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Two concurrent systems of nominal classification in Ngəmba (Eastern Grassfields)¹

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Abstract

Alongside a reduced gender system of the Bantoid type, the Eastern Grassfields language Ngəmba (Cameroon) of the Ghomala' cluster operates an incipient numeral classifier system that is restricted to a given set of nouns. The present paper provides a first analysis of its semantic, morphosyntactic and etymological profile and explores its relation to the concurrent gender system following the model of Fedden & Corbett 2017. Semantically, Ngəmba numeral classifiers categorize counted items for their shape and texture (saliently one-dimensional long and rigid vs. two-dimensional flat shape vs. three-dimensional globular), their partition (morsel vs. lump vs. slice) and their arrangement or aggregation (pile vs. bunch vs. tuft) with an instance of conflation with the notion of counterexpectual scantiness and inferior quality (meagre portion). On the etymological level, Ngəmba numeral classifiers develop from ordinary generic nouns denoting concepts such as HEAD, HORN, GRAIN, STICK, POD, PILE and LUMP. Eventual loss of nominal properties indexes an incipient functional split of the lexical source item and the newly emergent word class of numeral classifier. While Ngəmba conforms with the profile of numeral classifier systems found in other Bantoid languages such as Tiv (Angitso 2020) and beyond (Kießling 2018) in these respects, it diverges by its morphosyntax in establishing a close bond between classifier and numeral to the exclusion of the enumerated noun.

Keywords: nominal classification, numeral classifiers, counting, quantification, Grassfields Bantu, Bamileke, Ghomala', Ngəmba

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1 Introduction

Numeral classifiers have not been recognized as a particularly prominent feature in African languages as reflected in their drastic underrepresentation in prominent surveys of the topic such as Aikhenvald (2000) and Gil (2013) and their complete absence in Dixon (1986) and Craig (1986, 1994). This picture grossly misrepresents reality, since there are languages across various branches of Niger-Congo that have innovated numeral classifier systems parallel to an existing noun class system (Kießling 2018, Angitso & Kießling *fc*). One of them is Ngəmba², an under-described Eastern Grassfields language of the Ghomala' cluster spoken in the Western region of Cameroon by approximately 500.000 speakers (Mensah & Mekamgoum 2017: 398).

Alongside a reduced noun class system of the Bamileke type (Voorhoeve 1968, Hyman, Voeltz & Tchokokam 1970, Soh 2008), Ngəmba operates an incipient numeral classifier system that is restricted to a given set of nouns, as demonstrated in (1).

- (1)a. *mà-sǎŋ mé njáŋ ppa wwù*
 6-teeth child CLF < STICK³ two fall
 'Two of the child's teeth have fallen out.'

² Within Eastern Grassfields Bantu, Ngəmba is classified as a variety of Ghomálá? called Ghomálá?-West (Dieu & Renaud 1983: 124) or Ghomálá?-Ngemba (Eberhard & al. 2022). Alternative names are Western Ngəmba (Watters 2003), Bamileke-Bamendjou (Joshua project) and Ngemba (Ghomala?) (Hammarström et al.). The ISO 639-3 standard used by the Ethnologue subsumes it with Ghomálá' under the code *bbj*, while the Glottolog assigns it an individual glottocode *ngem1253*. Ngəmba has five dialects, i.e. Bamendjou and Bameka in the Upper-Plateau, Bansa in the Menoua, Bamougoum in the Mifi and Bafounda in the Bamboutos. All of them are mutually intelligible.

The data utilized for this research was recorded, transcribed and translated by the first author over a period spanning from 2021 to 2024, during three consecutive and extensive fieldwork sessions conducted in the towns of Bamendjou and Bameka, which are part of the Ngəmba-speaking area. The study relies on the expertise of two male and two female language consultants, whose ages currently range from 54 to 71 years (see footnote 1 for their names).

³ Conventions of classifier notation in the interlinear glossings: Classifiers are identified by the abbreviation CLF followed by < and their approximate semantic range – or their lexical source meaning where existent – given in small caps.

- b. *mə-nttshóé mé mím-ppa wwǎ ssí*
 6-dress child 6-two fall ground
 ‘Two of the child’s dresses have fallen down.’

When it comes to counting certain items such as *mə-sòŋ* ‘teeth’, it is not enough to simply combine them with the numeral *ppa* ‘two’, but they rather have to be accompanied by a sortal classifier which, in this particular case, has to be *njáŋ* ‘stick’ (1a). Other nouns such as *nttshóé* (9/6) ‘dress’ are counted directly without support of any classifier item (1b). Remarkably, sortal classifiers such as *njáŋ* apply to nouns of high countability (Gil 2013), dividing the inventory of count nouns into semantic classes, each of which is associated with a different classifier.

The present study has two aims. In the first line, we present the typological profile of the Ngəmba numeral classifier system, which may exemplify a Bamileke standard, as evidenced by notable similarities to the numeral classifiers documented for Ngiemboon (Vinogradov 2009). Based on this, we intend to explore the degree to which this emergent system of nominal classification operates concurrently to the pre-existing gender system. With this two-pronged approach, the article proceeds as follows. Section 2 gives a condensed overview of the Ngəmba gender system. Section 3 examines the principal categories of the Ngəmba numeral classifier system, highlighting their semantic foundations, with a key distinction of sortal classifiers mainly motivated by shape criteria vs. mensural classifiers that are based on aggregation and partition concepts. It concludes with a discussion of the syntactic characteristics of Ngəmba numeral classifier constructions and the morphological correlates of the emergence of the classifier category. Section 4 explores the degree to which both systems match, overlap or diverge, applying the typological frame established by Fedden & Corbett 2017. Section 5 wraps up the findings in a conclusion.

2 The gender system

Eight noun classes can be identified on the basis of five sets of agreement marker series whose distribution is determined by agreement targets, i.e. modifiers within the noun phrase, as listed in table (2).

Possessive pronouns agree by series A that presents the maximal set of noun class differentiations, reflecting a general trend in Eastern

Grassfields Bamileke languages (Hamm 2011: 19). Agreement on numerals and the interrogative pronoun ‘how many’ cuts partially across the agreement system established on the basis of possessive concord in that nouns of plural classes 2 and 6 are re-distributed according to animacy. Agreement series C, D and E show different degrees of neutralisation with respect to noun class contrasts. Series C merges classes 1 and 3 on the one hand and classes 7 and 9 on the other hand. Series D merges both, thus reducing noun class contrasts in the singular to an opposition of class 5 vs. the rest. In series E, finally, all singular classes are lumped together in opposition to a three-way class contrast in the plural. Generally, classes 5 and 10 are only distinct by their different number values.

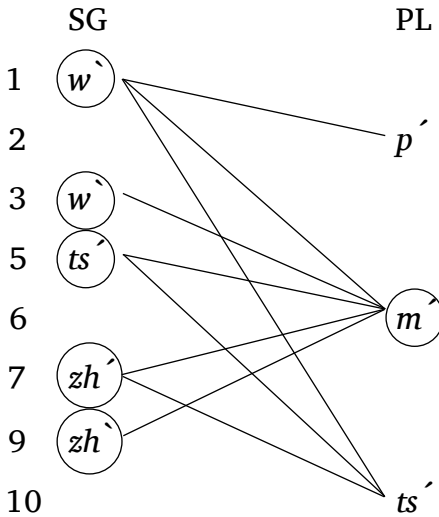
(2) Ngɔmba agreement classes and concordial series

class	number	A possessive pronouns	B numerals, 'how many?'	C pronominal demonstratives, 'which?'	D postnominal demonstratives, relative pronoun	E 'what, who, where'
1		w' - ~ w' - ~	wít-	w-		
3		zh' - ~ zh' - ~	zhít-	zh-	∅-	∅-
7	SG	ts' -	tsít-	ts-	ts-	
9		ts' -	tsít-	ts-	ts-	
5		p' -	má-	p-	p-	p- 'who, where'
10		m' -	má-, mít-	m-	m-	m- 'what'
2	PL					
6						

Noun class numbering follows the canonical Bantu system according to the Bleek-Meynhoof conventions (Katamba 2003) and applied to the Grassfields Bantu situation of Bamileke (Voorhoeve 1968, Hyman, Voeltz & Tchokokam 1970). Noun class membership is, to a limited extent, overtly marked by nominal prefixes (NPx) in the noun itself.

Ngəmba agreement classes pair in nine genders in total, i.e. 1/2, 1/6, 1/10, 3/6, 5/6, 5/10, 7/6, 7/10, 9/6, as listed in figure (3). Of these, six are major genders (marked by bold lines) and three are inquotate or minor genders. In addition, all classes except 2 and 10 form single class genders accommodating transnumeral nouns, as indicated by encircling. Various nouns allow for alternative plurals, e.g. *fʒk* (1/6~10) ‘cowife’.

(3) Ngəmba gender system



Gender 1/2 accommodates mostly nouns for humans. Exceptions include nouns like *kkhúp~mə-kkhúp* (1/2) ‘fingernail’. However, not all designations for humans are assigned to this gender, e.g. *fʒk* (1/6~10) ‘cowife’. Apart from nouns for humans, it also accommodates all nouns that originate in compounds with *mé/pó* (1/2) ‘child’, irrespective of whether the referent is human or animate non-human, and inanimates. Semantic assignment criteria are largely opaque, with the exception that minor gender 1/10 accommodates exclusively animates. Otherwise, non-human animates are distributed across genders 1/6, 5/6 and 9/6. Genders 3/6 and 7/6 include all types of

inanimates. Otherwise, inanimates are also found in 1/6, 5/6, 5/10, 7/10 and 9/6. Transnumeral nouns lack humans and cluster in the semantic domains of liquids, botanical items, insects, natural environment and meteorological phenomena and abstract concepts. They are opaquely distributed across the single-class genders 1, 3, 5, 6, 7 and 9. For more details see Mekamgoum & Kießling *fc*.

3 The numeral classifier system

In contrast to prototypical numeral classifier languages, the Ngəmba system is restricted in that classifiers are only used for a subset of nouns. They do not cover the entire nominal lexicon. So far, a total of 393 nouns have been found to require a classifier in counting. Furthermore, Ngəmba numeral classifiers are, to a large extent, etymologically transparent, since many of them derive in a cognitively motivated way from co-existing nouns. Morphosyntactically, the Ngəmba classifier forms a single unit with the numeral by adjacency since both items cannot be separated by any syntactic element.

3.1 Classifier categories

Ngəmba classifier items can be grouped in three broader categories according to semantic criteria as presented in table (4): sortal classifiers that apply to nouns of high countability subdividing them according to shape criteria, and mensural classifiers that provide nouns of low countability with a unit of measure in terms of aggregation or partition types.

(4) Ngəmba classifiers and their (source) meanings

	(source) meanings of classifier items
sortal classifiers	KERNEL, HORN, STICK, HANDLE, STAIN, HEAD, GRAIN, NEEDLE, SPECIES OF JUJUBE, CAL-ABASH, WELL/BOREHOLE < BUCKLED >, < LONGISH-FLEXIBLE >, < SIZABLE-ROUNDISH TUBER >
mensural classifiers: aggregation	PILE, PACKAGE, BUNCH, POD, TUFT, AGGLOMERATED PORTION, LONG AND THIN GROUP, SHORT AND LARGE GROUP, < BUNDLE >

mensural classifiers: partition	MORSEL, LUMP, SPROUT, SHORT PIECE, SLICE, FRAGMENT, FLAT SIDE, MEAGRE PORTION, < COMPONENT WITH FRUITS ATTACHED >, < COMPONENT WITH FRUITS OR TUBERS DETACHED >, < EXTENDED PART >
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Classifiers with transparent etymologies in co-existent nouns are cited in the second column of table (4) above according to the meaning of their nominal source item given in small caps. In all other cases where classifiers lack an immediately transparent nominal source item, their meaning is given by a brief semantic characterisation in angle brackets. Morphosyntactic and semantic properties of all three classifier types listed in table (4) will be discussed and exemplified in more detail in the following sections.

3.1.1 Sortal classifiers

Ngɔmba sortal classifiers found so far are listed in table (5). The first column gives the classifier's form – along with lexical meanings and specifications for gender for the ten classifiers that have transparent etymologies in co-existent nouns. The second column generalizes on the classifier's broader meaning as it can be inferred from its range of application. Exhaustive listing is indicated by the absence of [...] in table (5).

(5) Ngɔmba sortal classifiers

classifier (source form)	(source) meanings of classifier items
<i>m̄baŋ</i> (3/6) 'kernel'	small roundish objects: groundnut, bean, corn, rice, taro, palmtree, macabo, African plum, person [...]
<i>nd̄ɔŋ</i> (9/6) 'horn, whistle'	oblong fruits and tubers: sweet yellow yam, African plum, okra, groundnut pod [...] oblong containers like ampoules and small flacons for medicinal products
<i>n̄j̄áŋ</i> (9/6) 'stick, string'	longish and thin objects: wood, broom, tooth, hair, syringe (injected with fluid), grass [...]

classifier (source form)	(source) meanings of classifier items
<i>ngòem</i> (9/6) ‘grain’	smallish grainy things with curvy outlines: nuts, pepper, bean, corn, fish, bee, cricket, mosquito, worm, lice, ant, ticks, weevil, fly [...]
<i>páp</i> (7/6) ‘stain’	flat objects: leaf, plot of land, textile, iron sheet, plank [...]
<i>tǎ</i> (7/6) ‘well, borehole’	medium-sized roundish objects: avocado, orange, pineapple, coconut, papaya, mango, onion, tomato [...]
<i>tthwó</i> (7/6) ‘head’	sizable roundish objects: cabbage, pineapple, papaya, faeces, soil, salt, stone [...]
<i>cwò?ò</i> (7/6) ‘species of jujube’	maize
<i>sá?</i> (7/6) ‘needle’	tick ‘without eggs yet’
<i>tó</i> (7/6) ‘calabash’	pumpkin
<i>ngút</i> (9/6)	offshoot-like object or splash of liquid: mushroom, splash of water [...]
<i>nò?</i> (1/6)	objects with a non-straight buckled shape: banana, plantain, sweet potato, cassava, worm [...]
<i>ntè</i> (9/6)	long flexible string-like objects: thread, liana, cable [...]
<i>tǎm</i> (7/6)	sizable roundish solid tubers: macabo, taro, Irish potato [...]

In the following, three of these sortal classifiers, i.e. *mbaŋ*, *ngòem* and *nò?*, will be presented in detail.

3.1.1.1 *mbaŋ* (7/6) ‘kernel’

The noun *mbaŋ* (7/6) ‘kernel’ generally applies to orange pips, plum pits, lemon seeds or stones as in mangos, African plums, and avocado fruits. It is also used as numeral classifier to refer to small roundish objects such as certain tubers, fruits, nuts and grains, but also to persons, as listed in table (6) and exemplified in (7).

(6) Ngɔmba sortal classifier *m̄baŋ*

classifier	generalised classifier meaning and range of application
<i>m̄baŋ</i> (7/6) 'kernel'	small roundish objects: small tubers: small taro, macabo grains: rice, bean, corn, pepper, roundish spices and nuts nuts: groundnut, pumpkin seed, palmtree fruits: African plum small stones person

(7)a. *ŋwě pɛ m̄baŋ nákkhwa náŋ mbáŋá*
gather.IMP taro CLF < KERNEL four put pot
'Gather four (small) taros and put them in the pot!'

b. *ppĩ ta? m̄baŋ m̄á-kwú*
sow one CLF < KERNEL 6-bean
'Sow one bean!'

c. *ppĩ m̄á-kwú m̄baŋ nághám*
sow 6-bean CLF < KERNEL ten
'Sow ten beans!'

d. *zzhí nduní tso tso m̄baŋ tɛ*
3SG alone eat African.plum CLF < KERNEL five
'S/he alone ate five African plums.'

e. *m̄á ŋwak n-jó pò m̄baŋ nághám*
1SG arrive CS-see people CLF < KERNEL ten
'I arrived and met ten individuals.'

Outside the numeral classifier constructions presented in (7a–e) above and beside its usage as a simple noun in (8a), *m̄baŋ* (7/6) 'kernel' can be used for referential individuation of transnumeral terms that have a basic generic meaning such as *m̄ákwú* (6) 'beans' as in (8b–c).

(8)a. *páyà n-ddzó pyâ m-bbí m̄baŋ*
1PL.EXCL.FREQ CS-eat avocado CS-sow kernel
'When we eat avocado, we sow its seed.'

b. *ppĩ mbaŋ má-kwú*
 sow kernel 6-bean
 ‘Sow a (single) bean!’

c. *ppĩ mə-mbaŋ má-kwú*
 sow 6-kernel 6-bean
 ‘Sow (several) beans!’

Comparing (8c) to (7a, c–e) attests to the incipient grammaticalisation of *mbaŋ* as a classifier and its emancipation from the status of a full-fledged noun. While the source noun retains its nominal properties, as evident in its potential to pluralise by the form *mə-mbaŋ* ‘grains’ in (8c), the classifier derived from it exhibits loss of nominal properties in that the plural form is not accessible any longer in the plural contexts of (7a, c–e, 9a–b). Instead, an invariable classifier form *mbaŋ* is used in both singular (7b) and plural contexts (7a, c–e; 9a–b). It is precisely this neutralisation of formal number contrasts that indexes the incipient functional split of lexical source and classifier function here, as taken up in section 3.3.

(9)a. *á ttsó tso mbaŋ tɛ̀*
 3sg eat African.plum CLF < KERNEL five
 ‘S/he ate five African plums.’

b. *á ttsó tsôn⁴ á zh-ɛ⁵ mbaŋ*
 3sg eat 7.African.plum 1SG.POSS 7-that CLF < KERNEL
tɛ̀
 five
 ‘S/he ate those five African plums of mine.’

There is overlap in the range of application of this classifier with the classifier *ŋgɔ̀m* ‘grain’, discussed in section 3.1.1.2 below, with respect to items such as groundnuts, beans, rice, corn and pepper.

3.1.1.2 *ŋgɔ̀m* (9/6) ‘grain’

The noun *ŋgɔ̀m* (9/6) ‘grain’ is used as numeral classifier in counting smallish objects with curvy outlines such as grains, nuts, small insects

4 In Ngɔmba, low-toned nouns attract a high tone when followed by the possessive pronoun, to form a rising low-high contour, while mid- and high-toned nouns attract a low tone in the same environment to form a falling high-low contour.

5 Class 7 concord in this item is triggered by the noun class of the enumerated noun *tso* ‘African plum’, not by the noun class of the classifier.

and all types of fish and worms, as detailed in table (10) and exemplified in (11). Remarkably, it also applies to a less concrete concept such as *nàghà(n)* ‘word’.

(10) Ngɔ̀mba sortal classifier *ngòèm*⁶

classifier	generalised classifier meaning and range of application
<i>ngòèm</i> (9/6) ‘grain’	smallish grainy objects with curvy outlines: grains: rice, bean, corn pepper, garlic [...] nuts: groundnut, pumpkin seed [...] small insects: bee, cricket, fly, lice, mosquito, chigoe flea, chafer larva, ant, ticks, weevil, cock- roach [...] fish, worm, jigger that has eggs already [...] thoughtful word, advice [...] traditional Bamileke bead [...]

- (11)a. *pé* *tà?* *ngòèm* *mbəzháj* *n-cwí*
take.IMP one CLF < GRAIN groundnut CS-give.to.me
‘Take one groundnut and give it to me.’
- b. *məngóep* *mpfet* *ngəsáj* *ngòèm* *tét*
chicken eat corn CLF < GRAIN three
‘The chicken ate three grains of corn.’
- c. *mamá* *‘lá* *ná?* *pána* *məlúlú*
Mummy cook sauce ASS type.of.dry.fish
ngòèm *nàkkhwà*
CLF < GRAIN four
‘Mummy cooked the sauce with four fish.’
- d. *á* *hii* *tà?* *ngòèm* *nàghà* *a* *ně*
3SG give.3SG one CLF < GRAIN word 3SG MIT

6 There is some overlap in the range of application of the classifiers *ngòèm* and *mɔ̀ɔ̀* in that the items rice, bean, corn and pepper combine with both. At the present stage of knowledge, it is not clear whether they are completely interchangeable or whether there is some subtle semantic difference.

ncchyó

stay

‘S/he gave him/her one thoughtful word, and s/he stayed quiet.’

- e. *mà kà há ntàghà mbbúu ηgòem tét*
 1SG P2.IPFV give advice to.3SG CLF < GRAIN three
mǒ
 on.it

‘I gave him/her three pieces of advice about that (issue).’

In collocation with the numeral *tà?* ‘one’, *ηgòem* (9/6) ‘grain’ can be used for pejorative diminutivisation, e.g. with ‘intelligence in (12a) or for apportionment as in (12b).⁷

- (12)a. *m-bə tà? ηgòem sshyǒnnò cǎ*
 CS-be one CLF < GRAIN intelligence NEG
tthwúu bhó
 head.3SG.POSS NEG

‘S/he does not even have one bit of intelligence in his/her head.’

- b. *mâ-ηgòem sshyǒnnǒ bhá?á m-bá*
 DIM-CLF < GRAIN intelligence like.that CS-be
tthwúu
 head.3SG.POSS

‘(As you see him/her), there is some little grain of intelligence in his/her head.’

Outside the numeral classifier constructions presented in (11a–e) above, *ηgòem* (9/6) ‘grain’ can be used for referential individuation of transnumerals that have a basic generic meaning such as *ηgəsáy* (9) ‘corn’ as in (13a–b).

- (13)a. *məηgóp mpfet ηgòem ηgəsáy*
 chicken eat grain corn
 ‘The chicken ate a grain of corn.’

⁷ In both cases, *ηgòem* (9/6) ‘grain’ could be replaced by *njáy* (9/6) ‘stick; string’ as well.

- b. *məŋgɔ́ɛp mpfɛt mə-ŋgǎm⁸ ŋgəsâŋ m-á*
 chicken eat 6-grain corn 6-1SG.POSS
 ‘The chicken ate my grains of corn.’
- c. *məŋgɔ́ɛp mpfɛt ŋgəsâŋ à ŋgǎm tét*
 chicken eat corn 1SG.POSS CLF < GRAIN three
 ‘The chicken ate my three grains of corn.’
- d. *mbbvó mpfɛt físsy-à ŋgǎm tét*
 6-dog eat fish-1SG.POSS CLF < GRAIN three
 ‘The dogs ate my three fish.’

Examples (13a–b) prove that the numeral classifier *ŋgǎm* is actually derived from a coexistent full-fledged noun *ŋgǎm* (9/6) ‘grain’. Furthermore, comparison to (11) and (13c–d) above reveals an incipient grammaticalisation. While the source noun retains its nominal properties, as evident in its potential to pluralise by the form *mà-ŋgǎm* ‘grains’ in (13b), the classifier derived from it exhibits loss of nominal properties in that the plural form is not accessible any longer in the plural contexts of (11b–c), even when the counted noun is modified by pronominal possessives (13c–d). Instead, an invariable classifier form *ŋgǎm* is used in both singular (11a) and plural contexts (11b–c; 13c–d).

3.1.1.3 *nɔ̀?* (1/6)

The sortal classifier *nɔ̀?* is applied for counting objects with a longish buckled shape that is not straight such as bananas (14a), plantains, sweet potatoes, cassavas, worms and caterpillars (14b).

- (14)a. *pé kàncyǎ à nɔ̀? ppa ná*
 take banana 1SG.POSS CLF.BUCKLED two with
ŋ-ke mɛn ǎ
 CS-feed child PROX
 ‘Take two bananas of mine and feed this child with them.’
- b. *càcchò ǎ nɔ̀? tǎ fɔ́ cchyœ*
 caterpillar DIS CLF.BUCKLED five leave up

⁸ Tonal phenomena such as the final rising tone in *má-ŋgǎm* and the final falling tone in *ŋgəsâŋ* are not fully understood.

ŋ-ggwí ssi

CS-fall ground

‘Those five caterpillars fell down from above.’

Outside the numeral classifier constructions, *nɔ̃ʔ* can also be used for referential individuation of terms that have a basic generic meaning such as *kànc̣cyǎ* (1) ‘banana’ as in (15a–b).

- (15)a. *pé nɔ̃ʔ kànc̣cyǎ w-ɯ w-ě ná*
 take buckled.item banana 1-2PL.POSS 1-DIS with
ŋ-ke mɛn ǎ
 CS-feed child PROX

‘Take that banana of yours and feed this child with it.’

- b. *pé má-nɔ̃ʔ kànc̣cyǎ m-á ná ŋ-ké*
 take 6-buckled.item banana 6-1SG.POSS with CS-feed
mɛn ǎ
 child PROX

‘Take bananas of mine and feed the child with them.’

While there is no co-existent independent source noun from which the classifier *nɔ̃ʔ* may have been derived, it clearly betrays a nominal origin, as attested by its plural form of noun class 6 *má-nɔ̃ʔ* in (15b).

3.1.1.4

Derivational properties of (sortal) numeral classifiers

Sortal numeral classifiers do not split the semantic space in complementary parts. Instead, there is (considerable) overlap in the scope of individual classifiers. In general, classifier contrasts allow for fine-grained meronymic distinctions in domains such as liana, kolanuts or bananas and plantains. For example, a single banana or plantain is referred to by the classifier *nɔ̃ʔ* (16a), as discussed in section 3.1.1.3 above; reference to a bundle of bananas can be achieved by the classifier *ncwaj* (16b), as discussed in section 3.1.2.1.1, and the entire bunch is referred to as *tshòè* (16c).

- (16)a. *pé kànc̣cyǎ nɔ̃ʔ ppa ná ŋ-ke mɛ(n)*
 take banana CLF.BUCKLED two with CS-feed child
ǎ
 PROX

‘Take two bananas and feed this child with them.’

- b. *má* 'lá *kànc̣cyǎ* *ncwaj* *tét*
 1SG cook banana CLF.BUNDLE three
 'I have cooked three bundles (hands) of bananas.'
- c. *kànc̣cyǎ* *w-ək* *w-ǎ* *ttshòè* *ppá* *chí'ná*
 banana 1.PL.EXCL 1-PROX CLF.BUNCH two stand
ndœ
 house
 'These two bunches of bananas of ours are in the house.'

Along the same line, the counting of groundnuts requires specification of whether reference is being made to the entire pod by the classifier *mbaj* (17a) or to individual grains by *ngòem* (17b).

- (17)a. *mbəzháj* *mbaj* *ppa*
 groundnut CLF < KERNEL two
 'two groundnuts (pods)'
- b. *mbəzháj* *ngòem* *ppa*
 groundnut CLF < GRAIN two
 'two groundnuts (grains)'

Furthermore, some sortal classifiers seem to have derivational properties in that they allow speakers a certain degree of liberty in the semantic construal of classified items. Thus, *tǎm* is the general classifier used for counting tubers such as taro (18a), while *mbaj* can be used alternatively to construe the item as rather smallish (18b).

- (18)a. *pé* *tǎm* *ppa*
 taro CLF.ROUNDISH.TUBER two
 'two taros'
- b. *pé* *mbaj* *ppa*
 taro CLF < KERNEL two
 'two (small size) taros'

The local pepper variety that naturally has the same small size as groundnuts is counted with the classifier *ngòem* (19a), but *mbaj* can be used for the non-local variety with a bigger size (19b).

- (19)a. *tà?* *ngòem* *sók*
 one CLF < GRAIN pepper
 'one (grain of Cayenne) pepper'

- b. *tàʔ mbaŋ sɔk*
 one CLF < KERNEL pepper
 ‘one (grain of big size) pepper’

Regarding abstract notions like words, the classifier *njáj* is generally used for counting any word, irrespective of its quality, i.e. whether it is stupid or wise (20a), whereas the application of *ngòem* upgrades its quality, construing it as wise and thoughtful (20b).

- (20)a. *tàʔ njáj nàghà* b. *tàʔ ngòem nàghà*
 one CLF < STICK word one CLF < GRAIN word
 ‘one word’ ‘one (thoughtful) word’

3.1.2 Mensural classifiers

In contrast to the sortal classifiers, Ngəmba mensural classifiers provide nouns of low countability such as *mbap* (9) ‘meat’ with a unit of measure in terms of aggregation or partition types.

3.1.2.1 Aggregation

Ngəmba mensural classifiers that provide nouns of low countability with a unit of measure in terms of aggregation types are listed in table (21). All of them have transparent etymologies in co-existent nouns that occur outside the classifier construction.

(21) Ngəmba mensural classifiers for aggregations

classifier (source form)	(source) meanings of classifier items
<i>ncwaŋ</i> (1/6) ‘woven object, bundle (with multiple extensions)’	items that come in multiple extensions: plantain, banana
<i>mbàʔ</i> (9/6) ‘bundle’	bundle of items: clothes, firewood, liana, bamboo, grass [...]
<i>nàkǎʔ</i> (5/6) ‘pile, heap’	pile or heap: stone, cloth, grass, vegetable, firewood, ants, bee [...]
<i>nsshyàè</i> (9/6) ‘portion’	portions obtained by bringing together separate items. Each portion should be picked up with a sweeping motion of the hands: cocoyam, taro, plantain, banana, groundnut, thread [...]

classifier (source form)	(source) meanings of classifier items
vɔŋ (7/6) ‘troop, group’	long and thin group of individuals: people, animals, goats, cows, ants [...]
kǎ (7/6) ‘troop, group’	short and large group of individuals: swarm of bees, people, friends [...]
nəpũ? (5/6) ‘package, parcel’	any bundle wrapped in a cover: cooked koki, couscous, or pumpkin seed [...] textile, money, book, money, tobacco, thread, [...]
ŋgè (9/6) ‘pod’	Pods: kolanut [...]
tũ? (7/6) ‘tuft’	tuft of very short stubbly items: grass, hair, thread, soap [...]
ttshè (7/6) ‘entire bunch’	items that come in a natural bunch: entire bunch of plantain, banana, palmtree, raffia fruit and coconut [...]

In the following, two of these mensural classifiers, *ncwaj* and *nəpũ?*, will be presented in detail.

3.1.2.1.1 *ncwaj* (1/6) ‘woven nest, bundle (with multiple extensions)’

The aggregational noun *ncwaj* denotes woven structures, including cobwebs (22d) and nests made by certain birds and mice. As mensural classifier, it is used in enumerating natural aggregates of objects that have multiple extensions such as bundles of bananas and plantains, as shown in (22a–c).

- (22)a. *má* *zhwɛ* *tà?* *ttshè* *kəndɔŋ* *a* *hà*
 1SG buy one CLF < BUNCH plantain 3SG give
ncwaj *nəkkhwà*
 CLF < BUNDLE four

‘I bought one bunch of plantain, and it yielded four bundles.’

- b. *há* *tà?* *ncwǎŋ* *kəndɔŋ* *mbbó* *mò*
 give one CLF < BUNDLE plantain to 1SG
 ‘Give me one bundle of plantains!’

- c. *pé kàndɔŋ á zh-é ncwaŋ*
 take 7.plantain 1SG.POSS 7-ANA CLF < BUNDLE
tét n-cwí
 three CS-give.to.me
 ‘Take those three bundles of plantain of mine (you and I know of) and give them to me.’
- d. *ncwǎŋ máŋkkɛ wít-ppa w-ě*
 nest 1.spider 1-two 1-DIS
 ‘Over there, there are two cobwebs (nests of spider).’

Beyond its role in numeral classifier constructions, *ncwaŋ* can also be used for referential aggregation of terms like *kàncɔyě* (1) ‘banana’ as in (23a–b). In this case, it retains its potential to trigger noun class agreement according to its gender (1/6).

- (23)a. *ncwǎŋ kàncɔyě w-ǎ*
 CLF < BUNDLE 1.banana 1-PROX
 ‘This is a bundle of banana.’
- b. *mà-ncwǎŋ kàncɔyě m-ǎ*
 6-BUNDLE banana 6-PROX
 ‘These are bundles of banana.’

The incipient dissociation of the mensural classifier function from its source noun is accompanied by the loss of nominal properties. While the noun *ncwaŋ* (1/6) retains its nominal properties, as evident in its potential to trigger noun class agreement in the demonstratives in (23a–b) and to pluralise by the form *mà-ncwaŋ* ‘bundles’ in (23b). The classifier derived from it exhibits loss of nominal properties in that the plural form is not accessible any longer in the plural context of (22a, c). Instead, an invariable classifier form *ncwaŋ* is used in both singular (22b) and plural contexts (22a, c).

The fine-grained meronymical distinctions in the domain of plantains and bananas raise a problem with respect to the categorization of the mensural classifier *ncwaŋ* as either aggregational or partitional. From the point of view of the single banana or plantain, *ncwaŋ* presents an aggregation of individual fruits. From the point of view of the entire bunch, though, *ncwaŋ* rather presents a partition.

3.1.2.1.2 *nəpũ?* (5/6) ‘package, parcel, batch’

The aggregational noun *nəpũ?* (5/6) ‘package, parcel, batch’ is used as mensural classifier for food items that are packed in wrappers before being cooked, e.g. macabo porridge, couscous and *koki* (24a–b), a type of cake of black-eyed peas. It is also commonly used for a six-yard unit of African textile (24c) and any collection of items that are being packaged in wrappers, e.g. books (24d) and banknotes (24e).

(24)a. *cyé* *tà?* *nəpũ?* *kokí* *mbará* *pfét*
take.out.IMP one CLF < PACK koki pot eat.IMP
‘Take one ball of koki from the pot and eat.’

b. *cyé* *kokí* *zh-ú* *zh-ě* *nəpũ?*
take.out.IMP 7.koki 7-2SG.POSS 7-DIS CLF < PACK
tét *pfét*
three eat.IMP
‘Take three balls of that koki of yours and eat.’

c. *sún* *ǎ* *ha* *tà?* *nəpũ?*
friend 1SG.POSS.SM give one CLF < PACK
ssanjaà *w-u*
African.textile 1-2PL.POSS
‘My friend has offered you one pack of six-yards of African textile.’

d. *má* *zhwɛ* *ɲwà?nə* *nəpũ?* *nəghám* *mbbó*
1SG buy book CLF < PACK ten to
fél *à*
lovely.junior 1SG.POSS
‘I have bought ten packages of books for my lovely junior sibling.’

e. *má* *zhɔ* *ɲkap* *nəpũ?* *tét* *pàm í*
1SG see money CLF < PACK three bag 3SG.POSS
‘I have seen three batches of money in his/her bag.’

Outside numeral classifier constructions, *nəpũ?* can also be used for referential aggregation of terms such as *koki* (7) ‘black-eyed peas’ cake’ as in (25b) or without any specific reference to the packaged items (25a).

- (25)a. *ŋ-gõ nã-kkhwɔ nã-pũ? ts-á mbò pɔ cɛnã*
 1SG-go INF-receive 5-pack 5-1SG.POSS then SID send
 ‘I am going to collect my parcel that they have sent.’
- b. *cyé mã-mbũ? koki m-ě nã ŋ-go*
 remove.IMP 6-pack koki 6-DIS with CS-go
 ‘Take those balls of koki and go with them (take those balls of koki along).’

Comparing (24) to (25) reveals the incipient grammaticalisation of *nãpũ?* as a numeral classifier and its emancipation from the source noun *nãpũ?* (5/6) ‘package, parcel, batch’. While the noun retains its nominal properties, as evident in its potential to trigger noun class agreement in the pronominal possessive in (25a) and to pluralise by the form *mã-mbũ?* ‘packages’ in (25b), the classifier derived from it exhibits loss of nominal properties in that the plural form is not accessible any longer in the plural context of (24b, d–e). Instead, an invariable classifier form *nãpũ?* is used in both singular (24a, c) and plural contexts (24b, d–e). Apart from this neutralisation of formal number contrasts, nominal decategorization of the numeral classifier also entails the loss of the potential to accommodate modifiers such as demonstratives and possessives, as illustrated in (24b) where both modifiers, pronominal possessive and distal demonstrative, are indexed for class 7 in agreement with *koki*, but not with class 5 or 6 of the classifier’s source noun.

3.1.2.2 Partition

Ngõmba mensural classifiers that provide nouns of low countability with a unit of measure in terms of partition types are listed in table (26). All of them but *ntá?* (9/6) have transparent etymologies in co-existent nouns that occur outside the classifier construction.

(26) Ngõmba mensural classifiers for partitions or portions

classifier (source form)	(source) meanings of classifier items
<i>ssǎ</i> (5/6) ‘flat side’ < <i>nǎssǎ</i> ‘buttock’	flat surface: house, farm [...]
<i>ntá?</i> (9/6)	slim and longish extension separated from an organic whole: tree branch, tears, water, bamboo, wood, leg, arm, each of the twins, bâton de manioc (cassava rolled in leaves and having longish and slim shape) [...]
<i>pák</i> (7/6) ‘slice, peeling’	part: any part of a whole that is obtained by splitting [...]
<i>kàm</i> (7/6) ‘short piece, cut section’	part: any part of a whole that is obtained by cutting [...]
<i>pá?</i> (7/6) ‘fragment, broken piece’	piece: meat, wood, yellow yam, macabo [...]
<i>nǎghǎ?</i> (5/6) ‘meagre portion’	meagre portion: meat, food, person, plot of land [...]
<i>khàm</i> (7/6) ‘morsel, piece’	compact lump or conglomeration of solid and hard/tough items: stone, stony soil, clay, block, meat, hard couscous morsel, hard faeces, soap [...]
<i>nǎkhǎ?</i> (5/6) ‘component with its fruits still attached’	coffee, groundnut
<i>ŋkhá?nǎ</i> (9/6) ‘component with its fruits or tubers detached’	sweet potatoe, groundnut, pumpkin
<i>mbá?</i> (9/6) ‘bite’	bundle or malleable ball of items: all types of cooked couscous, kneaded soil [...]

Partitional nouns in numeral classifier function can further be subdivided according to whether reference is made to the manner of separation as with *kàm* and *pák* or to haptic criteria pertaining to the shape, texture and consistency of the resulting parts as with *khàm*, *mbá?*, *ntá?* and *ssǎ*. The partitional numeral classifier *nǎghǎ?* is special in that it includes an evaluative notion of pejorativity. The classi-

fier *pá?* seems to be the most neutral one in that it lacks any other semantic notions beside partition. In the following, two of these men-
sural classifiers, *ntá?* and *nàghǎ?*, will be discussed in more detail.

3.1.2.2.1 *ntá?* (9/6)

The partitional classifier *ntá?* (9/6) is used for two interrelated func-
tions. First, it applies in counting extended objects that form part of
a larger entity, e.g. limbs like the whole arm and leg, extremities of
botanical objects such as tree branches, lianas and bamboo. Second,
it provides nouns of low countability, especially liquids, with a unit
of measure, e.g. tears, water and snot, while at the same time acti-
vating the concept of an oblong shape, as in the case of tears running
down the cheeks in extended trickles and snot oozing out from the
nose (27).

(27)a. *mé* *ɛ* *tà* *ccyóé* *màttshôé* *ntá?* *ppa*
child cry until emit snot CLF.EXTENSION two
‘The child has cried to the extent of having two snots oozing
out from her nose.’

b. *pàk* *ghǎ* *llǎ* *ndəŋ* *ntá?* *nàghám*
1PL.EXCL F0 take bamboo CLF.EXTENSION ten
nǎ *kwít* *ŋkǎŋká?*
with build fence
‘We are going to use ten bamboo poles to build the fence.’

c. *tà?* *ntá?* *sshycənátsák* *fə* *nə-tsák*
one CLF.EXTENSION tear leave 5-eye
i *fíí*
3SG.PREP come.down
‘One tear flowed (ran down) from his/her eye.’

Outside the numeral classifier constructions in (27), *ntá?* (9/6) can
also serve referential individuation in application to liquids such as
snot (28a–b) and tears (28c).

(28)a. *mé* *ɛ* *tà* *cyóé* *ntá?* *màttshóé*
child cry until emit extension snot
‘The child has cried to the extent that it had snot running
from the nostril.’

- b. *mé le tà cyóe mə-ntá? mətshóe*
 child cry until emit 6-extension snout
 ‘The child has cried to the extent that it had snout running from the nostrils.’
- c. *mà-ntá? shshycenátsák kwě nə-tsək ì*
 6-extension tear come.out 5-eye 3SG.POSS
nchwò nǎlê
 due.to crying
 ‘Tears poured out from his/her eye because of crying.’

The point is that the numeral classifier item *ntá?* in (27) is distinct from its nominal source noun *ntá?* (9/6) by loss of the potential to pluralise, as can be seen from the usage of an invariable form *ntá?*, irrespective of singular (27c) or plural reference (27a–b), in numeral classifier constructions, whereas the plural form *mə-ntá?* is retained in contexts of individuation (28b–c).

3.1.2.2.2 *nəghǎ?* (5/6) ‘slim and tiny peel; meagre portion’

The partitional noun *nəghǎ?* (5/6) ‘slim and tiny peel; meagre portion’ is used as a devaluative mensural classifier to refer to a counterexpectual low number of items of inferior quality. It applies to nouns for humans, e.g. person (29a) and to inanimates, e.g. plots of land (29b), and to nouns of low countability such as substances, e.g. meat (29c). In this particular case, the grammaticalisation of the source noun as classifier is indexed by an optional loss of the erstwhile noun class 5 prefix *nə-*, indicated by bracketing in (29).

- (29)a. *pò (nə)ghǎ? ppa sǔ? chú?cə*
 people CLF.MEAGRE.PORTION two come meeting
 ‘Only two people came to the meeting.’
- b. *má wě má-cchó pà? m-á*
 1SG have 6-plot house 6-1SG.POSS
(nə)ghǎ? ppa
 CLF.MEAGRE.PORTION two
 ‘I have my two meagre plots of land.’
- c. *ssǒ tə? (nə)ghǎ? mbap*
 detach.fiber one CLF.MEAGRE.PORTION meat

n-cwí *mà* *pfét*
 CS-give.to.me 1SG eat

‘Take out one fiber of meat and give it to me so that I eat it!’

Outside the numeral classifier constructions in (29) above and beside its basic meaning ‘slim and tiny peel’ presented in (30a–b), *nəghǎ?* (5/6) can be used in its generalised meaning ‘meagre portion’ for depreciative reference to any item, irrespective of its degree of countability, as seen in its application to ‘meat’ (29c) and to ‘person’ (29a). The depreciative notion probably results from the fact that objects are conceptualised as insignificant portions, denying them the quality of a full-fledged member of the category.

(30)a. *(nə-)ghǎ?* *ne* *kkhwǒ* *mé* *mbǎ* *sèt*
 5-tiny.peel on leg child then.3SG peel.off
 ‘There is a tiny (skin) peel on the child’s leg that has peeled off.’

b. *á* *lǎ?* *ŋkabh* *ǐ* *nə-ghǎ?*⁹ *lǎŋ?*
 3SG hide money 3SG.POSS 5-tiny.peel stone
 ‘S/he has hidden his/her money in the tight space under the stone.’

c. *mə-ghǎ?* *tthwúu* *n-dú*
 6-tiny.peel head.3SG.PREP CS-be.full
 ‘There is a lot of dead skin on his/her head.’

3.2 Syntactic properties of Ngɔmba numeral classifier constructions

Syntactically, Ngɔmba numeral classifier constructions come in two radically different types, depending on the number of enumerated items. In singular numeral classifier constructions, the numeral *tà?* ‘one’ precedes the classifier that is followed by the enumerated noun, yielding the sequence NUM CLF N. Plural numeral classifier constructions involving numerals other than *tà?* ‘one’ present an exact mirror image with the enumerated noun in initial position followed directly by the classifier and the numeral in final position, i.e. N CLF NUM.

⁹ *Nəghǎ?* as head of the noun phrase *nəghǎ? lǎŋ?*, i.e. the tiny space between a big stone and the ground, cannot undergo morphological reduction by dropping the prefix *nə-*.

This is illustrated in (31). The singular numeral classifier construction in (31a) requires the numeral *tà?* ‘one’ in initial position preceding the classifier *njâŋ* that is followed by the enumerated noun *sá?* ‘needle, injection’. Contrary to this, the enumerated noun comes first in the corresponding plural construction in (31b), followed by the classifier and finally by the numeral *ntòghó* ‘six’.

(31)a. *lókǎ sòp tà? njâŋ sá? nəl i*
 doctor prick one CLF < STICK needle on O3SG
 ‘The doctor gave him/her one injection.’

b. *lókǎ sòp sá? njâŋ ntòghó nəl i*
 doctor prick needle CLF < STICK six on O3SG
 ‘The doctor gave him/her six injections.’

In more complex classifier constructions, it is only the enumerated noun that accepts additional modifiers, but not the classifier itself, as indicated in (9b) above and demonstrated in (32a–c) for the classifier *ndóŋ* (9/6) ‘horn’ below. Thus, pronominal possessives such as 1SG *á* and demonstratives such as the proximal *ǎ* ‘this’ modify the enumerated noun, as can be seen in (32a) where both show the concordial prefix *ts-* of class 5 in accordance with the enumerated noun *nəlǎ?* (class 5) ‘sweet yellow yam’, rather than the concordial prefix *zh-* of class 9, i.e. the noun class of the classifier’s source noun *ndóŋ* (9/6) ‘horn’ (32b–c).

(32)a. *fĭn nəlǎ? ts-á ts-ǎ*
 sell.IMP sweet.yellow.yam 5-1SG.POSS 5-this
ndóŋ nòghám
 CLF < HORN ten
 ‘Sell these ten sweet yellow yams of mine!’

b. **fĭn nəlǎ? *zh-á *zh-ǎ*
 sell.IMP 5.sweet.yellow.yam 9-1SG.POSS 9-this
ndóŋ nòghám
 CLF < HORN ten

c. **fĭn nəlǎ? *ndóŋ *zh-á*
 sell.IMP 5.sweet.yellow.yam CLF < HORN 9-1SG.POSS
**zh-ǎ nòghám*
 9-this ten

Modification in classifier constructions is only possible for the enumerated noun, yielding structures such as [N₁ CP₁-POSS CP₁-DEM] [CLF NUM]. Alternative constructions such as *N₁ CLF₂ CP₂-POSS CP₂-DEM NUM are ungrammatical.

Both, singular and plural numeral classifier constructions allow for split by insertion of adjuncts such as adverbials, adjectives, and prepositional phrases. Thus, in the plural numeral classifier constructions in (33a–b), the enumerated noun *sá?* ‘needle, injection’ is separated from the classifier *njáj* and the numeral *ntòghó* ‘six’ by intrusion of the prepositional phrase ‘on him/her’ (33a) and an additional adverbial *ta* ‘until’ (33b).

(33)a. *lókǎ sǒp sá? nál i njáj ntòghó*
 doctor prick needle on O3SG CLF < STICK six
 ‘The doctor gave him/her six injections.’

b. *lókǎ sǒp sá? nál i ta njáj*
 doctor prick needle on O3SG until CLF < STICK
ntòghó
 six
 ‘The doctor gave him/her as much as six injections.’

In the singular classifier constructions in (34), the enumerated noun *sá?* ‘needle, injection’ is separated from the numeral *tà?* ‘one’ and the classifier *njáj* by intrusion of the prepositional phrase ‘on him/her’ (34a) and additional adverbials such as *ndǎ?* ‘only’ (34b), the emphasis marker *mbə* (34c), and the adjective *fǎfók* ‘white’ (34d).

(34)a. *lókǎ sǒp sá? nál i tà? njáj*
 doctor prick needle on O3SG one CLF < TICK
 ‘The doctor gave him/her but one injection.’

b. *lókǎ sǒp sá? nál i ndǎ? tà?*
 doctor prick needle on O3SG only one
njáj
 CLF < STICK
 ‘The doctor gave him/her but just one injection.’

c. *lókǎ sǒp sá? nál i bhə ndǎ? tà?*
 doctor prick needle on O3SG EMPH only one

njáŋ

CLF < STICK

‘The doctor unexpectedly gave him/her but just one injection.’

- d. *lókṭǎ sǒp tà? njáŋ fáfók sá? nál*
 doctor prick one CLF < STICK white needle on
i
 O3SG

‘The doctor gave him/her one injection of white colour.’

The common denominator shared by both types of alternative constructions is the bond between the numeral and the classifier. Both forms are immediate syntactic constituents, excluding the enumerated noun. While it is possible for preposed adverbials to intervene between the enumerated noun and the core unit of classifier plus numeral as demonstrated in (33–34), any separation of the classifier from the numeral results in ungrammatical formations (35).

- (35)*a. *lókṭǎ sǒp sá? njáŋ nál i ntòghó*
 doctor prick needle CLF < STICK on O3SG six

- *b. *lókṭǎ sǒp tà? ndǎ? njáŋ sá? nál i*
 doctor prick one only CLF < STICK needle on O3SG

The syntax of the emergent numeral classifier system of Ngəmba, i.e. [CLF NUM] / [NUM CLF], thus conforms with two prominent typological generalisations, i.e. the assumption of adjacency of numerals and classifiers in classifier constructions (Aikhenvald 2000: 104–5, following Greenberg 1972 and Allen 1977) and the claim of an immediate constituency of classifier and numeral in classifier constructions (Dixon 1986; Aikhenvald 2000: 105). In an areal perspective, though, these syntactical parameters of Ngəmba numeral classifier constructions are at odds with constituency relations obtaining in emergent numeral classifier systems in other branches of Bantoid. For example, in Ekoid languages such as Ejagham (Watters 1981), and in Tivoid languages such as Tiv (Angitso 2020) and Ugare (Angitso & Kießling *fc*), a mirror image situation is rather to be found: The classifier is always adjacent to the enumerated noun and both form an immediate constituent [CLF N] excluding the numeral.

3.3 The emergence of a numeral classifier category

Ngõmba sortal and mensural numeral classifiers discussed in section 3.1 have been shown to derive from full-fledged nouns as is evident, in the majority of cases, from the co-existence of a noun with a formally identical item that is used in a classifier construction. The emergence of an independent taxonomic classifier category is directly reflected in nominal decategorization, i.e. the gradual loss of nominal properties in the set of the erstwhile classifying nouns, indexing the functional split of the classifier from its lexical source. Nominal properties affected by this loss generally pertain to (a) syntactic autonomy, (b) the number distinction, (c) concordial agreement features, (d) the potential to accept modifiers and, eventually, (e) morphological erosion (Kießling 2018). All of these can be found in Ngõmba classifiers, as summarized in table (36).

(36) Parameters of nominal decategorization in Ngõmba classifier items

	source noun	classifier
Syntactic autonomy	+	+ /-
Number distinction	+	-
Trigger of gender agreement	+	-
Accepts modifiers	+	-
Morphological erosion	-	+ /-

The source nouns of most sortal and mensural classifiers retain the full gamut of their nominal properties, as is evident from their potential to derive distinct plural forms, mostly assigned to noun class 6 marked overtly by *mə-*, and to trigger noun class agreement, e.g. with numeral modifiers in (37–40).¹⁰

(37)a. *tàʔ tthwó*
 one 7.head
 ‘one head’

b. *tthwó zhít-tét*
 7.head 7-three
 ‘three heads’

¹⁰ The (b)-examples in (37–40) actually show that the number notion is fading out in Ngõmba singulars. While the plural forms are restricted to plural reference in (37c–40c), the corresponding singular forms are semantically vague with respect to number and could be used for singular reference as in (37a–40a) or in contexts where reference is being made to plurals as in (37b–40b).

- c. *mə-tthwó* *mín-tét*
6-head 6-three
'three heads'
- (38)a. *tà?* *pǎp*
one 7.stain
'one stain'
- b. *pǎp* *zhít-tè*
7.stain 7-five
'five stains'
- c. *mà-pǎp* *mín-tè*
6-stain 6-five
'five stains'
- (39)a. *tà?* *nà-pǔ?*
one 5-package
'one package'
- b. *nà-pǔ?* *tsít-ppa*
5-package 5-two
'two packages'
- c. *mà-mbǔ?* *mím-ppa*
6-package 6-two
'two packages'
- (40)a. *tà?* *nà-ssǎ*
one 5-buttock
'one buttock'
- b. *nà-ssǎ* *tsít-ppa*
5-buttock 5-two
'two buttocks'
- c. *mà-ssǎ* *mím-ppa*
6-buttock 6-two
'two buttocks'

In classifier usage, however, these items lose both properties, i.e. they converge in an invariable number-indistinct form and they do not trigger concordial class agreement in the numeral any longer as seen in (41–44).

- (41)a. *tà?* *tthwó* *shú*
one CLF < HEAD cabbage
'one cabbage'
- b. *shú* *tthwó* *tét*
cabbage CLF < HEAD three
'three cabbages'
- (42)a. *tà?* *pǎp* *pəláj*
one CLF < STAIN plank
'one plank'

- b. *pàláŋ* *pǎp* *tè*
 plank CLF < STAIN five
 ‘five planks’
- (43)a. *tà?* *nəpǔ?* *ŋkùmŋkùm*
 one CLF < PACKAGE cassava.couscous
 ‘one ball of cassava couscous’
- b. *ŋkùmŋkùm* *nəpǔ?* *ppa*
 cassava.couscous CLF < PACKAGE two
 ‘two balls of cassava couscous’
- (44)a. *tà?* *ssǎ* *pà?à*
 one CLF < FLAT.SIDE building
 ‘one (flat) side of the building’
- b. *pà?à* *ssǎ* *ppa*
 building CLF < FLAT.SIDE two
 ‘two (flat) sides of the building’

In two instances, the loss of morphological material in the classifier also affects singular adnominal class prefixes, i.e. the class 5 prefix *nə-*. It can be dropped in the classifier derived from the source noun *nəghǎ?* (5/6) ‘slim and tiny peel; meagre portion’ (29), while the numeral classifier item *ssǎ* (5/6) ‘flat side’ is clearly distinct from its source noun *nəssǎ* (5/6) ‘buttock’ by the obligatory loss of the noun class 5 prefix *nə-*.

The sortal classifiers *nə?* (3.1.1.3), *ntè*, *tǔm* and the mensural classifier *ntá?* (3.1.2.2.1) lack syntactic autonomy in that they cannot occur outside a classifier construction. Interestingly though, all these items retain their plural forms in class 6 when used for referential individuation, aggregation, or partition outside the numeral classifier construction.

Generally, the loss of nominal properties in the course of grammaticalisation of classifiers from their source nouns is not only reflected in morphological reduction, i.e. non-availability of plural forms, but also in syntactic constraints on the classifier in that it does not accept any modifiers other than the numeral, as demonstrated in section 3.2 above.

4 Concurrency of gender and numeral classifier system

Sections 2 and 3 have shown that Ngəmba operates two systems of nominal classification concurrently, i.e. a fully grammaticalised gender system inherited from a Bantoid predecessor and an emergent numeral classifier system. This section addresses the question of their (in)dependence, i.e. to which extent do these systems diverge, overlap or coincide? In this respect, it will be helpful to explore how Ngəmba fits into the general typology of single vs. concurrent systems of classification recently developed and fleshed out in Fedden & Corbett 2017. Based on the distinction of three values, i.e. identity, partial overlap and total difference, that apply to two parameters, i.e. the semantic categories of classification and their formal exponency, their typology yields nine distinct types, as outlined in table (45).

(45) Typology of single and concurrent systems of nominal classification

		Semantics		
		same	partial overlap	different
Form	same	A1	B1	C1
	partial overlap	A2	B2	C2
	different	A3	B3	C3

Semantically, both Ngəmba systems of nominal classification do not show any overlap at all. The classifier system categorizes nouns according to criteria such as shape, partition and aggregation, as detailed in section 3, whereas semantic assignment criteria of the gender system are largely opaque with certain affinities based on (in) animacy and humanness. Formally, both systems are also maximally different in that the gender system is based on five sets of agreement prefixes for various syntactic targets, while the classifier system operates some 34 items of nominal origin, all of which are assigned to a particular gender themselves. Thus, Ngəmba qualifies as an instance of type C3 in the typology of Fedden & Corbett 2017. Having determined this, it would in principle be irrelevant to continue applying the more fine-grained instruments developed in Fedden & Corbett 2017 for calculating degrees of orthogonality of both systems. Yet, it is precisely this exercise that will bring out another crucial aspect of the concurrency and contribute to the understanding of why the numeral classifiers have been innovated at all.

The orthogonality score can be calculated from the way the categories of the concurrent systems map onto each other. In application to the Ngəmba situation, we therefore need to plot the distribution of 15 Ngəmba genders across 34 numeral classifiers. For the sake of clarity, we split this in two tables. Table (46) includes the 9 paired class genders and table (47) is restricted to the 6 single class genders, i.e. the transnumeral nouns. The numbers in each cell specify how many nouns in a given gender have been found to require a particular numeral classifier in counting, e.g. there are eight nouns of gender 1/6 that require the numeral classifier *ngà̀m* (9/6) ‘grain’ (see section 3.1.1.2) in counting.

(46) Ngõmba: orthogonality of paired class genders and numeral classifiers

	1/2	1/6	1/10	3/6	5/6	5/10	7/6	7/10	9/6
<i>m̄baŋ</i> 'kernel'	1				1		2	1	
<i>ndʒŋ</i> 'horn, whistle'					1		3		
<i>njájŋ</i> 'string'	1			1	3		3		
<i>ŋgõem</i> 'grain'		8			1		3	1	
<i>ŋgút</i>									
<i>pǎp</i> 'stain'		1					3		1
<i>tǎ</i> 'well, borehole'		1			2		1		
<i>tthwó</i> 'head'							2		
<i>nò?</i>		2					1		
<i>ntè</i>				1					1
<i>tõem</i>									
<i>sá?</i> 'needle'		1							
<i>khám</i>		1					3		
<i>tó</i> 'calabash'									
<i>ncwaw</i> 'woven object, bundle (with multiple extensions)'		1					1		
<i>mbà?</i> 'bundle'		1		1	1				2
<i>nàkǎ?</i> 'pile, heap'		8		1	1		3		1
<i>nàpú?</i> 'package, parcel'				1					1

	1/2	1/6	1/10	3/6	5/6	5/10	7/6	7/10	9/6
<i>ngè</i> 'pod'									
<i>tũ?</i> 'tuft'					1		1		
<i>tshæ</i> 'bunch'	1						1		
<i>ssä</i> 'flat side' < <i>nässä</i> 'buttock'							1		1
<i>ntá?</i>					1		2		1
<i>pák</i> 'slice, peeling'	3				2		6		2
<i>kàm</i> 'short piece, cut section'	1						1		2
<i>pá?</i> 'fragment, broken piece'	3						5		
<i>nèghã?</i> 'meagre portion'	1						1		
<i>mbá?</i> 'bite'									
<i>võŋ</i> 'troop, group'	3	1	3						
<i>nsshyè</i> 'portion'									
<i>nàk/hã?</i> 'component with its fruits still attached'									
<i>ŋk/hã?ná</i> 'component with its fruits or tubers detached'									
<i>kà</i> 'troop, group'	2	2	3						
<i>cwã?ò?</i> 'specie of jujube'									

(47) Ngõmba: orthogonality of single class genders and numeral classifiers

	1	3	5	6	7	9
<i>mbaŋ</i> ‘kernel’	7		2	1	2	2
<i>ndóŋ</i> ‘horn, whistle’	3	1		1	2	
<i>njájŋ</i> ‘string’	6	1			5	1
<i>ŋgõem</i> ‘grain’	12	1	1	2	4	8
<i>ŋgút</i>		2			1	
<i>pǎp</i> ‘stain’						
<i>tǎ</i> ‘well, borehole’	9		3		4	1
<i>tthwó</i> ‘head’	3			2	1	
<i>nɔ?</i>	1				2	1
<i>ntè</i>	1					2
<i>tõem</i>	2				1	
<i>sá?</i> ‘needle’						
<i>khàm</i>	1	1		4	4	2
<i>tó</i> ‘calabash’			1			
<i>ncwayŋ</i> ‘woven object, bundle (with multiple extensions)’						
<i>mbà?</i> ‘bundle’					1	1
<i>nàkǎ?</i> ‘pile, heap’	10	1	1		8	6
<i>nàpũ?</i> ‘package, parcel’	5		1	1	6	4
<i>ŋgè</i> ‘pod’			1			
<i>tũ?</i> ‘tuft’	2				1	2
<i>ttshè</i> ‘bunch’			1		2	
<i>ssǎ</i> ‘flat side’ < <i>nàssǎ</i> ‘buttock’					1	
<i>ntá?</i>	1	2		1	3	
<i>pàk</i> ‘slice, peeling’	9		3	1	6	2
<i>kàm</i> ‘short piece, cut section’	1	1			1	1
<i>pá?</i> ‘fragment, broken piece’	11		2		8	3
<i>nàghǎ?</i> ‘meagre portion’					2	1
<i>mbá?</i> ‘bite’	2			1		2
<i>vòŋ</i> ‘troop, group’	1				1	

	1	3	5	6	7	9
<i>nsshyè</i> ‘portion’	10	1	3		6	2
<i>nəkhǎ?</i> ‘component with its fruits still attached’	2			1	1	1
<i>ŋkhú?nə</i> ‘component with its fruits or tubers detached’	2		3	1	1	
<i>kà</i> ‘troop, group’					1	
<i>cwə?ə</i> ‘specie of jujube’						1

Based on these matrices, orthogonality scores can be derived, following the formula of Fedden & Corbett (2017: 17–19), by counting the number of cells filled from which we deduct the theoretical minimum, i.e. 34, and divide by the theoretical maximum minus the minimum. Applying this formula to the mapping of the two Ngəmba systems in (48a–b), we get the value 0.12 for the paired class genders and 0.38 for the single class genders. This difference is also reflected in the higher density of populated cells in table (47) vs. the higher number of empty cells in table (46).

(48) Calculation of orthogonality values

a. Paired class genders:

$$\frac{(\text{cells filled} - \text{minimum cells filled})}{(\text{possible cells} - \text{minimum cells filled})} = \frac{(67 - 34)}{(306 - 34)} = \frac{33}{272} = 0.12$$

b. Single class genders:

$$\frac{(\text{cells filled} - \text{minimum cells filled})}{(\text{possible cells} - \text{minimum cells filled})} = \frac{(99 - 34)}{(204 - 34)} = \frac{65}{170} = 0.38$$

Orthogonality values generally range between 0 and 1. The value 1 presents full orthogonality, i.e. the canonical case of two completely different systems of nominal classification, while 0 marks the complete absence of orthogonality, i.e. in that case we would be dealing with canonically only one system. According to Fedden & Corbett (2017: 18), any value between these poles would qualify a language as belonging to type B, i.e. as having two systems of nominal classification that partially overlap semantically. Surprisingly, however, this conclusion is at odds with our initial demonstration of the complete lack of semantic overlap between both Ngəmba systems of nominal classification. In that case, we would have expected a score of 1 as is indicative of completely orthogonal systems. How can these positions be reconciled? Why do the two completely divergent systems

of nominal classification that operate concurrently in Ngɔmba score such low orthogonality values after all?

The most obvious reason is the high number of empty cells in both tables which brings down the orthogonality score, i.e. the fact that nouns of many genders do not require a numeral classifier in counting or, viewed from the opposite perspective, that many numeral classifiers are restricted in application to nouns of just a few genders or even only one as in the case of *sáʔ* ‘needle’ and *cwɔʔʔ* ‘species of jujube’. So, the gaps in the tables are not determined by any semantic restrictions, they rather result from the lack of lexical coverage of the emergent numeral classifier system. There is about a total of 393 nouns that require a classifier in counting. One would expect a broader diffusion of nouns filling the empty cells, as the classifier system may come to gradually expand across the nominal lexicon, eventually encompassing it entirely.

There is still another observation that can be gleaned from the tables in (46–47). The substantial difference between the paired class genders and the single class genders points to a causal link between the numeral classifier system and the number feature. It is in particular the transnumeral nouns, i.e. those that do not come in number pairs, that score the higher orthogonality value of 0.38, while those nouns that come in number pairs score considerably lower. Moreover, both groups also differ considerably with respect to the absolute number of nouns that require numeral classifiers in counting, i.e. 268 transnumeral nouns vs. 125 nouns that come in number pairs. This suggests that the innovation of numeral classifiers, at least partially, compensates for the gradual disappearance of the number contrast from the gender system.

5 Conclusion

Ngɔmba has a restricted numeral classifier system that operates concurrently with a reduced noun class system of the Benue-Congo type. In terms of classificatory categories, enumerated objects are differentiated for their shape (saliently one-dimensional long shape vs. two-dimensional flat shape vs. three-dimensional round shape), their partition (morsel vs. lump vs. slice) and their arrangement or aggregation (pile vs. bunch vs. tuft). In this, the Ngɔmba system clearly

conforms with universal semantic properties of classifiers (Allan 1977: 297; Craig 1994: 567; Aikhenvald 2000: 286–293).

The borderline between mensural and sortal classifiers is fuzzy in that some mensural classifiers seem to conflate notions of partition and aggregation with specific haptic notions. Thus, the classifier *khùm* ‘morsel, piece’ (section 2.2.2.1) clearly serves to cognitively carve a concrete unit of reference out from the concept of a substance such as ‘meat’, but at the same time its range of application is limited to tough and compact items. In partitional mensural classifiers, crucial distinctions hinge on parameters such as manner of separation (breaking vs. slicing lengthwise vs. cutting crosswise) and shape, texture and consistency of the resulting parts (longish member vs. longish phytomorphic offshoot vs. malleable ball vs. hard/solid piece). There is also at least one mensural classifier that includes a devaluative notion of counterexpectual scantiness and inferior quality.

Due to its embryonic stage of development, the Ngəmba numeral classifier system is largely transparent etymologically, retaining more “descriptive content” (Seifart 2018: 29) in its classifiers and a higher degree of semantically transparent assignment rules than the inherited noun class system.

With respect to lexical source concepts, the classifier items found in Ngəmba originate in nouns for concrete objects such as body parts (head, buttock, horn), in basic level terms, most of which relate to the botanical domain (stick, grain, kernel), and in terms of aggregation (bunch, heap, tuft, package, pod) and partition (morsel, slice, piece, offshoot).

Syntactically, Ngəmba numeral classifier constructions come in two radically different types, depending on the number of enumerated items. Plurals require the order N CLF NUM, whereas singular classifier constructions with the numeral *tà?* ‘one’ present an exact mirror image: NUM CLF N. Both constructions have in common that it is the classifier and the numeral that form an inseparable syntactic unit to the exclusion of the enumerated noun. In this, the Ngəmba situation contrasts with numeral classifier systems of Tivoid, e.g. in Tiv (Angitso 2020) and Ugare (Angitso & Kießling *fc*), while it conforms with prominent typological generalisations about numeral classifier constructions, i.e. the assumption of adjacency and immediate constituency of classifier and numeral (Aikhenvald 2000).

In comparison to other numeral classifier systems in Bantoid, e.g. in Tiv (Angitso 2020), Ugare (Angitso & Kießling *fc*) and Ejagham (Watters 1981), Ngəmba classifiers seem to be more advanced in their emancipation from their source nouns as is evident from their extensive loss of nominal properties. However, they are still far from the stage of the Ogoni systems that have almost full lexical coverage (Ikoro 1996).

Despite an orthogonality score below 1, both systems of Ngəmba nominal classification, i.e. the numeral classifier system and the gender system, must be categorized as orthogonal to each other in that they do not overlap neither in terms of their semantics nor in terms of their formal exponency, presenting an instance of the C3 type of concurrent systems in the typological framework of Fedden & Corbett 2017. The higher orthogonality score of transnumeral nouns clearly shows that the innovation of classifiers, at least partially, compensates for the gradual disappearance of the number contrast from the gender system in Ngəmba.

Abbreviations

1 / 2 / 3 first / second / third person, 1 ... 10 noun classes 1 ... 10, ASS associative marker, CLF classifier, ANA anaphoric demonstrative, COMP comparative, CONT continuative, CP concordial noun class prefix, CS consecutive, DEF definite, DIS distal, EMPH emphatic, EXCL exclusive, F0 immediate future, FREQ frequentative, HAB habitual, HUM human, IMP imperative, INCL inclusive, IPFV imperfective, is impersonal subject, LOC locative, MED medial, N noun, NEG negative, nHUM non-human, NUM numeral, O object, P0 / P1 / P2 / P3 most recent to most remote past, PFV perfective, PL plural, PLUR pluractional, POSS possessive, POT potential, PROX proximal, QT quotative, RFL reflexive, SG singular, SID subject indefinite, SM subject marker.

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