG, PL	ì	nyì	i-yɛ́	i-yɛ̀	iyɛ̀ɛ	ì-nyìnɛ̀	í-yè	i-	ì-lɛ́	í-ì	í-í	ǹ-nyí
10	TN, SG	mɛ̀	mɛ̀	mɛ́	mɛ̀	mɛ̀ɛ	mɛ̀-nyìnɛ̀	mɛ́-yè	mɛ-	mɛ̀-lɛ́	á-mɛ̀	á-mɛ́	m̀-mɛ́
11	TN	lì/ai	nì	lɛ́	lɛ̀	lɛ̀ɛ	lì-nyìnɛ̀	lí-yè	--	lì-lɛ́	á-ì	á-í	ǹ-ní

Table 3: Agreement classes of Miyobe