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The two concurrent gender systems of Mba

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Abstract: This paper describes the gender system of the Ubangi language Mba, which can be characterized by the co-existence of two different classification systems. The ‘formal agreement’ system is tightly bound with the nominal deriflection system, while the ‘semantic agreement’ system, by contrast, emanates from a tripartite distinction in the language made between masculine humans, other animates, and inanimates. Whereas formal agreement is manifested on different elements that modify the head noun, the semantic agreement system operates in the pronominal domain, mostly outside the noun phrase.

Keywords: animate agreement; concurrent gender systems; Mbaic

1 Introduction

Mba(-ne) is one of the four languages forming the Mbaic family, besides Ndunga(-le), Dongo(-ko), and (a-)Ma(-lo). Genealogically, the Mbaic family is classified under the Ubangi pool within the larger Niger-Congo family (Güldemann 2018: 213–219). As already done by Carrington (1949), we call the language simply Mba and leave out the suffix *-ne*, as it merely indicates language names; an alternate name in the literature is (Ki)/(Ba)manga. The language is spoken by about 36.000 speakers (Eberhard et al. 2019) in the Democratic Republic of the Congo, north of Kisangani around the town of Bengamisa. Like the other Mbaic languages, Mba is a minority language surrounded by a number of others, such as Kumu and Mangbetu, Zande (Ubangi) and the vehicular languages Lingala, Swahili, and French (cf. Pasch 1986: 18).

While purportedly mentioned already by Stanley, Stapleton provided the first linguistic data, as published by Johnston (1908: 845–851). Carrington (1949) is the first grammar sketch, also describing the nominal classification system at issue here.

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Mba has a seven-vowel system featuring /i, e, ε, a, ɔ, o, u/, whereby a system of vowel harmony causes the assimilation of vowels of bound morphemes to the root vowel (Bokula 1971: 54; Carrington 1949: 92). All seven vowels have a nasalized counterpart and vowel length is not distinctive. There are two distinct tone levels, high versus low (Carrington 1949: 92). Bokula (1971: 54) also mentions a mid-tone, which is said to occur only rarely in speech but is considered here.¹ Mba shows a fairly simple consonant system but includes such rare phonemes as implosives and labial velars, which are characteristic for the wider geographical area.

The basic clause order is S-V-O-Other, with a variant structure being S-AUX-O-V-Other (Güldemann 2018: 152). Within the noun phrase, the nominal head can occupy the initial or final position (see Section 2.1.2). Mbaic languages are special within Ubangi as they display a noun class system of the Niger-Congo type, reflected by both suffixes on the noun and agreement on nominal dependents. A typologically rare feature of three of the four languages is that they possess a second classification system and thus provide potential instances of so-called concurrent noun classification (see Fedden and Corbett 2017). This holds for Mba, as described in more detail in this paper.

Carrington's sketch, several articles by Bokula (1971, 1982, 1983), and the data in the comparative work by Pasch (1986) provide the basis for the present study. Most important for our investigation is Pasch (1986) whose overview over the nominal domain allows extended insights into the gender systems of the four Mbaic languages. In line with the approach by Güldemann and Fiedler (2019) applied here, Pasch differentiates between the morphological marking on the noun, called here nominal form (classes), and 'concord', called here agreement (classes). In this paper, we undertake a strictly synchronic Mba-specific analysis and present aspects of the system that are not clearly recoverable from Pasch (1986).

2 Description

2.1 The morphosyntax of nominal forms

2.1.1 Nominal form (NF) classes

Mba nominal forms are in general characterized by suffixes, but the language also has two prefixes. Segmental nominal form classes are represented here in capitals

¹ Tone marking in this paper deviates from the one in the sources, as all tones are marked in a unified fashion, i.e. low tone /ˊ/, high /ˋ/ and mid /ˊˋ/.

by their abstract exponent. There is also a class of nouns that are best analyzed as lacking any morphology, labeled henceforth the \emptyset class and left unmarked in examples. Finally, we have to consider reduplication as a means for plural marking, usually with monosyllabic noun roots and in association with one of the plural suffixes.

We first deal with the nominal prefixes. One has the form *A-* (with allomorphs *a-* and *ə-*) and lacks a transparent function, as it occurs randomly on several nouns of different semantics and form but disappears in phrases (Carrington 1949: 92). Therefore, it is not classified here as a productive nominal form class, although it may well go back to an old Proto-Mbaic prefix (cf. the discussion in Pasch 1986: 92–95).

- (1) *á-n̄=bīā/á-n̄=í* ~ *n̄n̄=bīā/n̄n̄=í* ‘Wurm [worm] (animal=child)’
á-kók-lè/á-kók-sè ‘Mais [corn]’ [Pasch 1986: 93]

The second prefix *MA-* forms plurals of kinship terms whose singular is unmarked, as in (2a), or sometimes shows the prefix *A-*, as in (2b). In some cases, this plural prefix is in free variation with the nominal form class *-I*, as in (2c).

- (2) a. *tá/mâ-tá*
 b. *ā-tá/mā-ā-tá*
 c. *ā-tá/té* ‘(mein) Vater [(my) father/fathers]’ [Pasch 1986: 120]

Example (2) shows that these kinship terms often inherently convey the possessor. That is, several singular forms indicate different possessors and synchronically appear to be suppletive (Pasch 1986: 120), shown in (3) with the same possessum ‘father’ as in (2).

- (3) *túmú/mā-túmú* ‘dein Vater [your (SG) father/fathers]’ [Pasch 1986: 120]
tê/mā-tê ‘sein Vater [his father/fathers]’ [Pasch 1986: 121]

Most of the suffixes have a *CV*-pattern with an unspecific vowel *-E*, which surfaces as *-e* or *-ε*. This alternation is probably due to some vowel assimilation rule, but the data in Pasch (1986) does not allow any firm generalization.

One suffixal form class for plural nouns shows an abstract element *-I* that fuses with the nominal lexeme to cause ‘Umlaut’ of the final vowel. Pasch (1986: 108ff.) analyzes the vowel affected by *NF -I* as part of the noun stem, that is, the singulars are identical to the nominal root and have no suffix. For some nominal roots ending in *u*, *NF -I* is overtly suffixed to the stem, as in (4a). With some other nouns, stem-final *u* fuses with *NF -I* as all other final vowels do, as in (4b and c), respectively.

- (4) a. *djū+I > djū-ī* ‘Frau, Gattin [women, wife > women, wives]’
 b. *pú+I > pí* ‘Hut [hat > hats]’
 c. *líḡā+I > líḡè* ‘Freund, Kamerad [friend, mate > friends, mates]’
súsò+I > súsè ‘Fisch [fish > fishes]’ [Pasch 1986: 109–119]

When the noun ends in a front high or mid vowel, this does not change, so that the plural form is identical to the singular base, as in (5); number differentiation is only afforded then by the distinct agreement behavior.

- (5) *mémé+I > mémé* ‘Ziege [goat > goats]’
àṭfi+I > àṭfi ‘Dorn [thorn > thorns]’ [Pasch 1986: 112–114]

Available accounts observe a close relation between the suffixes *-LE* and *-NE* on the one hand, and between *-GE* and *-NYE* on the other hand. Bokula (1971: 63) treats both cases as pairs of allomorphs of two abstract nominal form classes, *-LE* and *-GE*, respectively. Pasch (1986: 139) adopts this analysis only for the first pair, while she assumes different nominal form (and agreement) classes for the second on diachronic grounds. There is no synchronic complementary distribution in each pair, for example, triggered by a phonological environment for the use of the nasal variant, which can be seen in (6) and (7). Accordingly, we treat all four suffixes in Mba as constituting their own nominal form class – a solution that is not warranted in other Mbaic languages.

- | | | |
|-----|---|---|
| (6) | Nominal form <i>-NE</i>
<i>ká-né</i> ‘Mutterbrust [breast]’
<i>ngbé-nè</i> ‘Hüfte, Becken [hip]’
[Pasch 1986: 125–127] | Nominal form <i>-LE</i>
<i>sâ=gê-lè</i> ‘Schwanz [tail]’
<i>dè-lè</i> ‘Name [name]’
[Pasch 1986: 121–127] |
| (7) | Nominal form <i>-NYE</i>
<i>nú-ê</i> ‘Vogel [bird]’
<i>ngó-ê</i> ‘Huhn [chicken]’
[Pasch 1986: 139] | Nominal form <i>-GE</i>
<i>tí-gè</i> ‘Mund [mouth]’
<i>gyó-gè</i> ‘Morgen [morning]’
[Pasch 1986: 133–136] |

Four of the suffixal form classes, *-LE*, *-GE*, *-NYE*, and *-ME*, are not dedicated to a single number value in that they occur with singular and transnumeral nouns; the transnumeral forms in *-LE*, *-GE* and *-NYE* are all derived from verbs and could be conceptualized as singularia tantum. Nouns in *-ME* normally express liquids and masses and are treated by Bokula (1982: 127) as not taking a plural form. All other sources give plurals (e.g., for liquids in different containers), making *-ME* a singular class. Several nominal form classes convey clear semantic features and are thus relevant for the class-based gender system described in Section 2.2. Table 1 gives an overview of the nominal form classes and some of their semantic features.

Table 1: Nominal form classes.

NF	Allomorphs	Number	Example(s)	Semantics
∅		SG	<i>kīā</i> ‘man’, <i>kó</i> ‘knife’, <i>zì</i> ‘thief’, <i>bó</i> ‘part, item’, <i>gó</i> ‘war’, <i>kyá</i> ‘snake’, <i>té</i> ‘tooth’	human, animal, plant, body part, (loan words)
-I	-i, ∅, fused to final stem vowel RED-I	PL	<i>kīē</i> ‘men’, <i>ké</i> ‘knives’, <i>zì</i> ‘thieves’, <i>kómbè</i> ‘slaves’, <i>djōmbē</i> ‘ears’, <i>mbáté</i> ‘beaks’ <i>bó-bè</i> ‘parts, items’, <i>gó-gè</i> ‘wars’, <i>lá-lè</i> ‘houses’, <i>kwí-kwí</i> ‘death (PL)’, <i>ngó-ngè</i> ‘waters’	plural of ∅ and -GE plural of ∅, -ME, and -GE
-LE	-le, -lɛ	SG TN	<i>là-lè</i> ‘eye’, <i>bó-lè</i> ‘plantain’, <i>gá-lè</i> ‘tree’ <i>líbā-lé</i> ‘love’	fruit, body part abstract, time
-NE	-ne, -nɛ	SG	<i>ní-nè</i> ‘fruit, grain’, <i>djōá-nè</i> ‘heart’, <i>zǒ-nè</i> ‘food (SG)’	
-SE	-se, -sɛ	PL	<i>là-sè</i> ‘eyes’, <i>bó-lè</i> ‘plantains’, <i>gá-sè</i> ‘trees’, <i>ní-sè</i> ‘fruits’, <i>djōá-sè</i> ‘hearts’, <i>mbátā-sè</i> ‘beaks’, <i>sèbèngbà-sè</i> ‘foreheads’	plural of -LE and -NE (rarely -GE and -NYE)
-GE	-ge, -gɛ	SG	<i>lá-gè</i> ‘house’, <i>kómbā-gè</i> ‘slave’, <i>kwí-gè</i> ‘death (SG)’, <i>djōmbō-gè</i> ‘ear’, <i>mbátā-gè</i> ‘beak’	masculine human, animal, deverbal abstract
		TN	<i>zú-gè</i> ‘to give birth’, <i>kwí-gé</i> ‘to die’	infinitives
-NYE	-nye, -e, -ē	SG	<i>njánjá-ē</i> ‘fly’, <i>sèbèngbà-nyè</i> ‘forehead’, <i>nú-è</i> ‘bird’	(small) animal, body part
		TN	<i>mbā-nyé</i> ‘craziness’	abstract
-ZE	-ze, -zɛ RED-ze	PL	<i>kyá-zè</i> ‘snakes’, <i>té-zè</i> ‘teeth’, <i>njánjá-zè</i> ‘flies’, <i>zǒ-zè</i> ‘food (PL)’, <i>nú-zè</i> ‘birds’ <i>dú-dú-zè</i> ‘items’, <i>kā-kā-zè</i> ‘pestles’, <i>ngò-ngò-zè</i> ‘waters’	plural of ∅, -GE, -NYE, and -NE plural of ∅ and -ME
-ME	-me, -mɛ	SG TN	<i>ngó-mè</i> ‘water’, <i>zì-mè</i> ‘blood’ <i>lóbè-mè</i> ‘intelligence’	liquid, mass, abstract
MA-	-ma	PL	<i>mā-tá</i> ‘fathers’	kinship term

Owing to their semantics, nominal form classes have derivational function, as seen in (8) with the nominal root for the ethnic autonym *m̄ba-* in three different classes.

- (8) *m̄bā-gè* ‘male Mba person, male speaker of Mba’
m̄bā-è ‘Mba people’²
m̄bā-nè ‘Mba language’ [Carrington 1949: 90]

² Following Pasch (1986: 134), this form in -I is the regular plural of nouns in -GE. She assumes a long vowel in *Mba.a* so that in this case only the final -a undergoes vowel assimilation.

The following examples illustrate some derivational functions of individual classes. As already seen in (8), the male member of an ethnic group or inhabitant of a location is derived by suffixing *-GE* to the base (the female counterpart is a compound and belongs to the nominal form class \emptyset , both kinds of nouns have their plural in (RED)-*I*); this is shown in (9a). The cases in (9b) represent the same derivation for insects of a certain place, with a plural in *-ZE*. Pasch (1986: 105) describes this derivation as a singulative, singling out individuals from a group or location.

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|-----|----|---------------------------------|----------------------------------|
| (9) | a. | Location or ethnic group | (Male) inhabitant/member |
| | | <i>āngbā-nē</i> | <i>āngbā-gè/āngbē-yē</i> |
| | | ‘Kingelima [language]’ | ‘Ngelima-Mann [Ngelima man]’ |
| | b. | <i>kābā</i> | <i>kābā-gè/kābā-zé</i> |
| | | ‘Termitenhügel [termite mound]’ | ‘Termite’ [Pasch 1986: 105, 140] |

Example (10) shows infinitives also formed by means of *-GE* as well as other types of deverbal nouns with various suffixes.³

- | | | | |
|------|------------|---------------------------------------|--|
| (10) | Infinitive | Deverbal noun | |
| | a. | <i>gèsé-gé</i> ‘antworten [to reply]’ | <i>gèsé-gè/gèsé</i> ‘Antwort [answer]’ |
| | | <i>yì-gé</i> ‘kaufen [to buy]’ | <i>yì-gè/yì-yí</i> ‘Preis [price]’ |
| | b. | <i>yú-gé</i> ‘uriner [to urinate]’ | <i>yú-mè/yú-yì</i> ‘urine’ |
| | | <i>zò-gé</i> ‘manger [to eat]’ | <i>zò-nè/zò-zè</i> ‘nourriture [food]’ |
| | | | [Bokula 1971: 65; Pasch 1986: 103] |

Denominal abstract nouns are formed by the nominal form class *-LE* (or rarely *-ME*) with the corresponding plural in *-SE*, as in (11). The same pair of classes renders the designation of fruits out of tree names, which are in the class pair \emptyset /*-I*, as in (12).

- | | | |
|------|------------------------------------|--|
| (11) | Agent noun | Abstract term |
| | <i>zí/zí</i> ‘Dieb [thief]’ | <i>zí-lè/zí-sè</i> ‘Diebstahl [theft]’ |
| | <i>kīā/kīē</i> ‘Mann, Gatte [man]’ | <i>kīā-lè/kīā-sè</i> ‘Hochzeit [marriage]’ |
| | | [Pasch 1986: 103f.] |

- | | | |
|------|--------------------------|---|
| (12) | Tree | Fruit |
| | <i>ndígó=yà/ndígó=yè</i> | <i>ndígò-lè/ndígò-sè</i> |
| | ‘Kolabaum [cola tree]’ | ‘Kolanuss [cola nut]’ [Pasch 1986: 104] |

³ According to Bokula (1971: 65), if both infinitive and verbal noun have *-GE*, the former has a high tone, while the resultative nouns have overall low tone. This is not apparent in Pasch’s examples in (10). The plural of such verbal nouns is mostly formed by means of *-I* or (RED)-*I*.

2.1.2 Agreement and agreement (AGR) classes

Agreement in Mba is complex and typologically special because it displays two distinct paradigms, as already observed by Tucker and Bryan (1966: 14). One paradigm strongly correlates with the system of nominal form classes outlined in Section 2.1.1 and is thus called for convenience the ‘formal agreement (system)’, meaning that the form of a noun largely determines the agreement class. The second agreement paradigm is consistently based on the semantic criteria of animacy and natural sex and is thus called the ‘semantic agreement (system)’. The two systems operate in partly different morphosyntactic domains: the first formal system is largely restricted to the noun phrase, whereas the second semantic system can operate in the noun phrase but occurs primarily in the realm of pronominal anaphor.

2.1.2.1 Formal agreement

The morphological property of the nominal head, its nominal form class, triggers gender and number agreement. This kind of agreement is largely restricted to the noun phrase, affecting specific targets such as demonstratives, interrogatives, numerals, and possessive modifiers. The system is also relevant in non-verbal predication. While most adnominal markers are suffixes, the agreement markers are prefixed to the relevant host.

The form of the agreement exponents is interpreted differently in the various sources, which can lead to different interpretations of noun phrase structure, especially concerning the identity of certain class markers. Carrington (1949) and Bokula (1971, 1982, 1983) describe agreement morphemes as consisting of a thematic consonant and a following default vowel, in principle identical in form to the nominal suffix. Pasch (1986: 142), however, analyzes them as containing only the typical consonant, which sometimes does not have a counterpart in the nominal suffix.

Table 2 gives an overview of the system of formal agreement classes, which largely correspond to the nominal form classes. This situation conforms to the ‘noun class’ approach traditionally applied in Niger-Congo studies. The class numbering follows that by Pasch (1986), which is oriented toward reconstruction in the entire Mbaic family. Since the proto-system comprises classes without a clear modern reflex in Mba, our numbering has gaps in lacking classes 8 and 10.

Agreement targets have quite diverse morphosyntactic behavior, so that we classify them into three structural groups for ease of discussion. The major parameters of variation are the position of the modified noun and whether it retains its canonical nominal form. The classification and analysis according to our three morphosyntactic types of agreement and the different targets is given in Table 3.

Table 2: Agreement classes across major targets (following Pasch 1986).

AGR	Exponent	NUM		GEN	DEM.PROX	DEM.DIST	'which'	ID	Number	Default	NF
		'one'	'two'								
1	W	ú-mà	–	W-é	W-é	W-ó	wàwò	W-á	SG	∅	
2	Y	–	bi-l-ne	Y-é	Y-é	Y-ó	yà'yò	Y-á	PL	-I	
3	L	l-ímà	–	l-é	l-é	l-ó	làlò	l-á	SG, TN	-LE	
3n	N	l-ímà	–	l-é	n-é	n-ó	nànò	°n-á	SG, TN	-NE	
4	S	–	bi-si-ne	s-é	s-é	s-ó	sàsò	s-á	PL	-SE	
5	K	k-ímà	–	k-é	k-é	k-ó	kàkò	k-á	SG	∅	
6	Z	–	bi-zi-ne	z-é	z-é	z-ó	zàzò	z-á	PL	-ZE	
7	G	g-ímà	–	g-é	g-é	g-ó	gàgò	g-á	SG, TN	-GE	
9	NY	g-ímà	–	g-é	ny-é	ny-ó	nyànyò	°ny-á	SG, TN	-NYE	
11	M	m-ímà	–	m-é	m-é	m-ó	màmò	m-á	SG, TN	-ME	

Table 3: Basic patterns of agreement constructions.

Group	NF	Head	Target	Construction schema
A	yes	final	'each'	[AGR _x -'each' N-NF _x]
			'other'	[AGR _x -'other' N-NF _x]
			1/2sg possessive	[AGR _x -POSSR N-NF _x]
			other possessive	[POSSR AGR _x -GEN N-NF _x]
B	yes	initial	numeral	[N-NF _x AGR _x -NUM]
			proximal demonstrative	[N-NF _x AGR _x -DEM]
C	no	initial	distal demonstrative	[N _x -AGR _x -DEM] ?
			'which'	[N _x -AGR _x -'which'] ?
			identificational	[N _x -AGR _x -ID] ?

Group-A agreement comprises all head-final constructions, with the modifier marked for agreement by a prefix and the head keeping its nominal suffix. This is found with 'each', as in (13), and 'other', as in (14).

- (13) *m-é ngó-mè*
 11-each knife-ME.11
 'jedes Messer [each knife]' [Pasch 1986: 144]

- (14) *l-étà mbìà-lè*
 3-other head-LE.3
 'anderer Kopf [another head]' [Pasch 1986: 145]

The agreement in possessive constructions is formally similar, although there is a morphosyntactic difference between a construction with first and second person singular possessors and another with all other possessor types. In the first one, the modifying possessor pronoun takes an agreement prefix and precedes the possessum, which occurs in its normal nominal form, as shown in (15) – this is identical to (13) and (14).

- (15) *l-èà gá-lè*
 3-1SG tree-LE.3
 'mein Baum [my tree]' [Pasch 1986: 162]

The possessive construction with nominal possessors and third person singular and all plural pronominal possessors differs slightly, as shown in (16). An independent possessor nominal appears in phrase-initial position followed by a genitive linker that agrees with the possessum, which itself occurs finally in its normal form. This is arguably an extended variant of the construction in (15), insofar as the agreeing genitive linker and the agreeing possessor resemble each other. The pattern in (16a) is somehow blurred by Bokula's (1983) graphic

representation that seems to interpret the associative morpheme as a prefix of the nominal possessum, as illustrated in (16b).

- (16) a. *ì y-é ɲgòmbè*
 1PL 2-GEN axe:I.2
 ‘unsere Äxte [our axes]’ [Pasch 1986: 161]
- b. *jòmà ségbésè*
jòmà s-é=gbé-sè
 chief.7 4-GEN=cloth-SE.4
 ‘les habits du chef [the clothes of the chief/king]’ [Bokula 1983: 64]

Group-B agreement with the canonical nominal controller preceding the agreement target applies to the numerals *-ima* ‘one’ and *bi.ne* ‘two’ (all other numerals are not agreement targets in following the modified noun unmarked). With the numeral ‘one’, the agreement exponent is prefixed to the lexical root, as in (17).

- (17) *kwāyā-lē l-īmā*
 path-LE.3 3-one
 ‘ein Weg [one path]’ [Pasch 1986: 146]

The situation with the numeral ‘two’ is more complex in that the agreement marker splits up the lexeme, as seen in (18). The marker could thus be analyzed as an infix. Another possibility arises from the fact that *biàlà* ‘three’ and *bumà* ‘five’ also display an initial *b(V)-*, which could be viewed as a morpheme added on the numeral root. While this analysis may be relevant from a historical perspective, it falls short of explaining the lack of the element on other (lower) numerals, e.g., *āngbotē* ‘four’.

- (18) *lā-sē bi-sì-nē*
 eye-SE.4 ?-4-two
 ‘zwei Augen [two eyes]’ [Pasch 1986: 148]

Proximal demonstratives involve the same basic structure as agreeing numerals. However, head noun and demonstrative are written in the sources as one word, apparently because the demonstrative base only consists of a vowel. We exemplify the structure by means of the partial demonstrative paradigms in Table 4. These contradict Carrington (1949: 97) and Pasch (1986: 149)⁴ but support Bokula’s morpho-syntactic analysis that the agreeing modifier follows the noun, which itself bears the nominal suffix. In the regular case in line 1, the proximal demonstrative

⁴ The first author assumes that the nominal suffix is merely repeated. The second author states that the **first** marker on the noun root is the agreement suffix plus demonstrative base *-é* and the second one the nominal suffix, primarily based on assumed tonal properties that are not consistently supported by the available data.

Table 4: Demonstrative paradigms (after Carrington 1949: 95).

	NF	AGR	DEM.PROX		DEM.DIST	
1	-ME	11 M-	<i>ŋgò-mé-m-è</i>	this water	<i>ŋgò-m-óo</i>	that water
2	∅	5 K-	<i>tè-k-è</i>	this tooth	<i>tè-k-óo</i>	that tooth
3	∅	1 W-	<i>àkúŋgú-w-è</i>	this gong	<i>àkúŋgú-w-ò*</i>	that gong
4	-l	2 Y-	<i>àkúŋgí-y-è</i>	these gongs	<i>àkúŋgí-y-ò</i>	those gongs
5	-l	2 Y-	<i>ŋgó.ŋgé-y-è</i>	these waters	<i>ŋgó.ŋgé-y-óo</i>	those waters

Note: *w not given in Carrington (1949: 95).

looks at first glance like a mere repetition of the nominal suffix. However, this cannot hold for singular nouns of the ∅ form class (lines 2 and 3) and for plural forms based on vowel change (line 4) or noun root reduplication (line 5).

In the agreement types of groups A and B, both the noun and the modifier are morphologically marked, namely by nominal suffix and agreement morpheme, respectively. The situation in group C is not as clear. This comprises constructions where the head noun is initial and the agreement target only consists of a vowel. Between these two constituents, there is a class-indexing morpheme whose exact identity is uncertain due to the largely alliterative class system.

We first give relevant examples for the identificational marker in (19a), for the same element in equational sentences when followed in addition by a coreferential nominal in (19b), for the morphologically complex interrogative ‘which?’ in (20),⁵ and finally for the distal demonstrative in (21) (cf. also the right column in Table 4 above).

- (19) a. *pú-w-á*
 hat.1-1-ID
 ‘das ist ein Hut [it’s a hat]’ [Pasch 1986: 153]
- b. *jú-w-à mù*
 woman.1-1-ID 2SG
 ‘You are a woman.’ [Tucker and Bryan 1966: 128]
- (20) a. *ŋgòmbò g-ú-g-à*
 axe.7 7-which-7-ID
 ‘which axe?’ [Tucker and Bryan 1966: 119]
- b. *gà-lé lè-à-lè-ò > gâàlâlò*
 tree-LE.3 3-ID-3-which
 ‘quel arbre? [which tree?]’ [Bokula 1983: 69]

⁵ The morphological structure of the interrogative is unclear. The predominant pattern is [AGR-α-AGR-0] but note the seemingly reversed order of the vowels in (22a). This changed order is also attested in Pasch (1986: 155) who translates this structure as ‘was für ein? [what kind of?]’.

- (21) *gà-lé* *lè-óo* > *galóo*
 tree-LE.3 3-DEM.REF
 ‘cet arbre en question [that tree in question]’ [Bokula 1983: 67]

Authors differ in their morphological analysis of these structures. Carrington (1949) analyses the first class-indexing element after the noun as a nominal suffix, Bokula (1971, 1983) as an ‘affixe pronominal’,⁶ and Pasch (1986: 151), following Tucker and Bryan (1966: 119), explicitly as an agreement marker. Adopting the latter analysis implies that only the bare noun is involved in such constructions and the class marking of the whole noun phrase is obtained by means of the agreement target. Without being able to clarify the problem, we favour, for the time being, the last analysis by Pasch, as there are precedents for this phenomenon in other Niger-Congo languages (cf. Hoffmann 1967 on the Kainji language C’lela).

In fact, the use of bare nouns with the nominal suffix detached from them is attested in Mba itself. This is evidenced by a major construction type in the domain of nominal modification not yet treated, that involving adjectives. Adjectival modification differs from all previous constructions in that it cannot be conceived of as proper agreement. That is, qualifying adjectives build with the initial modified noun a compound-like structure followed by the final nominal suffix (cf. Pasch 1986: 100, 156). This morphological pattern [_{N_x-ADJ-NF_x}] is illustrated in (22).⁷

- (22) a. *là-gè* *là-sìsì-gé*
 house-GE.7 house-bad-GE.7
 ‘a house’ ‘ein schlechtes Haus [a bad house]’
 b. *gbè-sé* *gbé-bùmbò-sè*
 dress-SE.4 dress-black-SE.4
 ‘dresses’ ‘schwarze Kleider [black dresses]’ [Pasch 1986: 156]

2.1.2.2 Semantic agreement

Mba possesses a second agreement system that is largely independent from the formal system described in Section 2.1.2.1 and whose agreement target is third

⁶ Bokula (1983: 69) nevertheless assumes the underlying presence of the nominal suffix at least for the interrogative, if only in a tonal reflex, and his morphological parsing also reflects this analysis, as seen in (22b) and (23b).

⁷ In classes 3, 3n, 7, and 9, some adjectives take a nasal rather than an oral suffix, which according to Pasch (1986) is lexically determined. Cf. the adjective *gǔ* ‘big’ with a nasal suffix as opposed to the oral suffix after the noun or a normal adjective: *àkòkò-lè* ‘a maizecob’, *àkòkò gbòndò-lè* ‘a small maizecob’, *àkòkò gǔ-nè* ‘a big maizecob’ (Carrington 1949: 97). This is partly parallel to the two class pairs of 3 versus 3n and 7 versus 9 themselves, in which the first is “oral” and the second partly “nasal” (see Table 4 below). Thus cf. *mì-nè* ‘tongue’, *mì-sìsì-lè* ‘a bad tongue’, *mì-gò-nè* ‘a big tongue’ (Pasch 1986: 157).

Table 5: Pronouns marking animacy (Carrington 1949: 96; Pasch 1986: 172).

Gender	Singular	Plural
Human masculine	<i>ndé</i>	
Other animate	<i>bī</i>	<i>bé</i>

person pronouns. These convey primarily a distinction of animate versus inanimate referents whereby the latter lack any exponence. As given in Table 5, the overtly marked animate category involves the encoding of number and gender by means of three forms to be labeled as follows: human masculine singular (H.M.SG), other animate singular (O.AN.SG, subsuming human females and animals), and animate plural (AN.PL).

The pronouns are used primarily in subject and object position in anaphoric function when no overt nominal of this role is present in the clause, as shown in (23) and (24) (cf. Carrington 1949 and Tucker and Bryan 1966: 129 for examples with nominal subjects but without pronouns).

- (23) *ndé-àsì* ‘il remplit [he just filled (it)]’
bī-àsì ‘elle remplit [she just filled (it)]’
bé-àsì ‘ils remplissent [they just filled (it)]’ [Carrington 1949: 101]

- (24) *ná-’ù* *kíá.* *bī-kè-bó* *hǎ̀nòà.*
 1SG-see.PST snake.5 O.AN.SG-PST-COME here
 ‘J’ai vu un serpent; il est venu ici. [I saw a snake. It came here.]’
 [Carrington 1949: 96]

These pronominal forms, however, are also used in constructions involving the formal agreement system described in Section 2.1.2.1 and thus interact with it. Example (25) shows the possibility of using such a pronoun after the identificational structure, rendering the same type of nominal predication as in (19a) above (see also Pasch (1986: 175) for a similar pattern with an interrogative as predicate nominal).

- (25) *djù-w-á* (*bī*)
 woman-1-ID O.AN.SG
 ‘sie ist eine Frau [she/?this is a woman]’ [Pasch 1986: 175]

Noun phrases are also affected by the use of animate pronouns. One somewhat expected context is the type of genitive construction illustrated in (16) with possessors other than first and second person singular. Here, as shown in (26), the third person pronominal possessor is represented by the anaphoric pronouns of Table 5.

- (26) a. **ndè** *g-é* *ngòmbò-gè*
 H.M.SG 7-GEN axe-GE.7
 ‘seine Axt [his axe]’ [Pasch 1986: 161]
- b. **bē** *y-é* *ngòmbè*
 AN.PL 2-GEN axe:I.2
 ‘ihre Äxte [their axes]’ [Pasch 1986: 161]
- c. **bi** *g-é* *bia*
 O.AN.SG 7-GEN child.7
 ‘sein (Tier) Kind [its (animal) young, ?and: her child]’ [Pasch 1986: 169]

Of more significance is the occurrence of the pronouns in constructions with demonstratives and numerals (Pasch 1986: 173–175). The first case is illustrated in (27), where the pronoun is phrase-final. With a numeral, as in (28), the pronoun stands between head noun and modifier and is thus an unambiguous part of the noun phrase.

- (27) *ndjōá-(w-)é* (**ndé**)
 man-1-DEM.PROX H.M.SG
 ‘dieser Mann hier [this man here]’ [Pasch 1986: 175]
- (28) *ndjùàzú-gè* (**ndé**) *g-ímā*
 man-GE.7 H.M.SG 7-one
 ‘ein Mann [one man]’ [Pasch 1986: 147]

It is important to note, however, that according to Pasch (1986: 173–174) such animate agreement within the noun phrase is not obligatory and varies idiolectally and situationally, which is sometimes indicated by the parentheses in the above examples. This may be corroborated by Carrington’s (1949: 96) remark that the form *-nde* is used in order to “emphasize” that a male referent is involved.

2.1.3 Nominal form classes versus agreement classes

Figure 1 shows that there is a large amount of parallelism between the nominal form classes and the formally assigned agreement classes, existing in two ways: first, there is a frequent one-to-one relationship between classes of the two systems, and second, the paired exponents have a clear formal affinity. Overall, this is a picture typical for a canonical alliterative classification system of the Niger-Congo type.

One exception to the bidirectional class relationship revolves around *AGR*₂, which is not only connected to its cognate nominal form class (RED)-*I* but also to the innovative plural prefix *MA-* for kinship terms. The other exception relates to the

Non-human nouns of the \emptyset form class agree either with AGR1 or AGR5. Referring to the reconstruction of the class system by Pasch (1986: 359, 365, 366), the cause for this NF conflation is the merger of two formerly distinct nominal form classes *-WO and *-KPO into the \emptyset form class under partial retention of the original consonants in the corresponding agreement classes.

2.2 The behavior of nominal lexemes

Both nominal form classes and agreement classes in the formal classification system are first of all lexical properties of nouns. The former define the paradigmatic morphological variation of noun lexemes regarding number and gender, the exponence of which was presented in Section 2.1.1. This lexicalized morphological behavior is commonly called declension class in Indo-European. Since in Mba nominal form classes not only encode number and gender but also serve derivational functions, we call this behavior “deriflection” – a coinage that aims to reflect this multiple nature of **derivation** and **inflection**. Table 6 gives an overview of the attested deriflection patterns. The majority are pairs of nominal form classes applying to countable nouns. But there are also groups of transnumeral nouns that

Table 6: Deriflections and their semantic contents (after Pasch 1986).

Deriflection	Salient/productive semantics
\emptyset /MA-	kinship terms
\emptyset /(RED)-I	human (females), animals, kinship terms, loanwords, plants
\emptyset /(RED)-ZE	body parts, some animals (snakes), (human) artifacts
-GE	deverbal infinitives
-GE/(RED)-I	male persons, membership, animals, deverbal object nouns
-GE/-ZE	animals, mostly insects
(-GE/-SE)	only few lexemes ('prayer', 'beak')
-NYE	abstract terms
-NYE/-ZE	animals, mostly insects
(-NYE/-SE)	only 'forehead'
-ME	uncountable masses, liquids, abstract concepts
-ME/(RED)-I	liquids, abstract concepts
(-ME/(RED)-ZE)	only 'water', 'ash' (both with alternative in -ME/(RED)-I)
(-ME/-SE)	only 'sorcerer', 'witchcraft'
-LE/-SE	fruits, body parts, language names, some animals, deverbal noun (objects, abstract terms, time spans)
-NE/-SE	fruits, body parts, artifacts, abstract terms
(-NE/-ZE)	only few lexemes, mostly animals (meat, pork, snake, bird)

are characterized by a single nominal form class. The table also records deriflections in parentheses that are exceptional and thus probably inquirate in terms of Corbett (1991), including the lexemes attested. Bokula (1971, 1982) only records productive deriflections and lacks *-ME/(RED)-I*, because he assumes *-ME* to have no plural counterpart. Given the semantic import of nominal form classes, it comes as no surprise that deriflections can also convey meaning.

Some nouns belong to more than one deriflection as they alternate in the plural between *-I* and *-ZE*, like, *mbòtǫ́/mbòtǫ́fĩ~mbòtǫ́-zè* ‘mushroom’, *ngóndè/ngóndè ~ngóndè-zè* ‘crocodile’, *ngò/ngò-ngē~ngò-ngò-zè* ‘water’ (Bokula 1971: 63; Pasch 1986: 106); the first author assumes that *-ZE* develops toward a default plural.

Mba’s formal gender system based on the corresponding agreement classes established in Section 2.1.2.1 is the counterpart of the morphologically based deriflection system. As with deriflections, there are paired and single-class genders and some patterns are rare and thus appear to be inquirate. Gender XI,⁸ for instance, is represented in Pasch (1986) by a single example, and gender XII is yet more problematic, as the corresponding deriflection is characterized by Bokula (1971: 63) as an alternative to *-ME/-I*, and no agreement patterns are known.

In Figure 2, we represent the formal deriflection and gender system side by side. The deriflection system in the left panel has 17 patterns: three with a single class for non-count nouns and 14 with a class pair for count nouns, of which five are lexically exceptional. The gender system in the right panel displays 13 paired genders, of which five are inquirate. The large-scale biunique relation of agreement and nominal form classes is behind the fact that the two systems in Figure 2 are very similar in their inventory and crossed structure. There are only two deviations. One concerns kinship terms whose innovative morphological plural in *MA-* causes gender I to map onto the two deriflections $\emptyset/-I$ and $\emptyset/MA-$. The other structural difference is that the singular of gender II does not have a separate counterpart in nominal forms but is conflated with other agreement classes in the \emptyset form class.

Gender assignment follows first of all formal considerations but has a few semantic aspects. In general, nouns with a suffix are formally assigned. For affixless nouns in the singular, the referential meaning is decisive. According to Pasch (1986: 166–171), male humans are lexically specified for either gender I or III (cf. Section 2.1.3 above); agreement can also vary according to the target. Female humans and loan words belong to gender I, while inanimates and non-human

⁸ For the numbering of genders, see Table 7.

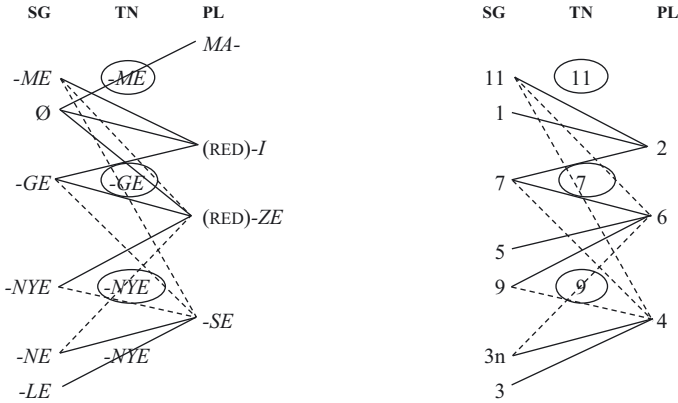


Figure 2: Formal deriflection system (left) and formal gender system (right) (after Pasch 1986).

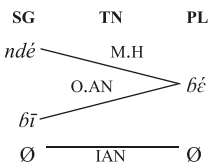


Figure 3: Second gender system based on animacy (after Pasch 1986).

animates go into gender I or II correlating with their plural class *-I* or *-ZE*, respectively.

Since Mba has additional pronominal agreement (see Section 2.1.2.2), it also has a second gender system. As already indicated above, it is much simpler than that in Figure 2, being based on the principal semantic criterion of animacy and a further distinction within the animate category. It involves three genders: masculine human, other animate, and inanimate, as indicated close to the lines in Figure 3.

Table 7 and Figure 4 display the formal deriflection system and the two gender systems together. While there is a strong correlation between deriflection and the formal gender system, the picture becomes more complex with the semantic gender system as this applies to nominal form classes according to just three semantic concepts. Hence, Figure 4 does not represent the mapping between deriflections and semantic genders.

Table 7: Formal deriflections and genders, and semantic genders.

Formal deriflection	AGR pairing	Formal gender	Semantic gender		
			H.M	O.AN	IAN
$\emptyset/MA-$	1/2	I	X	X	–
$\emptyset/(\text{RED})-I$			X	X	X
$\emptyset/(\text{RED})-ZE$	5/6	II	–	X	X
$-GE/(\text{RED})-I$	7/2	III	X	X	X
$-GE/-ZE$	7/6	IV	–	X	–
$(-GE/-SE)$	7/4	V	–	–	X
$-GE$	7	VI	–	–	X
$-NYE/-ZE$	9/6	VII	–	X	–
$(-NYE/-SE)$	9/4	VIII	–	–	X
$-NYE$	9	IX	–	–	X
$-ME/(\text{RED})-I$	11/2	X	–	–	X
$(-ME/-SE)$	11/4	XI	–	–	X
$(-ME/(\text{RED})-ZE)$	11/6	XII	–	–	X
$-ME$	11	XIII	–	–	X
$-LE/-SE$	3/4	XIV	–	X	X
$-NE/-SE$	3n/4	XV	–	–	X
$(-NE/-ZE)$	3n/6	XVI	–	X	X

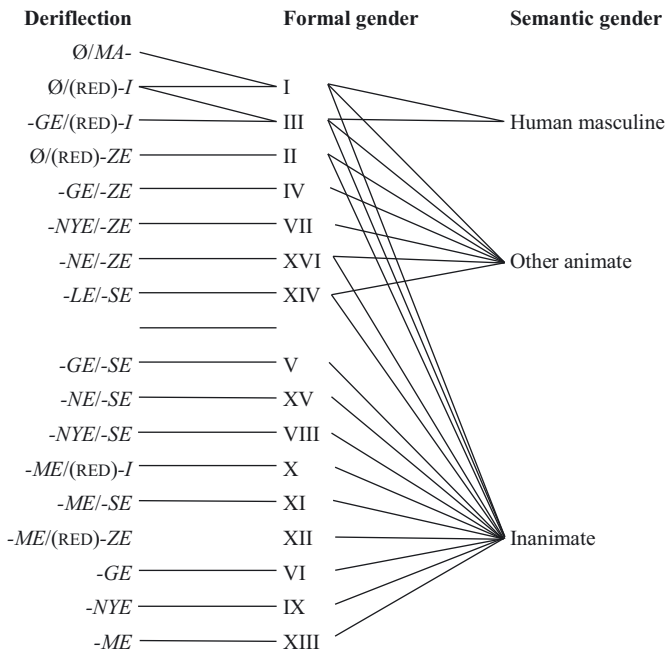


Figure 4: Mapping of formal deriflections and genders, and semantic genders.

3 Discussion

Since the formal gender system of Mba is closely tied to nominal deriflection, it is a rather canonical instance of the Niger-Congo type, as opposed to other systems discussed by Güldemann and Fiedler (2019) that have been restructured to the extent that the traditional “noun class” concept is far more problematic. We thus refrain from an extensive discussion of the formal system except for indicating two remarkable facts.

A first observation is that the formal class exponents of Mba (and of Proto-Mbaic reconstructed by Pasch 1986) are not straightforward cognates of classes of the Niger-Congo canon further west (itself partly biased toward Proto-Bantu/Benue-Congo). More likely matches in Mba are merely class 1, corresponding to the human singular class *1, and class 11, corresponding to the liquid~mass class *6A.

Another noteworthy feature of the system is that the class markers on nouns are suffixes while the agreement exponents on virtually all targets are prefixes. We hypothesize that the adnominal suffixes in Mba are innovative and may have emerged from short class-indexing determiners that followed and eventually fused with the noun, which can explain the fact that the suffixes have a uniform rather than class-specific vowel. The shift from noun prefixes to suffixes has historically transparent precedents in Niger-Congo (cf., e.g., Childs 1983 on Mel). It must remain unclear whether originally nouns had prefixes and lost them, alternated between a prefix and a \emptyset form, or lacked bound class affixes altogether (see Güldemann and Merrill in preparation for some discussion, see also Elstermann et al. this volume on Longuda).

More remarkable from both a historical and typological perspective is the effect of the second gender system of Mba, whose discussion concludes this article. The system as such is not really surprising in the narrow genealogical and areal context. As described by Pasch (1986: 256–262, 327–357), of the remaining three Mbaic languages, Dongo and Ma also possess an additional partly pronominal gender system encoding the feature of animacy. The Mbaic family in turn is not unique in the geographical area either, as a similar gender system also exists in Zande (Claudi 1985, cf. also animacy-based gender systems in geographically close Bantu languages).

A semantically transparent pronominal gender system on its own is also unremarkable in typological terms, as there exist numerous, more or less similar cases across the globe. A noteworthy point in the Mba system is that one of the three genders is only marked covertly. Recall in this respect that gender is conventionally defined as noun classification rendered by agreement. However, the most basic gender distinction in Mba between animate and inanimate nouns is

conveyed by **non-agreement** for the latter gender value. To our knowledge, this phenomenon has only been rarely reported so far (cf. Corbett 2006: 120–122 for a partially non-marked gender in the Nakh-Daghestanian language Archi, which perhaps significantly also applies to inanimates).

In any case, the most remarkable point of Mba noun classification is neither the (largely) formal Niger-Congo type gender system nor the semantically based pronominal gender system but rather their **co-occurrence** in one language, as Corbett (1991: 184–188) noted already under the notion of a ‘combined gender system’ (but see Corbett (2012: 174–176) where he opts for one system of classification). Recent research (Corbett et al. 2017; Fedden and Corbett 2017) has refined the earlier account by analyzing Mba and Mba-like cases as examples of ‘concurrent nominal classification’.

One of the major concerns of the new approach by Corbett and colleagues is the degree to which the two classification systems are independent, aka concurrent, or alternatively converge toward a single system. For Mba, we attempt to determine this question by three criteria proposed by these authors: a) similarity of formal encoding, b) structural orthogonality, and c) semantic basis of classification (cf. also Güldemann and Fiedler in preparation on concurrent noun classification in Niger-Congo generally).

With regard to the first factor, we conclude that the two systems in Mba are maximally distinct in that there is no overlap between formal exponents. This differs from other similar cases where two partly diverging systems rely on one set of markers but apply them differently in morphosyntactic and/or semantic terms (cf., e.g., Pasch (1986) for Dongo in Mbaic itself and Traill (1994: 35) for Taa of the Tuu family).

The second criterion of structural orthogonality can be discerned from the co-occurrence of the gender values in the two systems. Table 7 shows that animate entities are only found in seven of the 16 formal genders, and human masculines are restricted to the genders I and III. According to Fedden and Corbett’s (2017: 32–33) measurement, the orthogonality value in Mba is 0.42, based on only six genders. Our own calculation is 0.22, which is closer to 0 (= single system) than to 1 (= two systems). Although the animacy distinction of the semantic system is not deeply entrenched in the formal class marking, the situation in Mba appears on this count to resemble more a partly converging system.

As just indicated, the third criterion of the semantic basis of classification indicates again considerable independence of the two systems in that the principal assignment criteria are orthogonal if not even opposed to each other, namely, a human versus animate macro-gender distinction. At the same time, there is semantic overlap regarding the encoding of human masculine referents. This partial

convergence is replicated in morphosyntactic encoding in that both formal and semantic agreement co-occur in a variety of agreement contexts (see Section 2.1.2).

In general, we conclude that the formal and the semantic gender system of Mba represent a case of concurrent nominal classification but there are signs of their incipient integration in both morphosyntactic and semantic terms. This conclusion notwithstanding, it must be pointed out that our analysis is based on restricted and possibly crucially incomplete data and thus should be seen as preliminary. There can be no doubt, however, that Mba and its Mbaic relatives are of extraordinary interest for the typology of nominal classification, which makes the documentation of these partly endangered languages a very urgent target of African linguistics.

Abbreviations

Abbreviations follow the Leipzig glossing rules, except the following:

AGR	agreement
AN	animate
C	consonant
H	human
IAN	inanimate
ID	identificational particle
N	noun
NF	nominal form
NUM	numeral
O.AN	other animate
POSSR	possessor
TN	transnumeral
V	vowel

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