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CONTENT

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CONTENT

An overview of the Bantoid languages

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Abstract
The Bantoid languages are a body of some 150–200 languages positioned geographically between Nigeria and Cameroon. They do not form a genetic group, but all are in some way related to Bantu more closely than other branches of Benue-Congo. The most well-known branches are Dakoid, Mambiloid, Tivoid, Beboid, Grassfields, and Ekoid. Bendi, formerly Cross River, may be Bantoid, while Jarawan is probably Narrow Bantu. Their classification is controversial. Due to their inaccessibility, many are poorly described. The article summarises the literature on their classification and main linguistic features, and in particular how these relate to Bantu. It also includes a brief survey of endangerment of smaller languages and the state of literacy development.
Their main typological characteristics include S (AUX) OV word order, functioning or fossilised nominal affixing and concord (sometimes alliterative), suffixed verbal extensions, ATR vowel harmony and labial-velars in the phonology. Some languages have developed highly complex tone-systems as a result of extreme erosion of segmental material.

Keywords: linguistics, Niger-Congo, Bantoid, typology, classification

1 Introduction

The Bantoid languages are a body of some 150–200 languages positioned geographically between Nigeria and Cameroon and between Benue-Congo and Bantu in terms of their position within Niger-Congo. Often referred to as Bantu, for example in the term 'Ekoid Bantu', their classificatory position remains uncertain both in relation to Narrow Bantu and to Benue-Congo. However, their noun morphology is not that of classic Bantu, although their affixes are often ascribed its class numbers. This can be misleading, since it suggests a direct relationship with those of Bantu which is far from proven. It is important to recognise that 'Bantoid' does not represent

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a genetic group in the sense that there are a series of undisputed lexical or morphological isoglosses which argue for its coherence. Bantoid is better treated as a cover term for a member of Benue-Congo which split away before the genesis of Bantu proper. Even the division between Bantu and Bantoid has been questioned, as some authors have observed that much of Bantu A, with its highly reduced noun-classes, would perhaps be better treated as Bantoid. As a consequence, this is not a group about which linguistic generalisations can be made and examples of characteristic features are relevant only to particular subgroups. This text therefore summarises the characteristics of individual groups, and although it proposes a 'tree', this cannot be fully justified by innovations. Whether it is reasonable to expect such diagnostic innovations at such a time depth remains an open question. The reader should thus be aware that the classification and membership of Bantoid is far from settled, and this text represents the views of the author.

According to Möhlig (1983), Krause introduced the term 'Bantoid' in 1895, but this seems to have been subsequently forgotten. Sigismund Koelle (1854) and Wilhelm Bleek noted that many languages of West Africa also showed noun classes marked by prefixes, and Bleek went so far as to include a 'West African' division in the family he named Bantu. Bantu and parts of Bantoid are characterised by systems of nominal affixes and alliterative concord. These are highly eroded in some Bantoid subgroups but their former presence can be detected by fossil morphology and unproductive affixes. A different tradition was introduced in Meinhof's work; he saw languages without noun classes (typically Ewe, but including many Nilo-Saharan languages) as a type he named 'Sudanic'. He regarded languages which were apparently related but had noun classes as being 'influenced' by Bantu although there is no clear geographical model as to how this could have come about. This subset of languages was named 'Semi-Bantu' a term adopted by Johnston (1919–1922). The result of such views was a typological rather than a truly genetic classification.

The term Bantoid re-appears in Guthrie (1948) to describe what he called 'transitional' languages, replacing the rather more vague term 'Semi-Bantu'. Nonetheless, the underlying model espoused by Meinhof and Johnston was maintained by Guthrie. The modern sense of the term may first appear in Jacquot & Richardson (1956)

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which includes summary sketches of Nyang, Ekoid, Tikar and Grassfields languages although the volume as a whole also incorporates material on Bantu and a variety of Adamawa and Ubangian languages. The revolution in thinking that followed Greenberg (1963) is described in more detail below.

The literature on many Bantoid subgroups is sparse, to say the least, and many important sources are unpublished. This is in part a reflection of accessibility, since the poor roads are often cut in the wet season discouraging extended fieldwork. The regions of Nigeria where these languages are spoken can barely be reached without a four-wheel drive, while in Cameroon, either helicopter or several days' trek has been the only option. In addition, civil insecurity in several areas where Bantoid languages are spoken has discouraged recent fieldwork[1].

Access to previously unpublished data has, however, improved significantly. There are two key caches of unpublished and mainly electronic data, the files of SIL (which incorporates much of the data collected for ALCAM, the Linguistic Atlas of Cameroon) and the student dissertations supervised at the University of Yaoundé. Part of the legacy material is available on the SIL Cameroon website (http://www.silcam.org) although much material, especially Fieldworks lexicons, remain in the hands of its members[2]. Wycliffe Nigeria has recently undertaken surveys of the Bantoid languages on the Nigerian side of the border, resolving numerous queries about the extent and classification of particular branches[3]. University of Yaoundé linguistics theses have been scanned up to 2006 through Jeff Good and are available on a CD. Robert Hedinger has been in charge of a programme to digitise legacy data, for example, mimeo'd lexicons from earlier fieldwork, and to create Android

1 For example, Bamenda, formerly a major centre for researchers of Bantoid languages, was recently described in a BBC report as a 'ghost town'. See https://www.bbc.com/news/world-africa-61871027

2 I would like to take this opportunity to thank SIL members, who have always been willing to share material and to observe, that despite academic sniping from university academics, our knowledge of Bantoid would be markedly impoverished without the contributions of SIL members.

3 Materials from Nigeria created by SIL survey staff are available on personal application.

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apps to make it accessible. This material is now freely available for download.

The function of this overview is to provide basic information on the geography, classification and major typological features of the Bantoid languages[4]. Given that they are as numerous, diverse and presumably of greater antiquity than Indo-European[5], this implies a certain superficiality. Some hypotheses about their phonology and morphology can be set out, but these must remain tentative, as the type of lower-level reconstruction necessary to build more solid constructs remains to be undertaken. As for the higher levels of linguistic description, little can yet be said, as the grammars on which this could be based have yet to be written.

The structure of this paper is as follows; the initial discussion in section 2 concerns genetic classification, both the disputed boundary between Bantoid and Bantu, and the place of Bantoid languages within the larger framework of Benue-Congo. Section 3 provides an overview of languages considered to fall within Bantoid, which forms the basis for this synthesis. Section 4 covers a selection of features which can be said to characterise Bantoid. These are not necessarily ideal for typology, but they were chosen because they have been the subject of previous research and therefore the data can be cited more confidently than for other areas of phonology and syntax. Similarly, section 5 covers two topics for which we have relatively

4 The Kay Williamson Educational Foundation has generously funded part of my more recent fieldwork in Nigeria and Cameroon. My thanks are due to individuals who have worked with me, read my papers, given me access to unpublished data and generally provided encouragement. These are: Stephen Anderson, Katrina and Richard Boutwell, Virginia Bradley, Bruce Connell, Tom Cook (†), David Crozier, Dan Duke, Dan Friesen, Cameron Hamm, Robert Hedinger, Jean-Marie Hombert, Larry Hyman, Baudouin Janssens, Roland Kießling, Rob Koops, Cindy and David Lux, Marieke Martin, Emmanuel Njok, Derek Nurse, Laura Robson, Mike Rueck, Edward Ruprecht, Scott Satre, Anne Storch, Chuck Tessaro, Kay Williamson (†), Zachariah Yoder and David Zeitlyn. My greatest debt, however, is to the many people in Nigeria and Cameroon who have patiently answered my questions and taken part in survey work. Two anonymous referees have contributed significantly to the argument, although occasionally I have taken issue with them.

5 This might seem a controversial statement, but Bantu proper, with its relatively transparent internal relationships, is at least 4000 years old, if current archaeology is accepted. Proto-Indo-European is usually treated as 6000–7000 years old. The lexical and morphological diversity within Bantoid must surely have taken several thousand years to evolve.

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good data, language endangerment and the use of specialised language registers. Topics such as child language acquisition and even the impact of major lingua francas remain only patchily discussed. Section 6 concerns orthography, literacy and media, which is relatively well-studied, due to the primacy given to literacy in many language programmes initiated by SIL and CABTAL.

2 The genetic classification of Bantoid

2.1 Bantoid vs. Bantu

Although Bantu has been treated as a genetic unity since the middle of the nineteenth century, it remains an open question as to whether there is any distinctive boundary between Bantu and the languages related to it. As Bostoen & Van de Velde (2019) note, no lexical or morphological isoglosses have been identified that clearly demarcate Bantu from its closest relatives. Greenberg (1963) underlined this by treating Bantu as merely a branch of Benue-Congo, i.e. the adjacent languages of southern and eastern Nigeria and Cameroon. He says 'the Bantu languages are simply a subgroup of an already established genetic subfamily of Western Sudanic [i.e. Niger-Congo, broadly speaking] (Greenberg 1963: 32). Figure 1 shows Greenberg's classification.

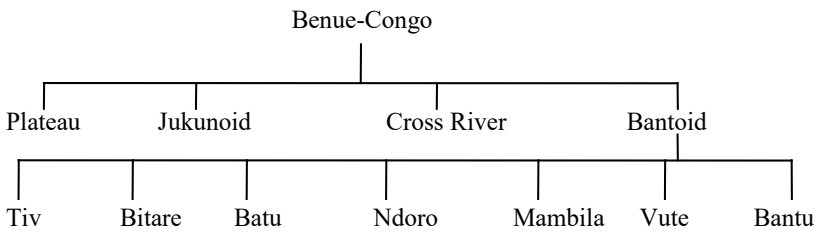

Figure 1. Greenberg's classification of Bantu (1963)

Greenberg (1963: 35) also clearly stated 'supposedly transitional languages are really Bantu'. In other words, many languages without features which are supposed to be characteristic of Bantu are nonetheless related to it. This approach to Bantu was refreshing and made historical sense in a way that Guthrie's views never had.

Since the 1960s, data has gradually accumulated on the vast and complex array of languages in the 'Bantu borderland', i.e. the region between Southern Cameroon (where Guthrie's Bantu begins) and

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Eastern Nigeria. The next step in the evolution of our understanding of Bantoid was the formation of the Grassfields Working Group in the early 1970s. Some early results this found its way into the classification in Williamson (1971) but much of the data, such as the comparative Ring wordlists, circulated as photocopies for many years. Apart from delivering monographs on particular languages (e.g. Hyman 1979; 1981), a field team undertook large-scale survey work and began the process of putting this mass of unknown languages in order (e.g. Hyman 1980; Elias, Leroy & Voorhoeve 1984). Hyman et al. (1980) was a major focus for publication of new evidence for linguistic features of particular Bantu subgroups, with a focus on Cameroon. Also in the late 1970s, the surveys for the ALCAM [*Atlas Linguistique du Cameroun*] (Dieu & Renaud 1983) began as part of a broader process of surveying Francophone Central Africa. Many of these findings were summarised in overview articles from this period, including Hedinger (1989) and Watters (1989).

The common feature of this body of work is that the classifications are presented with limited justification. This is not surprising as the number of languages is very large and many were poorly known, then and still today. Piron (1996, 1998) and Bastin & Piron (1999) represent classifications of Bantoid using lexicostatistics. Despite the large amount of data cited in Piron, it is marred by the sampling procedures used. Grollemund (2012) applies the most recent statistical techniques to the classification of Bantu and Bantoid. The focus of her thesis is on Bantu with South Bantoid languages sampled in a somewhat random fashion, omitting several branches of Bantoid described in this document and uses somewhat outmoded terminology. For example, Beboid is still treated as a unity. Moreover, since the cognacy judgments on which the calculations are based is not given it is difficult to assess the resultant trees. A welcome aspect of the thesis is the attempt to link the Bantu material with archaeology and palaeoclimatic data. Whether the conclusions concerning the classification of northwest Bantu will stand remains to be seen, but the contribution to our understanding of Bantoid is limited.

Publications on Bantu continue to dominate the field. In the large volume on Bantu edited by Nurse & Philippson (2003), there is a chapter on Grassfields Bantu (Watters 2003). While the chapter is welcome, there is no explanation why this short summary of a very complex zone is included while the other branches of Bantoid

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excluded, notably Jarawan, which is the best candidate for simply being a Bantu language and not Bantoid. In the second edition of this book (Van der Velde et al. 2019), Bantoid languages have disappeared and the inventory of Bantu varieties in Hammarström (2019) follows Guthrie fairly closely. Marten (2020) is a short summary of recent developments on Bantu/Bantoid classification. Grollemund et al. (2023) updates the statistical techniques used in subclassifying Bantu, together with an extended model of its expansion, but Bantoid is not treated in the same way.

2.2 The membership of Bantoid

Bantoid is a member of Benue-Congo, a large and complex group of languages, whose exact membership remains disputed. Originating with Westermann's (1927) *Benue-Cross-Fluss*, it took shape in Greenberg (1963), Williamson (1971) and De Wolff (1971). For a period in the 1980s and 1990s, it was considered that all the languages in former 'Eastern Kwa', i.e. Yoruboid, Igboid, Nupoid etc. were part of Benue-Congo, i.e. Western Benue-Congo. This view was published in Williamson & Blench (2000: 31) but without evidence and recent publications revert to the definition of Benue-Congo in Greenberg's original, with the potential addition of Ukaan, a small cluster of languages spoken southwest of the Niger-Benue Confluence (see e.g. Salffner 2009, 2012). Ukaan has alternating prefixes marking number and concord, hence its likely affiliation with Benue-Congo, but its exact position remains to be determined. Salffner & Sands (2012) discuss the difficulties of classifying Ukaan, for lack of unambivalent isoglosses. With this is mind, Figure 2 provides a revised subclassification of Benue-Congo languages.

Bendi, previously considered part of Cross River, has been shifted to Bantoid, a change of affiliation proposed by Blench (2001). Connell (p.c.) believes that Central Delta languages should not be considered part of Cross River and accordingly, they have been provisionally moved to an independent branch of Benue-Congo.

One aspect of this figure requires consideration, the division of Bantoid into North and South. Dakoid, Mambiloid and Tikar represent language groupings with either no noun classes, or relics of a highly idiosyncratic system, as in Tikar. There is some evidence for classifying these three together (see Blench 2012). However, the lack

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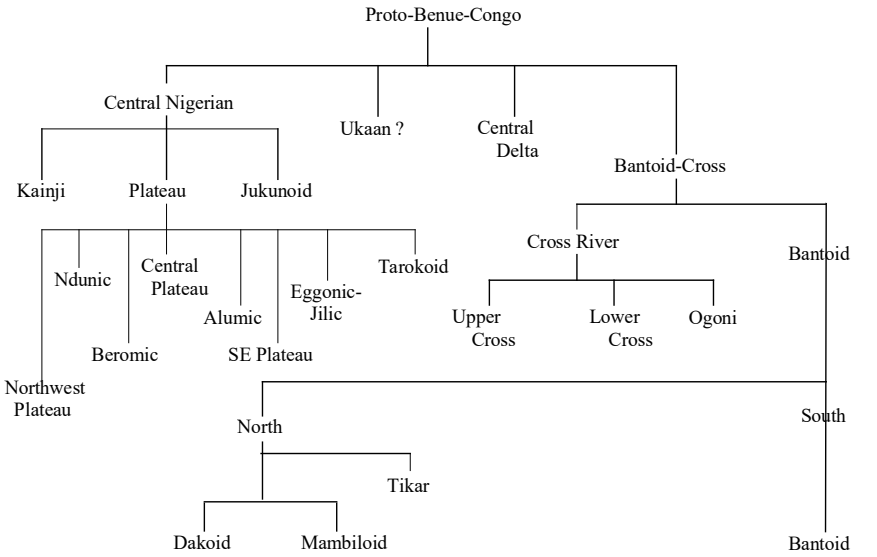

Figure 2. Revised subclassification of Benue-Congo languages

of data for some languages and convincing reconstructions of their historical morphology makes this a speculative hypothesis at best. The other side of the equation is 'South Bantoid', not a genetic group but a convenient cover term for all the languages that are close to Bantu without being part of it. As Figure 3 shows, individual groups split away from a common stem, and developed their own characteristics, in contrast to a genetic group such as Plateau or Kainji. The order in which this took place remains controversial, and will take considerable further work to resolve in a satisfying manner.

Benue-Congo is of considerable importance for the understanding of Bantoid, because some languages exhibit features which resurface in Bantu, but which are only attested in fragmentary form or not at all in Bantoid. Evidence for many Bantoid languages suggests that noun-classes can be radically restructured, to the point where the correspondences with Bantu are difficult to discern (e.g. Tikar). The likely conclusion is that early Bantoid had a noun-class system, but that it was relatively simple, and that it has gradually evolved through re-analysis and class-splitting to the complex systems found today. Languages with no traces of such a system, must have lost it despite a lack of segmental evidence for this.

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In the light of this, Figure 3 presents a tentative tree of South Bantoid.

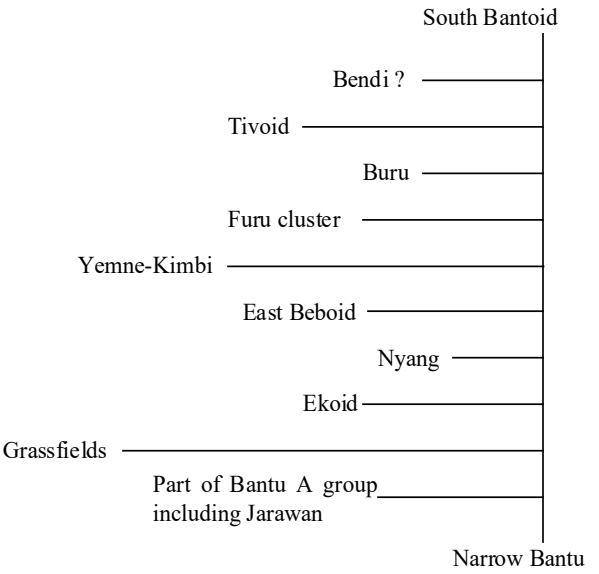

Figure 3. Genetic tree of Bantoid languages

3 Bantoid Overview

Figure 2 shows all the language subgroups described that 'stand between' Eastern Benue-Congo and Narrow Bantu. These languages are very numerous (>200) and also highly diverse morphologically. It seems likely that new languages are yet to be discovered and more work in historical reconstruction will improve our understanding of how these languages relate to one another. This section lists the major Bantoid subgroups as they are presently understood. A more complete list of all known languages is given in the Ethnologue[6] and Glottolog[7]. Table 1 lists the major subgroups of Bantoid following the order in which I believe them to have diverged from Benue-Congo.

6 http://www.ethnologue.com

7 https://glottolog.org

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Table 1. Major subgroups of Bantoid

Group	**Country**	**Location**	**Representative languages**
Dakoid	Nigeria	Around Ganye	Daka, Taram, Gaa (=Tiba)
Mambiloid	Nigeria/Cameroon	Around Gembu	Mambila, Kwanja, Vute, Ndoro
Tikar	Cameroon	NE of Foumban	Three dialects
Bendi	Nigeria	Around Ogoja	Bokyi, Bekwara, Alege
Tivoid	Nigeria/Cameroon	Around Obudu	Tiv, Iyive, Ugarə
Buru	Nigeria	Buru	Buru
Furu	Nigeria/Cameroon	Furu Awa	Furu
East Beboid	Cameroon	Around Nkambe	Noone[8], Ncane
Yemne-Kimbi	Cameroon	NE Grassfields	Fungom, Mundabli
Nyang	Cameroon	Mamfe	Kenyang
Ekoid	Nigeria/Cameroon	Mamfe	Ejagham, Etung
Mbe	Nigeria	Ogoja	Mbe
Ambele	Cameroon	Grassfields	Ambele
Menchum	Cameroon	Grassfields	Menchum
Grassfields	Cameroon		
Ndemli	Cameroon	Nkam, Littoral region	Ndemli
Ring	Cameroon	Grassfields	
Centre	Cameroon	Grassfields	Babanki, Kom, Mmen, Oku
East	Cameroon	Grassfields	Lamnso?
South	Cameroon	Grassfields	Bamunka
West	Cameroon	Grassfields	Aghem, Isu
Momo	Cameroon	Grassfields	Moghamo

8 This language name is spelt in various ways (Noni, Nooni) in bibliographic references and even within the Noone community.

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Group	Country	Location	Representative languages
Southwest	Cameroon	Grassfields	Manta
Eastern	Cameroon	Grassfields	
Bamileke	Cameroon	Grassfields	Bamileke, Ngiemboon, Ngomba
Ngemba	Cameroon	Grassfields	Bafut, Mankon, Ngemba
Nkambe	Cameroon	Grassfields	Limbum, Mfumte, Yamba
Jarawan	Nigeria/Cameroon	East-Central Nigeria	Jar, Mbula-Bwazza, Mama
Bantu A	Cameroon	Southern Cameroon	Akɔɔse

It is important to flag some major caveats. Not all authors agree Dakoid is Bantoid (e.g. Boyd 1994) and the placing of Ndoro in Mambiloid remains doubtful. Bendi has long been treated as Cross River, following Greenberg (1963) and Williamson (1989), but without good evidence[9]. The data on Furu is too uncertain to be sure it has been correctly classified; a Jukunoid affiliation is possible. Jeff Good (2013) has argued convincingly that Beboid is not a unity, and even that the languages within Yemne-Kimbi [=West Beboid] may not constitute a genetic group. Ambele and Menchum are treated as co-ordinate with Grassfields, but the evidence remains sketchy. Momo has been split up into Momo proper and Southwest Grassfields.

However, the most controversial is the placing of Jarawan Bantu. In most texts it is placed outside Narrow Bantu, as Bantoid. Lexically, Jarawan is more closely related to Narrow Bantu languages, perhaps Guthrie's A60 group (cf. Piron 1998, Grollemund et al. 2015), but the loss of both verbal and nominal morphology makes its integration into Narrow Bantu uncertain. An alternative interpretation could be that this loss is a later areal feature. A striking disagreement over the classification of Jarawan Bantu was aired at the First Bantoid Conference, in March 2022. The present author's claim of an A60 affiliation seems to be in line with Wills & Grollemund (p.c.) who assign Jarawan to Bantu A40–60. By contrast, Van de Velde &

9 Forthcoming papers cited by an anonymous reviewer confirm the Bantoid affiliation of Bendi first argued by this author.

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Ididatov (2022) argued for Bantu A80–A90. Clearly this argument has some way to go.

4 Typological features of Bantoid

4.1 Overview

The descriptive data required to characterise Bantoid languages in ways which would satisfy typologists is not available for many branches. Because so much of the material has focused on an ultimate goal of orthography and literacy, phonology and noun-classes remain much better understood than, for example, verbal extensions. Even the basic characteristics of syntax have to be inferred from text examples, rather than drawing on explicit statements. This section therefore draws together tables of examples, by necessity focusing more on phonology. Moreover, as will be seen in the table on word order, this is generally stable, unlike sound systems which are very diverse.

One author who has attempted to summarise the typological differences between Bantu and Bantoid is Hyman (2017). He summarises these in the expression "from syntheticity to analyticity" and discusses the way in "which [Bantoid] languages compensate for the loss of valence-adding extensions, e.g. the applicative, which has multiple functions in Common Bantu" (Hyman 2017: 69). He identifies periphrasis, unmarked double objects, adpositions and nominal constructions as strategies for dealing with the loss of verbal extensions. Table 2, adapted from Table 3 in Hyman (2017: 74) summarises the sort of contrasts which can be expected.

Table 2. Canonical Bantu compared with Bantoid (Hyman 2017: 74)

Feature	**Canonical Bantu**	**Bantoid**
phonology	minimum word = 2 syllables	maximum stem = mostly 2~3 syllables
morphology	highly synthetic, agglutinative	less so, gradual move towards analyticity
verb extensions	many, mostly marking valence	few, mostly marking aspect
unmarked objects	multiple	at most two, ultimate limitation to one per verb

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Feature	Canonical Bantu	Bantoid
object marking	head marking on verb	various prepositions and/or serial verbs
ditransitive verbs	a few (**pá* 'give')	few or none

Not all of these will be covered in the following discussion, which focuses on specific aspects of typology which can be documented in some detail.

4.2 Distribution of individual features

4.2.1 How structured were Bantoid noun-class systems?

Proto-Bantu is generally assumed to have had a complex system of noun-classes, marked by alternating prefixes and alliterative concord with adjectives and other parts of speech (Van de Velde 2019). When Bantoid languages have nominal affixes they are almost always prefixed, though suffixes and both prefixes and suffixes are recorded for some languages, especially in the Tivoid group. By Meeussen's (1967) system there were 19 such classes, but no branch of Bantoid has such a complex system, except possibly Mbe, and many languages either have few classes or none. Very characteristic of Bantoid is non-alliterative concord, where the segments in the nominal affixes do not match the agreement markers. Since alliterative concord is typical of Kainji, Plateau and Southern Jukunoid branches of Benue-Congo, it must be assumed that the nominal prefixes have either merged or been renewed, leaving the concord markers frozen. In other words, affix renewal without the corresponding concord, leaves the markers unanchored and often assigned to multiple affixes. One piece of evidence for renewal is the common situation where the concord markers are often marked with consonants, whereas the nominal prefixes may be vowels. Branches such as Bendi, Ekoid and East Beboid have noun-classes and alliterative concord recognisably similar to Bantu, although it can be difficult to match particular segments. These are likely to have retained their system from Benue-Congo while other branches of Bantoid became more divergent. Table 3 shows a summary of the situation for the individual branches of Bantoid.

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Table 3. Noun-classes in Bantoid and Bantu

Bantoid Group	**Language or group**	**Noun-classes**	**Reference**
Mambiloid	Mambiloid	None functional today, but frozen morphology indicates their former presence	Connell (ms. word-lists), Pepper (2010), Martin (2012); Thwing (1987)
Dakoid	Daka, Tiba	None functional today, but some suffixes may indicate their former presence	Boyd (1994, 1999)
Tikar	Tikar	Two singular and two plural classes, not correlated with Bantu	Stanley (1991)
Bendi	Bendi	Eight noun-class pairings with extensive allomorphy	Blench (ms. word-lists)
Tivoid	Ugarə	Six noun-class prefix pairs (all vowels) with alliterative concord. Some Tivoid languages have both prefixes and suffixes	Cassetta & Cassetta (1994a)
Buru	Buru	Four singular/plural noun-class prefix pairs. Concord unknown.	Koops ms.
Nyang	Kenyang	Eleven noun classes[10]	Mbuagbaw (2002), Ojong (2005)
East Beboid	Noone	Noone has classes corresponding to the major Bantu classes, plus three locative classes with no equivalent	Hyman (1981)

10 The methodology here is suspect as Ojong (2005) arranges her treatment by Bantu noun-classes, regardless of the non-correspondence of segmental materials.

Bantoid Group	Language or group	Noun-classes	Reference
Yemne-Kimbi	Abar	Nine singular and seven plural classes	Good et al. (2011)
Furu	Bikyak	Seven unproductive class prefixes	Kießling (p.c.)
Ekoid	General	Nine prefix classes with concord	Watters (1981)
Mbe	Mbe	Sixteen prefix classes with concord	Pohlig (2006)
Ambele	Ambele	Not explicitly analysed, but there appear to be six nominal prefixes	Nganganu (2001)
Momo	Throughout	Six singular and four plural classes distinguished on basis of concord	Eyoh (2010)
SW Grass-fields	Throughout	No descriptive literature	Blench (ms. word-lists)
Menchum	Befang	Thirteen class prefixes arranged in seven sg./pl. pairs with concord	Gueche (2004)
Ring	Babungo	Thirteen class prefixes with associated concord	Schaub (1985)
Eastern Grassfields			
Bamileke	Ngyembɔɔn	Ten noun classes and concord, though 9 and 10 are only distinguished by tone	Lonfo & Anderson (2014)
Nun	Bamun	Six classes and concord, although there is considerable duplication of segmental material	Hombert (1980)
Nkambe	Yamba	Only retains Cl. 1/2 alternation with other nouns having zero prefix. Concord highly eroded	Nassuna (2001)

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Bantoid Group	Language or group	Noun-classes	Reference
Ngemba	Bafut	Six singular and four plural classes. Non-allierative concord preserved	Tamanji (2009)
Ndemli	Throughout	Noun class and concord system almost completely collapsed, though non-productive prefixes can be identified	Ngoran (1999)
Jarawan	Throughout	No functional nominal prefixes, although evidence for their former presence abundant	Maddieson & Williamson (1975), Blench (ms. word-lists)

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Until we have reconstructions of the proto-forms for each individual subgroup, assessing the overall systems of early Bantoid remains problematic.

4.2.2 Labial-velar consonants

Labial-velar consonants, /kp/, /gb/, /ŋm/ and ngb (usually realised as /ŋmgb/ or /ŋgb/), are some of the most characteristic African double articulations (Connell 1994; Cahill 1999). Although /ŋm/ is more common worldwide, /kp/ and /gb/ are confined to Africa, except for a few Papuan, Oceanic and Sino-Tibetan languages (Güldeman 2008). Clements & Rialland (2008) and Idiatov & Van de Velde (2021) provide a more detailed overview of the occurrence of labial-velar stops in the immediate Bantu borderland. Table 4 shows the occurrence of labial-velar stops in both Bantoid and Bantu for sample languages.

Table 4. Labial-velars in Bantoid and Bantu

Bantoid Group	**Language or group**	**kp**	**gb**	**ŋm**	**Reference**
Dakoid	Tiba	+	+	-	Boyd (1999)
Mambiloid	Mambiloid	+	+	+	Robson (2010), Martin (2012)
Tikar	Tikar	+	+	-	Stanley (1991)
Bendi	Bendi	+	+	+	Blench (ms. wordlists)
Tivoid	Ugarə	+	+	-	Cassetta & Cassetta (1994b)
Buru	Buru	-	-	-	Koops ms.
Nyang	Denya	+	+	+	Mbuagbaw (1996)
East Beboid	Noone[11]	+	-	-	Lux (2016)
Yemne-Kimbi	Mungbam	+	+	-	Lovegren (2013)
Furu	Bikyak	+	+	-	Kieβling (p.c.)
Ekoid	General	+	+	+	Crabb (1969)
Mbe	Mbe	+	+	-	Pohlig (2006)
Ambele	Ambele	+	+	-	Nganganu (2001)

11 This is slightly problematic. The sounds that are treated in the Noni orthography as labialised labial-velars, i.e. /kp^{w}/, Hyman considers as labiodentalised velars, thus /kpw/ is written <kfu> in Hyman's orthography (Hyman 1980: 1). Labio-dental offglides are also reported in Ncane (Boutwell & Boutwell 2008).

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Bantoid Group	Language or group	kp	gb	ŋm	Reference
Momo	Throughout	+	+	-	Blench (ms. wordlists)
SW Grassfields	Throughout	+	+	+	Blench (ms. wordlists)
Menchum	Modele	+	+	-	Boum (1981)
Ring	Common	+	+	+	Hyman (ms. wordlists)
Ndemli		-	-	-	Ngoran (1999)
Eastern Grass-fields					
Bamileke	Throughout	+	-	-	SIL/ALCAM (ms. word-lists)
Nun	Throughout	+	-	-	SIL/ALCAM (ms. word-lists)
Nkambe	Throughout	+	-	-	SIL/ALCAM (ms. word-lists)
Ngemba	Throughout	+	-	-	SIL/ALCAM (ms. word-lists)
Zone A languages	A10–20, A53, A64, A70, A83	+	+	+	Clements and Rialland (2008)
Jarawan	Bwazza	+	+	-	Blench (ms.)
Zone C languages	C104, 12a, 13, 14, 20, C30, 34, 37, 41, 45, 53, 54, 104	+	+	+	Clements and Rialland (2008)
Zone D languages	D12, 13, 14, 21, 311, 22, 32, 33	+	+	+	Clements and Rialland (2008)
Other Bantu	E72a	+	+	+	Clements and Rialland (2008)

Two comments are necessary on this listing. The nasal labial-velar is not always analysed as a distinct phoneme, since it occurs homorganically, preceding the velars and labial-velars, so it is probably more widespread than appears here. The broad absence of /gb/ and /ŋm/ throughout Grassfields is surprising. There are languages where these have been transcribed, but they are rare.

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4.2.3 ± ATR vowel harmony

Vowel-harmony systems have been reported from a number of the language phyla of the world, most notably in Africa and in Altaic languages (Comrie 1981: 59 ff.). In Africa, however, vowel harmony is usually characterised as Advanced Tongue Root (ATR), which is distinct from the labial and palatal harmony systems in, for example, Altaic. The phonetics of these systems have been described in some detail in Stewart (1967) and Lindau (1975). The exact characterisation of these systems has been debated and Lindau argued that the feature would be better described as expanded pharynx. The + or -ATR vowels most commonly form regular parallel sets and these can usually be interpreted as erosion or reduction of an original 10-vowel set. These 5 + 5 systems are typically present in Nilo-Saharan and Niger-Congo (Hall et al. 1974), updated in Dimmendaal (2001). Authors who discuss these issues with particular reference to Niger-Congo are Casali (2003, 2008), Güldemann (2008) and Clements & Rialland (2008). Hyman (1999) has inventoried the main Bantu languages exhibiting this type of vowel harmony. Dimmendaal (2001) highlights a restricted number of cases where ±ATR vowel harmony seems to have diffused across phyletic boundaries. It is rare in Bantu but is present in languages of the A40 and A60 groups, as well as in D30 languages (e.g. Budu in Koehler 1995; Bila in Kutsch Lojenga 2003). It has been argued that these D group languages represent contact with neighbouring Central Sudanic languages (Grégoire 2003), but there is no evidence of the lexical borrowing that usually appears to go along with the adoption of such a radical restructuring.[12]

Table 5 shows languages for which vowel harmony is attested in phonological descriptions for Bantoid.

Table 5. ATR vowel harmony in Bantoid

Bantoid Group	**Presence**	**Language**	**Reference**
Mambiloid	Absent		
Dakoid	Absent		
Tikar	Absent		
Bendi	Absent		

12 Although scenarios are possible to explain this situation, none have yet been proposed.

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Bantoid Group	Presence	Language	Reference
Tivoid	Present	Ugare	Cassetta & Cassetta (1994b)
Tivoid	Present	Iyive	Foster (2012)
Tivoid [?]	Present[13]	Esimbi	Hyman (1988), Koenig, Coleman & Coleman (2007)
Buru	?		No analysis
Nyang	Absent		
East Beboid	Residual	Kemezung	Cox (2005)
Yemne-Kimbi	Present	Mundabli	Voll (2017)
Furu	?		No analysis
Ekoid	Absent	Ejagham	Watters (1981)
Mbe	Absent	Mbe	Pohlig (2006)
Ambele	Not stated	Ambele	Nganganu (2001)
Western Momo			No reference
Menchum	Absent		
Ring	Absent		
Momo	Absent		
Eastern Grass-fields	Scattered	Yamba	Scruggs (1980)
Bantu	A,C,D		Clements & Rialland (2008)
Jarawan	Absent		Rueck et al. (2009)

The residual ATR systems in East Beboid make it probable it should be reconstructed for the group, but this has yet to be shown.

4.2.4 How many vowels?

The number of vowels in proto-Bantu is probably closely related to the previous discussion of vowel harmony, since languages with more than seven vowels tend also to demonstrate harmony phenomena. The features of 'classic' Bantu are the rather unusual seven vowel set proposed by Guthrie, where the high vowels exhibit two qualities (see discussion in Hyman 2019). Outside Bantu, most seven vowel languages usually show the mid-vowels splitting, and there is plenty

13 Esimbi has an extreme version of vowel harmony, where the vowel is usually identical in all multisyllabic roots.

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of evidence that this is the common outcome of vowel merger in non-Bantu nine-vowel languages. Bantoid languages commonly have quite large vowel inventories; in the case of some Grassfields languages vowel-splitting has led to more than ten basic vowels.

Table 6 shows representative languages and the number of phonemic vowels is attested in descriptions of Bantoid and Bantu.

Table 6. Vowel systems in Bantoid and Bantu

		Vowels			
Bantoid Group	**Language**	**O°**	**N**	**L**	**Reference**
Mambiloid	Mambila	7	-	-	Connell (2001)
Dakoid	Sama Mum	8	-	+	Boyd & Sa'ad (2010)
Tikar	Tikar	8	-	-	Stanley (1991)
Bendi	Bekwara	7	-	-	Stanford (1967)
Tivoid	Ugarə	8	-	+	Cassetta & Cassetta (1994b)
Tivoid [?]	Esimbi	8	-	+	Koenig, Coleman & Coleman (2007)
Buru	Buru	7	-	-	Koops (ms.)
Nyang	Denya	7	-	-	Mbuagbaw (1996)
East Beboid	Ncane	7	5	5	Boutwell (2020)
Yemne-Kimbi	Mungbam	8/9	-	-	Lovegren (2013)
Furu	Bikyak	10[14]	-	-	Kießling (p.c.)
Ekoid	Ejagham	7	-	-	Watters (1981)
Mbe	Mbe	7	-	-	Pohlig (2006)
Ambele	Ambele	10	-	4	Nganganu (2001)
Western Momo	Manta	7	-	7	SIL wordlists
Menchum	Befang	8	-	7	Boum (1981), Gueche (2004)
Ring	Isu	7	-	7	Anderson (2013)
Momo	Ngwo	7	-	7	Eyoh (2010)

14 From the fragmentary data it is unclear if the vowels are phonetic or phonemic.

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		Vowels			
Bantoid Group	**Language**	**O˚**	**N**	**L**	**Reference**
Eastern Grassfields					
Bamileke	Fe'fe'	10	-	8	Hyman (1972)
Bamileke	Ngomba	6	-	6	Satre (1997)
Ngemba	Bafut	13[15]	-	11	Tamanji (2009)
Nun	Chufie'	9	8	9	Hamm (2013)
Nkambe	Mfumte	10	-	-	Eyoh & Hedinger (2008)
Zone A languages	P-Manenguba	7	-	7	Hedinger (1987)
	Bafia (A53)	11	-	-	Guarisma (1969)
Jarawan	Bwaza	6	-	-	Bwazza Literacy Committee (2007)
O˚ = Oral, N = Nasal, L = Length					

Nasalised vowels are highly unlikely to be a feature of early Bantoid. They almost certainly derive from reduction of CVN sequences, hence the lack of correspondences between individual Bantoid branches. The antiquity of long vowels is more difficult to establish. Again cognacy of long vowels across Bantoid branches is apparently absent and long vowels probably arise independently from deletion of intervocalic consonants.

4.2.5 Fricative vowels

A poorly understood, but striking phonological feature is the existence of fricative vowels, in several branches of Bantoid. The only review of fricative vowels that takes a comparative approach is Connell (2000, 2007). Regrettably very few of the occurrences of fricative vowels reported since his survey are in the public domain. As Connell (2000: 234) points out, comments about families such as Eastern Grassfields suggest strongly they may be present elsewhere, notably in Limbum (Fransen 1995). Nonetheless, it seems to be worth compiling their distribution, as this is clearly relevant to the recon-

15 This is a rather extreme claim and it would be helpful for it to be supported with evidence for phonemic contrast.

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struction of proto-Bantu phonology. Table 7 shows all the cases of fricative (and pharyngealised) vowels in Bantoid that are reported.

Table 7. Fricative vowels in Bantoid

Family	Language	Reference
Mambiloid	Len	Connell (2000)
Mambiloid	Wawa	Martin (2012)
Mambiloid	Kwanja	Robson (2010)
Beboid	Mundabli	Voll (2017)
Grassfields Nkambe	Limbum	Fransen (1995)
Zone A languages	Kwasio	own research, Duke (p.c. 2010)
Zone A languages	Bagielli	own research, Duke (p.c. 2010)
Zone A languages	Fang	Kelly (1974), Mve (1997)
Jarawan	Jar	Rueck et al. (2009)

Connell (2007) is cautious in his conclusions about the relevance of cognates between Len and proto-Bantu but since more evidence has come to hand it seems more reasonable to assume that these types of vowels are widespread, that they related to labiodentalisation and that they were present in proto-Bantu.

4.2.6 Tones

Bantu is reconstructed as having two tones, without any complications such as glides and downstep (Guthrie 1967–71; Marlo & Odden 2019). While this is characteristic of numerous Bantu languages in the central area, many languages, especially in Zone A, have a more elaborate system, which resembles more closely the three and four-tone systems which are common in Bantoid. Table 8 compiles a sample of descriptions of tone systems for Bantoid and Bantu, only listing languages with three tones or more.

Table 8. Tone systems in Bantoid and Bantu

Bantoid Group	Language	Tones	Reference
Dakoid	Sama Mum	H, M, L, R, F	Boyd & Sa'ad (2010)
Mambi-loid	Mambila of Gembu	Four level tones and numerous glides	Perrin (1974), Connell 2000, 2017); Kwanja (Weber & Weber 2008); Wawa (Martin 2012)

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Bantoid Group	Language	Tones	Reference
Tikar	Tikar	H, L, R, F	Stanley (1991)
Bendi	Bekwara	H, M, L, four glide tones	Stanford (1967)
Tivoid	Ugarə	H, L, U, D	Cassetta & Cassetta (1994b)
Tivoid [?]	Esimbi	H, M, L, R, F	Koenig, Coleman & Coleman (2007)
Buru	Buru	H, M, L	Koops (ms.)
Nyang	Denya	H, L, D, R, F	Mbuagbaw (1996)
Beboid	Noone	H, M, L, HL, HM, H, ML, LF, MR, LH	Lux & Lux (1996)
Furu	Bikyak	H, M, L, (?VL), F	Kießling (p.c.)
Ekoid	General	H, M, L, R, F	Crabb (1969)
Mbe	Mbe	H, L	Pohlig (2006)
Ambele	Ambele	H, M, L, R, F	Nganganu (2001)
Western Momo	Manta	H, M, L	SIL Wordlists
Menchum	Modele	H, L, F	Boum (1981)
Ring	Isu	H, M, L, four glide tones	Anderson (2013)
Momo	Ngwo	H, M, L, R, F	Eyoh (2010)
Eastern Grass-fields			
Bami-leke	Fe'fe'	H, M, RL, L, R, F	Hyman (1972)
Bami-leke	Ngomba	H, D, L	Satre (1997)
Ngemba	Bafut[16]	H, L or H, M, L	Tamanji (2009) or Mfonyam (1990)
Nun	Chufie'	H, M, L, three glide tones	Hamm & Hamm (2007)
Nkambe	Mfumte	H, M, L, R, F	Eyoh & Hedinger (2008)

16 By contrast, Mfonyam (1990) claims three tone levels.

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Bantoid Group	Language	Tones	Reference
Bantu Zone A	P-Manen-guba	H, L, R, F	Hedinger (1987)
Jarawan			No analysis
H = High, M = Mid, L = Low, R = Rising, F = Falling, U = Upstep, D = Downstep, VL = Very Low. Sequences of two letters describe combination tones, thus LF is Low falling			

In principle, these tones apply to single vowels and where differing tones occur on VV sequences contour tones are heard. However, some authors show VV sequences to clarify contour tones, even where vowels are short (e.g. Eyoh 2010). There is clear relationship between the year of a description and the complexity of a tone system. Older accounts broadly show simpler tone systems; as researchers are more attuned to these systems, greater complexity has emerged.

Tone reconstruction is a more complex task than vowels and consonants in part due to the differing descriptions of tone in different authors and a failure to distinguish clearly surface and underlying tone. Some families, such as Jarawan, lack a single reliable synchronic description of tone. However, if the evidence from North Bantoid is relevant, then early Bantoid probably had either two[17] or three level tones, as well as rising and falling. However, in many branches of Bantoid, the downstep derives from an underlying L tone between two surface H, the L tone persisting after a tone bearing unit had been lost. Surface contour tones are common but only further work will determine if they are an underlying feature of Bantoid.

4.2.7 Word order

The characteristic word order of Bantoid is S (AUX) V O, as virtually all the sources in Table 9 attest. Some languages allow the auxiliaries after the main verb, including much of Bantu, but this is also attested in Tikar and Vute and is thus not diagnostic.

Table 9. Word order in Bantoid and Bantu

Bantoid Group	Language	Word order	Reference
Dakoid	Sama Mum	S (AUX) V O	Boyd & Sa'ad (2010)

17 Connell (2018) argues for two.

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Bantoid Group	Language	Word order	Reference
Mambi-loid	Vute	S (AUX) V O, S (AUX) O V	Thwing (1987)
Tikar	Tikar	S V (AUX) O	Stanley (1991)
Bendi	Bekwara	S (AUX) V O	Stanford (1967)
Tivoid	Tiv	S (AUX) V O	Voeltz (2005)
Buru	Buru	no data	Koops (ms.)
Nyang	Denya	S (AUX) V O	Abangma (1987)
Beboid	Kemezung	S (AUX) V O	Cox (2005)
Furu	Bikyak	S (AUX) V O	Kießling (p.c.)
Ekoid	Nkem	S (AUX) V O	Sibomana (1986)
Mbe	Mbe	S (AUX) V O[18]	Pohlig (2006)
Ambele	Ambele	S (AUX) V O	Nganganu (2001)
Western Momo	Manta	No data	SIL Wordlists
Menchum	Modele	S (AUX) V O	Gueche (2004)
Ring	Kom	S (AUX) V O	Shultz (1993)
Momo	Meta’	S (AUX) V O	Spreda (1986)
Eastern Grass-fields			
Bami-leke	Yemba	S (AUX) V O	Harro & Haynes (1991)
Ngemba	Bafut	S (AUX) V O	Tamanji (2009)
Nun	Chrambo	S (AUX) V O	Wright (2009)
Nkambe	Limbum	S (AUX) V O	Mpoche (1993)
Jarawan	Bwazza	S (AUX) V O	Rueck et al. (2007)
Bantu Zone A	Akɔɔse	S V (AUX) O	Hedinger (2008)

4.2.8 Verbal extensions

Verbal extensions in Bantoid are absent in some branches, especially in those more remote from Narrow Bantu, where they have disappeared without leaving obvious segmental traces (see overview in

18 Inferred from examples.

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Blench 2022). Table 10 summarises the situation for the different Bantoid subgroups identified in the literature. It should be emphasised that there are no specific publications on extensions in many of them. Those marked functional have been identified in the literature as in active use, whereas inferred suffixes are those which I have extracted from lexical data. The claim for their presence or absence has to be based on inferences from the lexicon or incidental data. Some of the more diverse subgroups, such as Mambiloid, may include languages with no remaining extensions and those where they are evidently present. In some cases, functioning verb extensions only remain for a small subset of verbs, but these are still assigned as present. Key references are given for individual languages.

Table 10. Verbal extensions in major Bantoid subgroups

Group	**Verbal extensions**		**Language**	**Reference**
	Functional	**Inferred**		
Dakoid		+	Daka	Boyd & Sa'ad (2010)
Mambiloid	+	-	Nizaa	Kjelsvik (2002: 19 ff.)
Mambiloid	+	-	Vute	Thwing (1987), Martin (2012)
Tikar	+	-	Tikar	Stanley (1991)
Bendi	-	-	Bekwarra	Stanford (1967)
Tivoid	-	-	Tiv	Arnott (1958)
Buru	?	-	Buru	Koops (n.d.)
Furu	?	-	Furu	Breton (1993), Kiessling (p.c.)
East Beboid	+		Noone	Hyman (1981)
East Beboid	+		Mungong[19]	Boutwell (2014)
East Beboid	+		Nchane	Boutwell (2020)
Yemne-Kimbi	-	-	Mundabli	Voll (2107)
Nyang	-	-	Denya/ Kenyang	Unpublished lexicons

19 However, these consist only of a multiple action extension and an extremely rare causative in *-si*.

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Group	Verbal extensions		Language	Reference
	Functional	Inferred		
Ekoid	-	-	Ejagham	Watters (1981)
Mbe	+	-	Mbe	Bamgboṣe (1967)
Ambele	?	?	Ambele	Nganganu (2001)
Menchum	?	?	Befang	Gueche (2004)
Grassfields				
Ndemli	+		Ndemli[20]	Ngoran (1999)
Ring	+		Lamnso?	Grebe & Siiyaatan (2015); Akumbu (2020); Hyman (2018)
Momo	+		Meta'	Spreda (1995), Hyman (2018)
Southwest	?	?	Manta	Ayotte & Ayotte (2002)
Eastern				
Bamileke	+	-	Ngiem-boon	Blench (ined) from Lonfo & Anderson (2014)
Nkambe	-	-	Mfumte	McClean (2014)
Ngemba	+		Bambili	Ayuninjam (1998)
Narrow Bantu zone A	+	+	Akɔɔse (A10)	Hedinger (1992, 2008)
Jarawan	+	+	Mbula	Van de Velde & Idiatov (2022)

Hyman (2018) is a survey of Bantoid verb extensions which includes Grassfields, Mbe (Ekoid), Tikar, Noone, Kemezung (Beboid) and Vute (Mambiloid) in his comparative tables. To throw light on the ancestry of Bantu verbal extensions we must create a basic tabulation of the presence of extensions in individual Bantoid branches, although some may eventually be discarded as not relevant to Bantu.

20 Although Ngoran (1999: 73) states that "[i]n this language, we have been unable to uncover any vestiges of suffixal extensions", they are identified in Ndedje (2016).

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5 Some sociolinguistic aspects

5.1 Language endangerment

In any region with a density of languages as high as the Bantoid area, there are likely to be endangered languages. Endangerment can arise from the gradual spread of minority languages, where communities gradually switch from one to another. For example, within the Mambiloid group there are several moribund or extinct languages whose speakers have switched to the languages of their neighbours (Connell 1998, 2010; Connell et al. 2021). With Africa as a whole, the major threat to diversity is 'predatory' languages, spoken by politically dominant groups or as trade languages. Typical such languages are Hausa, Bambara or Sudanese Arabic. Until the colonial era, there were no such languages in the Bantoid area, although it is on the fringe of the region where Fulfulde is a lingua franca, and it is beginning to have an impact on Mambiloid (Connell 2009). Within Nigeria, Hausa is spreading on the Mambila Plateau and in the Dakoid area. Within Cameroon, the threat to language vitality in the twentieth century has come from Pidgin English. Children either do not learn, or learn their languages poorly.

Through the surveys conducted by SIL and referenced throughout this document, a significant number of studies of language vitality exist. Broadly speaking, most Bantoid languages are still spoken in their home area, and speakers have a positive attitude to speaking their mother tongue. In the case of Mambiloid, there is a scatter of very small languages on the point of extinction in Bankim sub-division of Adamawa Province in Cameroon. For example, the Njerep language, part of the East Mambila cluster, is moribund with a single speaker still able to converse in 2000 and some five rememberers (Connell & Zeitlyn 2000). This cluster also includes Cambap, with some 30 speakers in 2000, Kasabe, extinct in 1995 but for which wordlist data exists, and Yeni, for which only songs are remembered (Connell 1998). The Njanga language, with just five speakers in 2008, is becoming increasingly difficult to recover. Speakers are changing to the related Sundani and engage in codeswitching, making it less than sure that the Njanga forms are 'authentic' (Robson 2010). As an example of the fate of smaller languages, Table 11 shows a summary of the extinct or moribund Mambiloid languages.

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Table 11. Extinct or moribund Mambiloid languages

Language	Number of Speakers	Closest Relative
Cambap (aka Twendi)	30 (2000)	Mambila (Langa)
Somyev (aka Kila)	20 (2000)	Tep, Wawa
Njanga	5 speakers, 5 rememberers (2008)	Kwanja
Njerep	6 (2000)	Mambila (Langa)
Bung	3 (no native speakers)	Kwanja
Kasabe (aka Luo)	0 († 11/95)	Mambila (Langa)
Yeni	0	Mambila (Langa)
Sources: Connell (2010), Robson (2010)		

By and large, these languages have been assimilated by speakers of other Mambiloid languages, rather than a widespread lingua franca. This seems to be rather exceptional, and it is interesting to speculate whether the disruption to social patterns in the region caused by the Fulɓe invasions and raiding in the nineteenth century upset the delicate balance of languages, causing some to expand and others to lose their cultural identity. The Furu languages have also been subject to massive replacement. The absence of good (socio)linguistic data on these languages makes it difficult to speculate why they have become moribund, since they are in an extremely remote area. Another similar situation is the Lower Fungom region on the northern Ring Road. This is an area of extreme multilingualism, with a number of languages confined to a single village (Good 2013; Good et al. 2011; Di Carlo et al. 2020). Some languages are down to less than 100 speakers, and it appears almost no-one speaks only a single language.

5.2 Specialised languages

The notion of a hierarchically-structured lexicon and grammar which reflects vertical authority relations in society is familiar from East and Southeast Asia; Japanese and Javanese are well-known examples. Within Africa, there are some examples of register, the use of a particular speech-form to express aspirations (Ma'a/Mbugu is a well-known example, cf. Mous 2003). There are also court languages, or hierolects, where an incoming royal dynasty retains the speech or elements of speech from their original ethnicity. In the Grassfields of Cameroon, a number of chiefdoms have developed a replacement lexicon marking particular strata of society.

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One example[21] is the replacement lexicon in Bìfɨ̂ɨ̂[22] and relates these to the overall social structure of Bafut[23]. The Bafut people form part of the complex of chiefdoms which make up the Cameroon Grassfields. Although small in geographical extent, these chiefdoms are characterised by elaborate political hierarchies, a highly distinctive material culture and a great diversity of languages (Knöpfli 2008). Bafut social hierarchy may be broadly described as consisting of both ascribed and achieved levels, with a hereditary royal family and a nobility composed of wealthy and powerful individuals. Bafut society is interpenetrated by secret societies at every level, mostly organised around masquerade dances. Table 12 shows the levels of authority in the Bafut social hierarchy.

Table 12. Bafut social hierarchy

Title	**Gloss**
mfò	Fon
ŋ̀kùm	Nobility
àtaŋtso	Village chief
tanɨkurɨ	Village leader

Respect terms in Bafut can be broadly divided into three categories, objects and places, body parts and verbs. The terms are used ‘upwards’ i.e. a commoner would use respect terms when speaking to a Fon or chief. All of these are lexical replacements; there is no evidence for distinctive syntax or morphology. The vocabulary of objects and places has a significant diversity of terms used with the nobility, whereas body parts are confined to the Fon. Verbs used in speaking to the Fon also include a couple of specialised forms used when speaking with princes. Table 13 shows the respect terminology for objects and places.

21 Based on fieldwork in Bafut in January 2010. The material was checked with the current Fon, His Majesty Adumbi II, to whom our thanks.

22 The language is Bìfɨ̂ɨ̂ and the town, people and culture is Bafut.

23 Di Carlo & Ayu’nwi (2020) present another, somewhat different account, without making reference to existing prior work.

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Table 13. Respect terminology for objects and places

English	Everyday form	Fon	Aristocracy	Chief
calabash	*fɨtə̄ə̀, dàà, bà'à*[24]	*ká'á*		
chair/stool	*àlə̀ŋ*	*àbə̀rɨ̄*		
compound	*ǹdugə̀*	*ǹtɔ̀'ɔ̀*	*ǹdùgə̀/ābɛ̀ɛ̀*	*ābɛ̀ɛ̀*
cup	*ǹdɔ̄ŋ*	*ānɔ̄*		
door	*àbà'à*	*àbù'ù*	*àbù'ù*	
dress	*àtʃə̀'ə̀*	*ǹvì*		
food	*àtʃūgə̀/àtʃú'ù*	*àkɔ̄ɔ̀*	*ndʒòò*	
grave	*nɨ̀sjɛ̀*	*nɨ̀fùm*		
gun	*mɔ́'ɔ́/ŋ̀gārə̀*	*kwàrə̀*	*táfán*	
house/residence	*ǹdâ*	*àtʃùm*	*fɨ'ɨ̀ndâ*	
parlour	*ǹtīì bù'ù*	*múm tʃàà*	*tʃàà*	
relaxing place/ courtyard		*àyɔ̄'ɔ̀*	*báŋ*	
shoes	*ǹtām/àbā'ākòrə̀*	*(àbā'ā) ǹtʃā'à*		
umbrella	*àkōŋ*	*àtʃɨ̄rə́*		

This type of specialised language has been little-studied and may therefore be far more common than present publication suggests.

6 Orthography, literacy and media

6.1 Orthographies for Bantoid languages

Cameroon represents a confluence of a government with a relatively positive attitude to linguistic diversity, vivdly reflected in the fact that there is a government sanctioned orthography for Cameroonian languages (Tadajeu & Sadembouo 1984). The resources of the university system and SIL have resulted in a rich body of analysis, in particular phonologies, with literacy and ultimately bible translation as their goal. Bantoid languages on the Nigerian side of the border are much less well documented, and almost none have orthographies

24 All names for different kinds of calabash, i.e. their proper names.

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which have been accepted by the community and are used in literacy materials. Cameroon ethnolinguistic communities have also shown interest in linguistic documentation as part of cultural renovation, and many small dictionaries have been funded by the speakers themselves. Figure 4 shows a typical workshop at a community-funded literacy centre among the Noone people. Table 14 is a summary of the Bantoid languages for which either an orthography exists, or is in development.

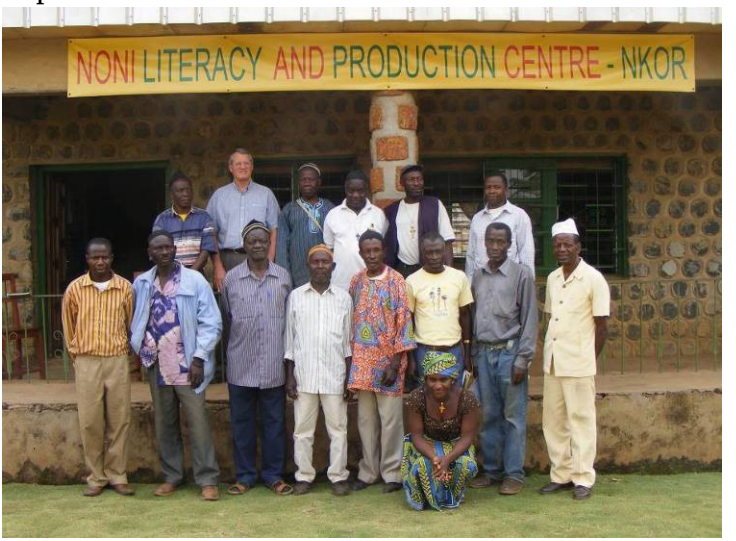

Figure 4. Noone literacy committee, March 2009

Table 14. Orthography development in Bantoid languages

Group	**Country**	**Orthographies developed**
Dakoid	Nigeria	Sama Mum, but not officially accepted
Mambiloid	Nigeria/Cameroon	Mambila (2 varieties), Kwanja, Vute
Tikar	Cameroon	Tikar
Bendi	Nigeria	Bokyi, Bekwara
Tivoid	Nigeria/Cameroon	Tiv, Oliti
Buru	Nigeria	None
Furu	Nigeria/Cameroon	None
East Beboid	Cameroon	Noone, Nsari, Kemezung

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Group	Country	Orthographies developed
Yemne-Kimbi	Cameroon	None
Nyang	Cameroon	Denya, Kenyang
Ekoid	Nigeria/Cameroon	Ejagham
Mbe	Nigeria	Mbe
Ambele	Cameroon	None
Menchum	Cameroon	None
Grassfields		
Ndemli	Cameroon	None
Ring		
Centre	Cameroon	Babanki, Bum, Kom, Mmen, Oku
East	Cameroon	Lamnsɔ
South	Cameroon	Bamunka, Kensweyswey, Vengo
West	Cameroon	Aghem, Isu, Weh
Momo	Cameroon	Moghamo, Mundani, Ngie, Ngwo
Southwest	Cameroon	None
Eastern		
Bamileke	Cameroon	Ngiemboon, Ngomba, Ngwe, Yemba
Ngemba	Cameroon	Awing, Bafut, Bambili, Bamukumbit, Pinyin
Nkambe	Cameroon	Limbum, Mfumte, Yamba
Nun	Cameroon	Bamali, Bambalang, Bamukumbit, Bamun, Bangolan, Chufie’
Bantu A	Cameroon	Numerous
Jarawan	Nigeria/Cameroon	None

6.2 Indigenous scripts

The Bamun people became famous for developing an indigenous script to write the language of the court (Dugast & Jeffreys 1950; Schmitt 1963). The script itself was devised at the end of the nineteenth century by Sultan Njoya and his scribes. The traditional Bamun corpus consists of manuscripts, chiefly history, treatises on traditional medicine, local cartography, personal correspondence, and illustrated folktales. Some of these can be seen on display at the museum in

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the palace at Foumban. The script passed through several stages of evolution, from a largely ideographic script to broadly phonetic. In its most recent incarnation it has some eighty characters. Its current use is limited to some signage (Figure 5) but a proposal has recently been put to assign Unicode numbers to the characters.

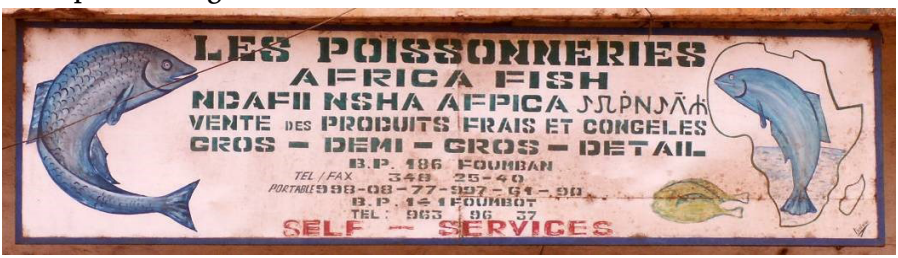

Figure 5. Bamun script on fishmonger's shop sign in Foumban. Source: Author, 2008

The Bagam, a subgroup of the Mengaka, a Bamileke language, appear to have developed their own script, probably sometime in the nineteenth century. L.W.G. Malcolm, an administrator and ethnographer, documented this script and submitted a paper to the *Journal of the African Society* (1920/21). The journal was edited by Sir Harry Johnston, who for reasons best known to himself, considered indigenous African scripts to be 'clumsy copies of Roman script'. As a consequence, no Bagam characters were ever published and only came to light some seventy years later, when they were published in the journal's successor, *African Affairs* (Tuchscherer 1999). There is a clear connection with the Bamun script and some characters are the same. Unfortunately, the Bagam script has disappeared and it is unlikely we will know more than is contained in Malcolm's admittedly amateur record.

7 Conclusions

The Bantoid languages are a nexus of families on the Nigeria/Cameroon borderland, all of which show features which link them to Bantu. However, they do not constitute a unitary genetic group and their relations with one another remain a matter for further research. Depending on definition of dialect and language, there are between 150 and 200 languages. The inaccessibility of the terrain where many are spoken has meant that documentation remains scanty and full-

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length grammars and dictionaries are rarities. Compared with Bantu, the systems of nominal classes and verbal extensions are often highly reduced or even lost, corresponding to a rise in the complexity of phonological and tonal systems. Finding correspondences between Bantoid and Bantu noun-class markers is often problematic and it is likely that borrowing and affix renewal have played a major role in their genesis. It is clear that we should not read back the features of Bantu into Bantoid and assume absence is evidence for erosion.

The linguistic interest of Bantoid is its extraordinary morphological and phonological diversity. Comparative evidence from the Kainji languages suggests strongly that early Bantoid had a rich system of noun-classes and verbal extensions, but relatively simple tones and phonology. These have eroded and been rebuilt, sometimes into systems of great complexity. Tracing the pathways by which this occurred has hardly begun, and remains a challenge for future linguists. This can only be achieved by continued attention to documentary linguistics, the creation of dictionaries, grammars and text collections. Greater attention from the international scholarly community would thus be welcome.

Some of these languages are endangered, especially in the Mambiloid and Furu groups. However, in the Grassfields, there are thriving literacy programmes, and we can be reasonably optimistic about their survival in the immediate future. Moreover, the Cameroon government takes a positive view of language diversity and development, so development of orthographies and a greater media presence can be foreseen.

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The fate of the Benue-Congo velar nasal in Bantoid

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Abstract:
Proto-Benue-Congo has been reconstructed both with a simple velar nasal **ŋ* and with the velar nasal as part of a **ŋg* structure. The loss of the simple velar nasal has been noticed as a feature of Bantu languages but has not been studied in other Bantoid groups. This paper considers the lexemes for which this phoneme has been reconstructed and then examines the subsequent development of the velar nasal in several groups. The results vary from preservation in Ekoid to near absence in Bantu. The phonological loss of velar nasals is not surprising, as parallels demonstrate. Rather the question arises of why certain languages only preserve remnants of the original velar nasal, and a partial answer is connected to suffixation and cluster formation.

Keywords: Bantoid, Bantu, velar nasal, reconstruction

1 Introduction

One of the differences between the phonemic inventories reconstructed for Proto-Benue-Congo (PBC) and its descendant Proto-Bantu (PB) is that the latter does not usually include the velar nasal **ŋ*, except as an element in the realization of certain nasal + consonant structures.[1] De Wolf (1971) was probably aware of the absence of the simple velar nasal in PB because his PBC reconstructions were modelled on PB lists and he distinguished PBC forms reconstructed with **ŋg* from those with simple velar nasal **ŋ*. The former often have descendant PB forms in **ŋg*, whereas the latter often have a zero reflex in PB. For example, PBC **kaŋga* 'guineafowl' > PB *káŋgà* shows preservation, whereas PBC **tuŋi* 'ear' > PB *túì* shows loss.[2]

1 Cf. Hyman (2003: 49), Meeussen (1967: 83, 85), and Meinhof et al. (1932: 32–3).

2 Unless otherwise stated, PBC reconstructions are from de Wolf (1971: 53–59) with class markers in parentheses, while PB reconstructions are taken from *Bantu*

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Mukarovsky (1976–77: 248) also noted the unusual loss of his Proto-Western Nigritic *n in C_2 position in certain PB reconstructions. Then Dimmendaal (1978: 233–34) was the first to state that there is a regular correspondence between stem-medial and stem-final *$ŋ$ in Proto-Upper Cross (PUC) and $ø$ in Proto-Bantu for which he gave several examples.

But besides the Bantu reflexes, what happened to the PBC velar nasal in other Bantoid groups?[3] After highlighting the general problem of velar nasals in Proto-Benue-Congo and Niger Congo, the plan of this article is first to identify stems which can be reconstructed with simple *$ŋ$ at the level of Proto-Cross-Congo (PCC)[4] or earlier, and then look in detail at a range of Bantoid language groups for evidence of preservation or loss. Finally, we will look at the Bantu evidence for greater clarity on that subgroup.

The Bantoid data in this paper is cited from publications whose authors vary in their conventions for transcribing or analyzing nasal + velar structures ($ŋg$ or ng, prenasalized or not, compound or not). But I will refer to all those structures as complex $ŋg$ in contrast to simple $ŋ$ (without any additional component). Likewise, the term "$ŋ$ loss" only refers to a language's loss of the inherited PBC simple phoneme *$ŋ$ not to its loss in a complex structure. It is also important to keep in mind that the presence of simple $ŋ$ in a language today does not mean that the language failed to undergo "$ŋ$ loss", since after the

Lexical Reconstructions 3 (BLR3) (Bastin, Coupez, Mumba & Schadeberg 2002), sometimes with examples from Guthrie (1967–71). The convention of BLR3 (following Meeussen's usual style) is to write *ng for the PB prenasalized velar, but in this paper I use *$ŋg$, as had been the custom of Meinhof and Guthrie. Regardless of the convention of the authors cited, I write reconstructed roots without preceding or following hyphens. Letters following PB reconstructions indicate the Guthrie zones where reflexes are attested; the symbol " + " indicates additional zones, that is to say "ABDE + " is a shorthand for zones A, B, D, E and some further letters.

3 A description of possible Bantoid branches can be found in Blench (2015), but it must be stated that there is a lack of clear characteristics, much less confirmed innovations, that would distinguish the members of a Bantoid group or many subgroups, including Bantu itself. Although Dakoid is included in Bantoid in Blench (2009), I think much of its core vocabulary has roots divergent from the conventional Bantoid languages.

4 To label the ancestor of the Cross River and Bantoid languages, I use the term Proto-Cross-Congo (rather than Proto-Bantoid-Cross) to maintain consistency with the pattern Niger-Congo and Benue-Congo and to avoid confusion with PBC, the abbreviation for Proto-Benue-Congo. PCC reconstructions are mine.

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loss of inherited *ŋ the simple velar nasal often arose anew from the reduction of *ŋg or other consonants.

2 The velar nasal in early Benue-Congo or Niger-Congo

There is not yet a list of reconstructions for PCC or Proto-Bantoid, so we must begin at an earlier stage. What Benue-Congo roots might be candidates for studying the reflexes of PBC simple *ŋ in Bantoid? De Wolf (1971) was focused on PBC noun classes rather than phonology and he provides no description of how he reconstructed his tentative PBC phonemic system, which includes both *ŋ and *ŋg, or even how he reconstructed roots. Nevertheless, de Wolf's main list of tentative PBC noun roots includes twenty roots with simple *ŋ and nine roots with *ŋg.[5] Only some of these have Bantoid reflexes. In his list of PBC phonemes, Blench (2004) reconstructs *m, n, ɲ, and *N (presumably an unspecified nasal), but he also uses *ŋ in his Eastern Benue-Congo reconstructions (e.g. 253 #koŋ 'hill') and *ŋg in the Bantoid-Cross ones (e.g. 329 #kaŋga 'guinea-fowl'). Sometimes these match PB reconstructions, sometimes they do not.

So, how and why we should reconstruct this phonemic difference for PBC *ŋ and *ŋg are difficult questions, mainly because very few modern Benue Congo languages make this distinction. Most languages only have the simple velar nasal. De Wolf's Central Kambari (Kainji) is one of the minority with ŋg but it apparently lacks simple ŋ and the principle for his PBC reconstructions is not clear: Kambari *ùù-dàŋgâ* 'tree' (<*ú-taŋga 'stick, whip'), *tsì-pə̀nâ* 'brains' (<*mà-boŋgo), *ùù-rə̃ʔə̂* 'depth' (<*bu-doŋo), *ùù-nâ* 'mouth' (<*ú-nuŋa). There are some Plateau languages with ŋg, but the instances do not consistently correspond to reflexes in other languages and there is the possibility that a *-ŋgV suffix has sometimes played a role.

In fact, in Niger-Congo in general, the complex *ŋg is not very common (mainly Bantu and the Atlantic or Mel languages). Among his 600+ pseudo-reconstructions of Proto-Western-Nigritic (covering most of the groupings of current Niger-Congo), Mukarovsky (1976–77)

5 De Wolf (1971: 51–59), grouped by gender. Those with ŋg are *kweŋge 'cheek', *ŋgwana 'child', *kaŋga 'guinea fowl', *baŋga 'jaw', *kpaŋga 'mat', *peŋga 'shoulder', *kwoŋga 'spear', *taŋga 'stick, whip', *gaŋgo 'tooth'. In addition, there are occasional incidental reconstructions throughout the volume.

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includes eight with a simple velar nasal or *ŋw* complex (all initial only).[6] The PWN complex **ng* appears 26 times (only in C_2 position), often as an alternative, and often without examples for *ng/ŋg* outside Bantu.[7] Even the presence of *ŋg* in a sample language is not very indicative. For example, one of the few languages that Mukarovsky regularly cites with *ŋg* is Gonja, a North Guang language of the Kwa group, but Snider (1989) uses *ŋ* or *ŋŋ*, e.g. *e-peŋi* 'sun' instead of Mukarovsky's *è-peŋgí*. In any case, Snider (1990: 10) derives North Guang **ŋŋ* from Proto-Guang **ŋk*, so Guang will not provide any confirmation for reconstructing Proto-Niger-Congo **ŋg*. Yet, for the widely attested stem of 'guinea fowl' (PWN **kuang*, PBC **kaŋga*, PB **káŋgà*), other than the Bantu and Benue-Congo reconstructions, Mukarovsky's only reflexes with **ŋg* are a Gonja form and possibly Kisi (Mel) *kaŋgb-u* 'kind of dove'.

The paradox is that PB has **ŋg* but no simple **ŋ*, but beyond Bantu there is plenty of simple *ŋ* but little evidence for **ŋg*. There is a similar deficit of evidence in languages outside Bantu for the other nasal complexes (**mb* and **nd*) reconstructed by Mukarovsky and de Wolf,[8] but there are at least numerous oppositions in Bantu of **m/*b/*mb*

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6 Mukarovsky (1976–77) discusses *ŋ* at 1.116–17, and the "denasalization of **ŋm*" in some languages at 1.142–46 (later he uses **ŋw* in listing those same roots). Mukarovsky writes his PWN pseudo-constructions with capital letters, but for ease I have written them with miniscules. Those with **ŋ*: **ŋiu* (**ŋium*, **ŋu-*) 'drink', **ŋun* (**ŋunk*) 'smell', **ŋwa* 'scratch', **ŋwá* (**ŋwyá*, **ŋwúna*) 'nose', **ŋwákì* (**ŋwátì*) 'smoke', **ŋwál* 'moon', **ŋwát* 'star', **ŋwo* 'bee; honey'.

7 PWN roots with **ng*: **baga (*banga*) 'jaw', **bung* 'waterhole, river', **beng* 'dislike, hate', **bhang* 'shine brightly', **bhung* 'roar', **cang* 'charm', **gwàng* 'hang up', **jing* 'build', **kuang* 'guinea-fowl', **kung* 'bend (eel)', **kwúng* 'gather up', **liang* 'hang down, dangle', **lingi* 'water', **mún* (*mung*) 'suck', **mang* (**mak*) 'astonish', **ní* (**níang*) 'elephant tusk', **pin* (**ping*) 'lie across', **pok* (**pong*) 'knead', **pek* (**peng*) 'be bent sideways', **ping* 'plait', **phán* (**pháng*) 'cutlass', **phuk* (**phung*) 'blow, breathe', **tagi* (**tangi*) 'kind of trap', **tang* (**tiang*) 'be first, in front', **ting* 'cut (off)', **tung* 'basket', **tsuang*? (**tuang*) 'stick'.

8 De Wolf has only a few reconstructions with **mb* or **nd* and, as usual, the evidence for them is not clear. For example, none of his examples for **kondi* 'moon, month' or **tende* 'palm tree' have */nd/*, so presumably they are based on PB **gòndè* and **téndé* respectively. For **kumba* 'pig' (no PB cognate), he cites the Upper Cross River forms Mbembe *ò-ḳómbà* and Humono *è-kó̀mbạ́/ì-*. But */mb/* is very rare inside a morpheme in those languages, and the Okom variant *akku* 'pig' suggests that the Mbembe forms *okkómba*, *akkómba* involve a clitic. Dimmendaal does not reconstruct **mb*, **nd* or **ŋg* for PUC.

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and **n/*d/*nd*. Without PB reconstructions, which heavily influenced Mukarovsky and de Wolf, it is quite possible that PWN and PBC might have been reconstructed with just **ŋ*, and not **ŋg*. Two general solutions to the puzzle are obvious: 1) a widespread shift of **ŋg* > *ŋ* except in Bantu,[9] or 2) only early **ŋ* (without **ŋg*) and then Bantu innovated **ŋ* > *ŋg*. From the phylogenetic viewpoint, it seems unusual for so many branches of Volta-Congo to lose a phonemic feature independently. But the fact that the other PB nasal complexes look solid makes an early **ŋg* plausible typologically.

How solid is the Bantu evidence for non-initial **ŋg*? The various NC_2 structures are regularly attested in hundreds of languages from all zones, regardless of tones or surrounding vowels. There is an occasional tendency toward nasal complexes inside the history of the Bantu group, e.g. early Bantu **yàb-ʊk-* 'cross river' > Eastern Bantu **yàmb-ʊk*. But there is really nothing internal to justify the case for a uniform change like PBC **ŋ* > PB **ŋg* (and in certain cases PB **ø*).[10] Bantu languages differ in this regard from the neighboring Grassfields languages, where NC_1 structures are frequent but no NC_2 structures have been reconstructed for Proto-Grassfields.[11] In general, the simplification of consonants in C_2 and the limitation of coda consonants are widespread phenomena in the Nigeria-Cameroon area and are often connected with the loss of V_2 but do not require it. Some Bantu languages in the area were also affected by these changes, for example, PB **ŋg* is fairly consistently preserved by Sawabantu languages like Duala (A24), as well as by Tuki (Mbam A601), but not usually by Tunen (A44) or the Manenguba group: e.g. PB **gàŋgá* 'root' > Duala *mwangá* and Tuki *ongangá* but Tunen *mòkaŋa* and Akossi (A15c) *ŋ̀-kàŋ*. The change **ŋg* > *ŋ* (and sometimes further *ŋ* > *ø*) is also a feature of many B70–80 languages.

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9 If both existed earlier, this would have been a merger of **ŋg* and *ŋ*. For the change **ŋg* > *ŋ* and general background on the velar nasal in Germanic languages, see Bailey (2019).

10 Among the C_2 consonants for a hypothetical Proto-Potou-Akanic-Bantu (PPAB), Stewart (2002: 209) lists *mb*, *nt*, *ŋg*, *ŋk*, and *n* (but not *m* or *ŋ*). He states, "the simple nasal *n* is presumed to go back diachronically to a prenasalized stop *nd*" (so the occasional PB **nd* is a non-systematic innovation when it occurs, as is Proto-Akanic **ŋ* < **n*). But his **ŋg* is early, e.g. PPAB **fĩ̃ŋgĩ̃* 'vein' > PB **tíŋg[-]à*.

11 The apparent exception PGr **sàm ́ bà(l)́* 'seven' (PB *càmbàdì*, *càmbʊ̀àdì* BLR 8433) is a compound formation.

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In summary, there is reason to wonder about the early history of pre-nasalized consonants or nasal complexes at the stages before Proto-Bantoid. But putting aside these speculations about the phonemes of Proto-Niger-Congo and Proto-Benue-Congo, this paper will continue with the standard assumption that PBC had both *ŋg and *ŋ and that PB *ŋg is a reliable indicator of the former. The question under study then is to what extent PBC had simple *ŋ and what its fate was in Bantoid languages.

2.1 PBC or PCC reconstructions with simple velar nasals

If they were in fact distinct, PBC *ŋg and *ŋ merged in early Cross River in favor of *ŋ, e.g. PB *káŋg 'fry, roast' ~ PUC *káŋà, PLC *káŋ. So, by themselves the forty PUC roots with *ŋ in Dimmendaal (1978) do not distinguish any difference in source. But he devised a simple test for distinguishing them by listing six cognate roots for which PUC *ŋ has a corresponding *ø in Guthrie's PB, thus demonstrating the phenomenon of simple ŋ loss in Bantu: 'knee', 'egg', 'ear', 'louse', 'root/hair', 'faeces'.[12] The Bantu comparisons are needed because Cross River *ŋ is ambiguous in itself. Likewise, reconstruction based on Bantoid alone is complicated by languages where contemporary ŋ can have a variety of sources. Accordingly, the evidence of PB is critical for distinguishing PCC *ŋ and *ŋg.

For this analysis, I have further added several roots from other sources that might be relevant. Proto-Lower Cross (PLC), Proto-Cross River and Proto-Ogoni reconstructions are from Connell (1991, 2025a), Proto-Western-Nigritic (PWN) reconstructions from Mukarovsky (1976–1977), Benue-Congo Reconstructions (BCR) from Blench (2004), Proto-Jukunoid (PJ) from Shimizu (1980), Proto-Plateau (PP) from Gerhardt (1983: 139–154), Proto-Grassfields (PGr) from Hyman (1979). Also cited when available is data from the Benue-Congo Comparative Wordlist (BCCW) collected in Williamson & Shimizu (1968) and Williamson (1973). Many contemporary language forms are those collected by the Grassfields Bantu Working Group (GBWG) in the 1970s or in the Bantu database accompanying Grollemund et al. (2015).

We can create a list of possible PBC or PCC forms with a simple velar nasal by filtering the various lists above for roots where a PB

12 Dimmendaal 1978: 233–34. For the velar nasal in specific Upper Cross languages, with reconstructions of PUC, see Sterk (n.d.: 71–2).

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form lacks the velar nasal found in the PBC, PUC, or PLC reconstruction. Simple velar nasals have not been reconstructed at the beginning of PBC roots.[13] I have separated the root-medial (1) and root-final examples (2), because assessing final velar nasals is often more complicated. Some roots do not have good Bantoid evidence for a final consonant, and in some forms it is possible that the reconstructed final velar nasal is based on an original suffixed class marker (especially likely to be preserved on monosyllables). Since all PB nouns are reconstructed with a vowel coda, it is also possible that the lack of final velar nasals is due to a general loss of all PB final consonants.

(1) PBC or PCC proto-forms with velar nasal **in medial position**

'ear' PBC **tuŋi* (*ku/a*)
PB **túì* 15/6, 5/6 (BLR 3030)

The velar nasal is well attested in Cross River (PUC **ttóŋ(ì)*, PLC **ú-tɔ́ŋ́ /a-*) and somewhat in Jukunoid, Plateau and Western Gur (BCCW 31, PJ **tóŋ* (*ku/a*), PWN 556 *thúi*, *thú*). We will see that Bantoid languages sometimes show what look like frozen **-lɪ* or **-kʊ* suffixes, both frequently seen as class markers in Gur forms.

'ashes' PBC **toŋ* (de Wolf 1971: 71)
PB **tó*, **túé* 3, 14 (BLR 2954)

Despite de Wolf, Bantu forms support a CVCV structure for PCC. The velar nasal is well attested in Plateau, Jukunoid and Cross River (BCCW 5, PJ **tóŋ* (*u-/i-*), PWN 560 **thún*). Across Benue-Congo and Bantoid, the most common vowel in this word is *ɔ* (so PUC **tɔ́ŋ*, PLC **ń-tɔ́ŋ́*). Guthrie's reconstruction of **túé* (C.S.1810.5, 1769), followed by BLR, is based on forms like Songe (L23) *e-twe*, which helpfully provide V_2, but the glide in those forms only suggests an unspecified rounded back vowel and all the examples with vowels in zones ABD have *o* or *ɔ*.

'hair, root, vein' PUC **dɪŋa* (*dò-/ɪ*)
PB **dì* 3/4, **dia* 3 'root, fibre' (BLR 1003)

The PUC reconstruction is supported by PLC **ɔ́-lɔ̀ŋ* 'root', but not PWN 344 **líul*, *líl* 'root', PJ **dzin* (*u/i*) 'hair' or Proto-Central-Jukunoid **dén* 'root', PLC **dét* 'hair'. Unfortunately, it is not easy to be sure about Bantoid cognates because the root has

13 Even a prenasalized velar appears initially in only one of de Wolf's stems: PBC **ŋgwana/*bana* 'child', where the nasal in the singular is clearly a remnant of the class prefix **mʊ-*.

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metaphorical semantics, which seem to overlap with possible by-forms or other roots:

1. PUC **tɪna* (*dò-/ɪ*) 'root, hair', PWN 515 **tin* 'root (trunk)', PB *tínà* 'root, base of tree trunk - banana plant'.
2. PBC **duŋu* (*ú/ti*) 'cord / rope', **digi* (*ú/i*) 'cord / rope / liana'; PJ **diT*, **diK* (*u/i*) 'rope'; PUC *-dyíkì*, PLC **ó-lók*; PB **dígì* 3/4 'string' in zones CDE+, PB **dí* 11 'string' BGH+. The two PBC proto-forms for 'cord, rope' look suspiciously similar especially since the velar nasal in **duŋu* is probably just a velar, as in Cross River.
3. PB **cìŋgà* 'string; hair (on body)'.
4. Also, for 'root', Bantoid languages often use the cognates of PB **gàŋgá*.

'knee' PUC **dúŋí* (*dè-/dà-*)
PB **dúí* 5/6 (BLR 1239)

The velar nasal is likewise reconstructed for PLC **é-lóŋ /n-* and BCR 220 *#rúŋù* (with forms from Plateau and Tarokoid). PWN 363 **lúnku-* (**dúnku-*). There is limited data for PWN 109 **dui*. The basis of De Wolf's reconstruction of PBC **duno* (**li/*a*) is unclear since none of the forms he cites have C_2 or V_2. Perhaps he was making a connection with the Eastern Bantu **dòŋgò* 'knee' EGJL+ (BLR 1217) but BLR derives that from the verb 'join'. PBC **kudu* (*li/a*) may reflect this root with a **kò* class prefix for body parts.

(2) PBC or PCC proto-forms with velar nasal **in final position**

'dew' PBC **miŋ* (*ma*)
PB **mè* 3, 5, 11 (BLR 2158)

The velar nasal is found in Plateau reconstructions but the word was not included in the usual Cross River lists for reconstruction. Blench (2022) gives common Plateau *#myeŋe*, with *ŋ* as a Plateau innovation. PWN 366 **màni*, **mìna*. A possible conflation exists with stems for 'water': PBC **ni* (±) (**ma*), PUC **nì* (*mà-*); or PLC **ḿóːŋ*, PGr **mò´*.

'egg' PBC **kiŋ*, **tiŋ*
PB **gí* 5/6 (BLR 1368)

Reconstruction of the velar nasal for PBC is uncertain at best. Cf. PJ **kyì* (*ri/a*), PP**tii* and **zeŋ*, PWN 122 **gíla*, BCCW #33. From PUC (Dimmendaal 1978: 297) **kkèŋí*, PUC (Sterk n.d.:

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80) *`-*kkèddí* and PLC **ŋ́-kíɛ̀ǹ*, Connell reconstructs Proto-Cross-River **kìɛǹ*. These forms and the Bantoid forms discussed below often appear to have the relic of a class 5 marker.

‘excrement’ PBC **biŋ* (*a*)
PB **bîì* 13, 6 (BLR 6425)
The velar nasal is seen in reconstructions of Plateau and Jukunoid (PJ **byíŋ /a-*), but for Proto-Cross-River, Connell reconstructs **bín* (cf. PUC (Dimmendaal 1978: 256) **`-biŋ*, PUC (Sterk n.d.: 72) *\*`-bín*, PLC possibly **fɪ̀ŋ* or **fíD*). PWN 32 **bin*. BCR 98 *#mi*. Protoforms for Mambiloid and Grassfields are reconstructed with final **d*, see below.

‘louse’ PUC **dáŋ* (è-/i-), PLC **ó-láŋ / i-*
PB **dá* 9/10 (BLR 780)
Dimmendaal (1978: 67) and Sterk (n.d.: 34–5) discuss the problem that **ŋ* is absent in this stem in a number of Central Upper Cross languages. But Northern Jos has **laŋ* (*bì/ì*). BCR 240 *#daNi* is based on Tarokoid (Sur) *dani*, the PLC reconstruction and Nizaa (Mambiloid) *lām*. No entries for ‘louse’ in PWN or BCCW, and de Wolf only offers PBC **i-kodu/*i-*. I have not found other Bantoid cognates.

‘mosquito’ PUC **boŋ*, PLC **é-bɔŋ*
PB **bʊ́* 9/10, 11/10 (BLR 279)
Also Proto-Plateau 2 (Jaba) *ì-buŋ*. Sterk’s reconstruction of PUC **`-bbɔ́ŋŋV̀* suggests a suffix is at issue. The velar nasal is not supported by PWN 53 **búne*, BCR233 *#boN* (in fact, none of the three forms cited there has any nasal).

‘wing’ PBC **pabaŋ*, **babaŋ* (li/a)
PB **pàpá* 5/6, 11/10, **bàbá* (BLR 2407)
The velar nasal is seen in some Plateau languages but is not reconstructed for Plateau groups. It is, however, reconstructed for PUC **bábàŋ* (Dimmendaal 1978: 258) and perhaps with a suffix in PUC **`-bbàŋɔ̀* (Sterk cited by Connell 2025a) but not PLC **ú-bâ / m-*. See also BCCW 101; PWN 419 **papa* ‘shoulder, wing’. This word, and related verbs to ‘flap wings’, may have an onomatopoetic dimension that complicates reconstruction.

Altogether, these ten roots above provide a few good cases for reconstructing a PBC or PCC simple velar nasal, although only four are medial, and in most of the word-final cases the evidence is rather

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weak. It should be noted that all of these are nouns, partly because de Wolf's list only includes nouns but also because the great majority of PUC reconstructions with velar nasals are nouns.

2.2 Unlikely or uncertain cases of PBC *ŋ and *ŋg

Few BC languages have pre-nasalized or compound NC structures, so de Wolf apparently reconstructed *ŋg on the basis of the Bantu data like that in Table 1.

Table 1. Proto-Benue-Congo forms in *ŋg

	PBC	PB
'guineafowl'	*kaŋga (ì/í)	*káŋgà 9/10 (BLR 1720)
'jaw'	*baŋga (ku/í)	*báŋgá 11/10 (BLR 108)
'spear'	*kwoŋga (li/a)	*gòŋgá 5/6 (BLR 1448)

Thus, we should be able to pair PBC *ŋg with PB *ŋg and PBC *ŋ with PB *ø. But it is well known that many of de Wolf's reconstructions deserve reconsideration. Based on PB or other Bantoid reflexes, it seems that some PBC forms, listed in (3), should actually have different types of velars than those reconstructed by de Wolf, or none at all.

(3) Disputable PBC or PCC proto-forms

'shoulder' PBC *peŋga (ku/a)
PB *bègà 5/6 (pègà 5/6) (BLR 139)
De Wolf (1971: 63, 158) only gives two uncertain reflexes and PBC *ŋg looks unlikely here in general: PWN 41 *buaka (bueka); PP2 (Jaba) *gu-pek / a-*, PGr *mbèk(-a?); Ekoid: Balep *è-pɛg*, Ejagham *efâŋ*, Ekajuk *ɛ́-bə́g*.

'tooth' PBC *gaŋgo (±) (li/a)
PB *gègò 5/6 'molar tooth' (BLR 1356)
De Wolf (1971: 62) only gives one possible example Central Kambari *áá-ŋgá/á*. Cf. PWN 200 *kéka*.

'buffalo, bush cow' PBC *poŋ (ì/í)
PB *bògó 9/10 (BLR 258)
De Wolf gives several examples with final *-m* (so also PUC *pɔ́m 'cow') but none with a velar nasal. The Bantoid evidence suggests either *ŋg or possibly *g*: PGr *mbòŋ`; in Yemne-Kimbi, Bu *mbɔ̀lā/bìmbɔ̀lā* (1/2) and Koshin *mbɔ̀ŋ/bòmbɔ̀ŋ* (1/2); the

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Ekoid-Mbe evidence is discussed later. If PBC **ŋg*, perhaps the PB form in classes 9/10 reflects some dissimilation of double NC structures – to which the varying C_1 of this difficult word may also contribute. Cf. BCCW 46.

'blood' PBC **luŋ* (*ma*)
PB **dúŋgó* 6 (BLR 4488)

De Wolf's examples do not show a velar nasal (or *ŋg*), but we will see below that the Bantoid data supports PBC **ŋg*. There are other 'blood' roots that might be relevant for some of the Bantoid data: 1) PBC **zi* (*ma*), PGr **cÌ´*, PB **gìdá* (5) 6; 2) PJ **yíŋ* (*ma*), PUC **yìŋ*, PB **jíŋgà* 6, but perhaps some forms are related to the previous series; 3) PGr **lém`* looks like a cognate of PUC **dè* but is more likely from PBC **luŋ* with the class 6 marker **-ma* suffixed.

'charcoal' PBC **kalaŋ* (*li/a*)
PB **kádà* 5/6 (BLR 1662)

There is no strong evidence for **ŋ* in Plateau or Jukunoid and Connell (2025a) reconstructs Proto-Cross River **káDV*. In any case, a putative C_3 in this form would be at risk in most languages. Cf. BCCW #16, PGr **ké`*. There is also the problem of the PB pair **kádaŋg/*káŋg* 'roast'.

'leopard' PBC **kpoŋi* (*ì/í*)

Without a clear PB descendant, it is hard to know whether to reconstruct PBC **ŋ* or **ŋg*, although the latter seems more likely. De Wolf's velar nasal seems to be based on a form in Kainji (Anaguta *ù-kpèŋ/ì*), and three Bendi forms: Alege *ì-kpɔ̀ŋ*, Boki *ì-kpaŋ/ì-* and Bete *ù-kpɔ̀ŋ/ì*, which are ambiguous. PBC **kpoŋi* has some resemblance to PB **gòì* 9 'leopard' (BLR 7154), but there must have been several terms for wild cats, and there is no velar nasal in PJ **kù* (?)(*i/i*), PUC **kpè* and PLC **é-kpè /*i-*, PWN 150 **gwìl*. Cf. BCCW 56. Some groups like Ekoid have both roots (or stems of the same root?).

'mouth, lip' PBC **nuŋa* (*ú/ti*)
PB **nùà* 12, **nyùà* (BLR 4709)

De Wolf only cites Kagoro (Plateau) *u̇-núŋ* with the velar nasal, and there is limited support for a velar nasal from Cross River. PLC **í-núà* argues against the reconstruction of a velar nasal, as does PUC **mà* (often forms in *mmà*), which is likely from **nua*

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with a labialization of the nasal by the rounded vowel. Proto-Ogoni **ngegã* is ambiguous at best. See also PWN 404 *níuma*, *núa*. In general, this root has been seen as a likely denominative of 'drink' (cf. PB **nyó* (BLR 7047), PWN 406 **ŋiu(m)*, **ŋu*), and **-a* or a class affix seems a more likely suffix than **-ŋa*. But note occasional second nasals in Bantu forms for 'drink' like Nugunu (A622) *nyóɛna*, Mangisa (A63) *ə-nyuŋ*, Eton (A71) *mè-ɲúŋ*.

'throat/voice' PBC **toŋo* (*ì/í*)

The velar nasal in Plateau 2, Ekoid, Bendi, and PLC **ù-tóŋ* 'neck' is ambiguous. The noun is apparently not known in Bantu but the Mambiloid and Grassfields evidence discussed below suggests the root was **toŋgo*. In that case, perhaps related is the verb seen in PB **tóŋg* 'crow, groan' and Nchane (Beboid) *thɔ̄ŋɛ̄* 'crow (v)' (Boutwell 2020). Williamson (1989: 250–54) considers *#toŋ* a Benue-Congo innovation.

'sheep' PBC **tiaŋe* (**bu/*í*)

De Wolf's evidence is very weak, including Tiv *ì-yɔ̀ngò*. PUC **tama* and PJ **tam* better fit the fragmentary Bantu data: **tààmà* 9 (BLR 9217) cited from zone J and forms in *-tomba* found in various A70 languages. Bendi data discussed below.

'tooth' PBC **sana* (*li/a*)

De Wolf only provides evidence from two Upper Cross River languages (Humono *rɛ̀-sạ̀n/rạ̀*, Mbembe *è-ṣà/à-*) and three varieties of Bendi (which at that time was considered Cross River). It seems that these are two separate roots. The Cross River proto-forms have been reconstructed without velar nasals as PUC **ttân* (*dè-/dà-*) (Dimmendaal), **`-sàdɔ̀* (Sterk), PLC *\*é-dɛt`*, Pr-Ogoni **àdáNa*. But the Bendi forms all have final *ŋ* (e.g. Bete *ù-ʃáŋ/ì*) and are likely cognates of PGr **sòŋ´* 'tooth', PB **còngà*, **còngá* (BLR 6826, 736), apparently a Bantoid derivative of **còng* 'sharpen to a point' (BLR 670, BCR #389), like the use of English 'incisor' for a front teeth.

There are still several other roots with a simple velar nasal in de Wolf, but they lack clear PB correspondences.[14] Because of the complexi-

14 Not discussed in this article are: PBC **taŋ* (**ù/*ba*) 'thief', **kpaŋe* (**ku/*a*) 'canoe/boat', **ziŋin* (**ì/*í*) 'guineafowl', **toŋi* (**li*) 'honey', **kiaŋ* (**ku/*a*) 'thing', **kodoŋ* (**ú/*í*) 'throat / voice', **mbaŋ* (**ú/*í*) 'rain, rainy weather', **tieŋu* (**ù/*ba*) 'witch' and **tieŋu* (**bu*) 'witchcraft'.

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ties of numbers as a separate topic, I have also not treated 'four' in this article. However, the velar nasal reconstructed for Cross River (PUC **nàŋì*; **nàŋ*, PLC **ìnìàŋ*) is absent not only in Bantoid languages (including PB **nàì*) but also in Jukunoid, Kainji, and most Platoid languages (Pozdniakov 2018).

3 The velar nasal in various Bantoid groups

To summarize so far, based on data outside Bantoid, we have about ten lexemes for which we might want to reconstruct a simple velar nasal for the proto-Bantoid stage. That is not a lot, but enough to examine the Bantoid evidence, with an emphasis on the four stems with medial **ŋ* ('ashes', 'ear', 'hair/root' and 'knee'). As we go along, we can re-assess some of the problematic reconstructions.

3.1 Ekoid-Mbe

We begin with the Ekoid-Mbe group which provides the fullest data. These languages regularly have a consonantal reflex of PBC **ŋg*, but they show a difference in reflexes of the PBC simple **ŋ*. Ekoid varieties like Ejagham and Efutop regularly preserve the simple velar nasal, but Mbe does not, as shown in Table 2. Included are Proto-Ekoid-Mbe (PEM) reconstructions from John Watters (p.c.).[15]

Table 2. Ekoid-Mbe evidence for preservation of a velar nasal

Language	'ashes'	'ear'	'excrement'	'knee'
PBC	**toŋ*	**tuŋi*	**biŋ*	**dúŋí*
PEM	**tôŋ*	**tôŋ*	**bîŋ*	**rúŋ~lúŋ* (?)
Ejagham	*a-tôŋ*	*o-tûŋ*	*à-bîŋ*	*a-rúŋ*, *ê-rúŋ*
Efutop	*ǹ-tûŋ*	*ò-tâə̀ŋ*	*à-bîŋ*	*è-dâə̀ŋ*
Mbe	*bé-tùɛ̀* (pl.)	*ó-tūɛ̀*	*a-bí*	*lɛ́-lù*

The word for 'root' (PUC **dɪŋa* – PB **dì* 3/4, **dia* 3) is one more example where Ekoid has a velar nasal (N. Etung *ì-yɨŋì/à-*, S. Etung *ɛ̀-yɨŋà*) but Mbe does not (*è-lì/bè-*).[16] An alternative stem is seen in

15 Unless otherwise stated, Ekoid data comes from Blench (2014), which is based on Ejagham data from John Watters and David Crabb's comparative wordlist. The Mbe data comes from the unpublished wordlists collected by Otronyi et al. (2009) or Blench (2014).

16 For **d* > Etung *y*, Mbe *l*, cf. PB **dúm* 'bite' ~ Etung *yûm*, Mbe *lwɔ́m*.

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PEM **rŭg* (?) 'root' (Ejagham *ìrʉ̀k*, Efutop *ǹ-duǔg/à-*) which might suggest a velar plosive rather than velar nasal in PBC **duŋu* 'cord/rope', as discussed above.

Table 3. Ekoid-Mbe evidence for lack of inherited velar nasal

Language	'egg'	'wing'	'mouth'	'mosquito, bee'
PBC	**kiŋ*, **tiŋ*	**pabaŋ*, **babaŋ*	**nuŋa*	[PUC **boŋ*, PLC **é-bɔŋ*]
PEM	**kĭ*	(*)-*papɛ*	*nyò*	*búm*
Ejagham	*eji*	*efaβe*	*ɲŋɔ̀/ɔ̀ŋɔ̀* (GBWG)	*ḿ-bə́m*
Efutop	*è-zí*	—	—	*m̀-bú*
Mbe	*lɛ̀kiː*	*épūpūrù*	*úŋūŋ*	—

Since Ejagham and Efutop seem reliable indicators of PBC velar nasals, it is noteworthy that velar nasals are missing in Ekoid reflexes of some of de Wolf's PBC reconstructions, as seen in Table 3. No Ekoid languages have a final nasal in the roots for 'egg' or 'wing'. For 'mouth', Ekoid evidence suggests there is no **ŋ* in PBC, but Mbe has a surprising velar nasal. For 'mosquito, bee', the final *m* in Ejagham and the missing final nasal in Efutop suggest an incorporated class 9/10 marker rather than a lost velar nasal.

It must be emphasized that the lack of velar nasals in the Mbe forms above is not because Mbe does not have that phoneme. Rather, Mbe is like Bantu in losing the simple velar nasal but showing a consonantal reflex of PBC **ŋg*, e.g. PB **káŋg* 'fry, roast' ~ Efutop *kaáŋà*, Mbe *yáŋ*; cf. PB **búmb* 'mould pottery' ~ Efutop *mɔ̀ŋ*, Mbe *mwɔ́ŋ*. Accordingly, the presence of a velar nasal in both the Ekoid and Mbe forms of a word, together with PB **ŋg*, is a good indicator that the relevant PCC reconstruction should be **ŋg*. This distinction suggests three revisions to PBC reconstructions (Table 4).

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Table 4. Series of PCC **ŋg* rather than simple velar nasal

Language	Phonemes	'blood'	'horn, tusk'	'cow, buffalo'
PBC	various	**luŋ*	**tano*	**poŋ*
PCC	**ŋg* (*vs. *ŋ*)			
Ejagham	*ŋ*	*a-gyʉ́ŋ*	*ń-táŋ*	*m-fóŋ*
Efutop	*ŋ*	*à-lɔ́ŋ*	*ǹ-tə́ŋá*	*m̀ŋ-fɔ́ŋ*
Mbe	*ŋ* (*vs. ø*)	*bɛ̄-lūŋ*	*ṇ-táŋ*	*ṇ-pūɔ̄ŋ* (*lìbʲɛ̀*)
PB	**ŋg* (*vs. *ø*)	**dúŋgó*	**tóŋgʊ*	[**bògó*]

At the PCC stage, it certainly seems that all three of these roots should be reconstructed with **ŋg*, and accordingly at the PBC stage too, rather than de Wolf's proposals.

Likewise, the final consonant in Mbe *ǹ-júkpɔ̀ŋ* 'leopard' suggests **ŋg* in PBC **kpoŋi* 'leopard'. But the reconstruction of 'leopard' is uncertain (as discussed above), especially since most Ekoid varieties have cognates of PB **gòì* 9 'leopard', e.g. Ejagham *m̀-gbè/ò* or Ekparabong *ŋ̀-kɔ̀i/bɔ̀-*.

Overall, it seems that Proto-Ekoid-Mbe inherited a distinction between simple **ŋ* and complex **ŋg*. Ekoid later merged them, while Mbe lost the velar nasal. So Ekoid and Mbe forms help us establish distinct reconstructions and confirm medial **ŋ* in 'ashes', 'ear', 'hair/root' and 'knee', as well as support a final consonant in 'excrement' (perhaps earlier **d*, cf. PGr **bÍd*).

3.2 Bendi

Closest to Ekoid geographically, and perhaps linguistically, are the Bendi languages. Like most Bantoid groups, Bendi languages have simple velar nasals as C_2 reflexes of PBC **ŋg* ~ PB **ŋg* (Table 5).[17]

Table 5. Correspondences of PB **ŋg* with Bendi *ŋ*

Meaning	PB	Bendi data
'guineafowl'	**káŋgà*	*kě-kâŋ* (Bokyi), *kù-kʌ̂ŋ* (Bisu)
'tooth'	**còŋgà*	*-ʃáŋ* (Bokyi), *ɔ̀-ʃɔ́ŋ* (Alege)
'blood'	**dúŋgó*	*ɛ̄-rūŋ* (Ukwortung), *èbɛ̀-nūŋ* (Bekwara)
'horn'	**tóŋgʊ*	*ɪ́-tʲúŋ* (Ukwortung)

17 Bendi group examples are from Blench (2010) and the wordlists in Otronyi et al. (n.d.). The *ŋg* in C_2 of Bendi *ù-ŋgìŋgiè* 'woman' (where other varieties have *g*, *ŋɲ*, or *ɲ*) is merely due to reduplication.

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But a number of Bendi varieties have final *m* where *ŋ* is expected, e.g. Bekwara *itʃʷom* 'horn'. On the other hand, the final *ŋ* in Ukwortung *úlʲúŋ* 'dry season' (PGr **lùm`*, Bekwara *ùjɔ̀m*) and *ítʲèŋ* 'heart' (cf. PB *tímà*, Bekwara *rítʲém*) is surprising. Although Ukwortung has a number of words with final *m* (e.g. *íkúm* 'corpse'), it can also elide it altogether, e.g. *íɲã̀* 'animal' (cf. PB *nyàmà*, Bekwara *ìɲàm*). Until these coda rules or developments are clarified, it is useful to cite multiple Bendi varieties in cases of divergence. For example, we find differing nasals in Bendi as well as in Benue-Congo reconstructions for 'sheep': Ukwortung *útʲāŋ* (cf. PBC **tiaŋe*) vs. Bekwara *utʲam* (cf. PUC **tama*, PJ **tam*). The latter seems more reliable.

In 'ear' and 'ashes', the velar nasal is seen in almost all varieties (4).

(4) Bendi simple velar nasals as reflexes of PBC velar nasals:
   a. 'ear' (PBC **tuŋi* (*ku/a*) – PB **túì* 15/6)
      Bete *ko-ʧoŋ /a-*, cf. Bisu *ko-ton/a-*
   b. 'ash(es)' (PBC **toŋ* – PB **túé* 3)
      Bete *à-tyúŋ*, Bisu *à-ʧûŋ*

Other Bendi words which look like inheritances of simple velar nasals are 'knee' (e.g. Mbube *rī-rúŋ/ē-rúŋ*) and 'root' (e.g. Okworogung *ī-dâŋ*), presumably cognate with PUC **dɪŋa* (PB **dì* 3/4, **dia* 3) where Ekoid also has a velar nasal but Mbe does not.

Bete *ù-kpàŋ/ì-* 'leopard', *ki-tuŋ* 'neck' and Bokyi *mpoŋ* 'dwarf cow' are ambiguous for **ŋg* or **ŋ* but are most likely reflexes of **ŋg*, as discussed above. There is no C_2 in Bekwara *òŋù* 'mouth', or Bete *lì-tì/à-* 'egg', presumably from PBC **tiŋ* (*li/a*). Bokyi *bu-byibabaŋ* 'wing' is exceptional for the final velar nasal (cf. Bete *kù-bìbà*), but perhaps the extra syllables are an onomatopoetic effect of flapping wings. Cf. the reduplication in Ekoid varieties like Balep *è-kpòŋmkpòŋ/bɛ̀-*.

In general, the Bendi group behaves like the neighboring Ekoid, preserving a velar nasal in the key words for 'ear', 'ashes', 'knee', and omitting it in 'mouth'. There are no signs of suffixation.

3.3 Tivoid group and its neighbors

Blench (2016) has rightly raised questions about the membership of the Tivoid group. I have even more doubts than he does, since I do not think the presence of both prefixes and suffixes in these languages is sufficient for grouping. I would limit the name Tivoid to

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the two groups he calls Central Tivoid A and B, each of which can be further divided. Near them, Esimbi and Ugarə (Mesaka) look like distinct other languages. Of those so-called Tivoid languages west of the Mambila Plateau, based on lexical isoglosses and more frequent relics of nasal prefixes, I would distinguish the Batu group (Blench's Northern Tivoid), and two other languages Njwande (Bitare) and Buru, which are perhaps related to or influenced by Batu.[18]

3.3.3 Tivoid

Generally, Central Tivoid languages have CV(C) roots with a varying range of prefixes and suffixes. First, we should observe some forms that look like inherited **ŋg*, e.g. Caka-Batanga *ogaŋga* 'root' (PB **gàngá*), *iyaŋgɔ* 'spear' (PB **gòŋgá*), *atiŋgɛ* 'count (v)' (PB **táŋg*) and Tiv *auŋgwa* 'hear' (PB **jí(ŋ)gua*). But some caution is warranted because most Central Tivoid A verbs rarely have *ŋg* in any position, and noun forms suggest that the NC combinations in Tivoid can sometimes be expanded versions of a simple nasal C_2, either by phonological processes or the inclusion of suffixes, for example we seem to see **d ~ *nd* (PB *béèdè* 'breast', Caka-Batanga *ibanda*), as well as **m ~ mb* (PBC **lemi* 'tongue' > Otanga *olɛmbəɣ*, Tiv *nómbŏr*).[19]

Whether current *ŋg* in Tivoid is a preservation or a secondary development, the reflexes of the inherited **ŋ* in 'ear' and 'ashes' in (5) and (6) mostly show loss.

(5) Tivoid examples for 'ear' (PBC **tuŋi* (*ku/a*) – PB **tóì* 15/6)
Central Tivoid B: Caka-Batanga *ɔtu*, Eman *ɔto*
Central Tivoid A north: Tiv *utox*, Iyive *kátɔ́k/átɔ́*, Otanga *oto*
Central Tivoid A other: Evand *k^{w}ɔ́tɔ́ŋgɔ́k/átɔ̄*, Oliti *otuŋ*, Baceve *ɔtuŋo*

Tivoid languages often preserve both class prefixes and old suffixes, hence the Iyive form historically analyzable as *ká-tɔ́-k*. The final consonant in Tiv *utox* probably also historically reflects the Tiv class marker *ku* as it does in *itiɔx* 'head' (PB **túè*). The unusual example of a singular-plural contrast in Evand *k^{w}ɔ́tɔ́ŋgɔ́k/átɔ̄* looks like a reflex

18 Data on the languages grouped with Tivoid are from Blench (2016) and Koops & Blench (2010).

19 This phenomenon may also be seen in varieties of Mambiloid (Connell 2025b), e.g. 'navel': Mvur Mambila *kubil*, but Cambap Mambila *kómbōn*, Oumyari Wawa *tʃómbāì* (PB **kóbú* 5/6, Tiv *ì-combò*).

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of **kʊ-tʊŋ-kʊ/*a-tʊŋ-a* 15/6 (with an additional **-k* added once the original one assimilated to *g*). Apparently, the class 15 suffix *-k* in the singular provided a consonant cluster environment that preserved the nasal C_2, but the vocalic plural marker did not. The Oliti and Baceve forms look like reduced forms of the Evand form.

(6) Tivoid examples for 'ash(es)' (PBC **toŋ* – PB **túé* 3)
Oliti *mutumu*, Tiv *ituɛm*, Iyive *mutwim*

No variety preserves a velar nasal. The Oliti form looks rather like what we would expect from a class 3 noun with a **mʊ-* prefix and a related suffix (or perhaps a **wʊ* concord). Evand *mɔtumɛlam* is similar with an additional suffix. Independent diphthongization is rare in these languages, so Tiv *ituɛm* seems to faithfully preserve the same vowels as PB **túé*, and Iyive *mutwim* is similar but with glide formation.

Tivoid provides no good evidence for the preservation of a velar nasal in other candidates like 'mouth', 'excrement', and 'dew'. For 'egg', almost all languages have prefixed forms of *gi*, *ge*, or *ki*, with apparent remnants of class 5 suffixes seen in Baceve *ɛdzinɛ*, Oliti *ɛdziŋ*.

3.3.2 Other languages sometimes labelled Tivoid

Esimbi seems to maintain **ŋg* sometimes, e.g. *ɔ-ghəŋgə* 'root' and *mɛ-yuŋgu* 'blood', but note also *təŋà* 'count' (PB **táŋg*). If Esimbi *atáŋgə* 'moon' is related (as Indo-European words for 'month' are from **meh*$_1$ 'measure'), then there might be a difference of intervocalic and final reflexes (or suffixes?). In contrast, the inherited simple velar is lost in Esimbi, e.g. *mɔɔtù* 'ashes', *ó-to/ɔ́-to* 'ear'. In short, Esimbi patterns with some of the Central Tivoid languages.

Likewise, Ugare (Mesaka) distinguishes inherited **ŋg* > *ŋ* (*ú-tǎŋ* 'moon', *u-gaŋ* 'root') from inherited **ŋ* (*úˈtô* 'ear', *vatu* 'ash').

The Batu group is not always consistent but has fewer NC complexes, e.g. Afi *ŋgógàn/àkóŋ* 'spear' and *mbánān/ábáā̄* 'breast', but these reflexes contrast with the absence of consonants in the words for 'ear': Afi *ndún/ándó*, Njwande *out/atu*. Afi *mūtāmwū* 'ashes' has either a **-mʊ* or **-wʊ* suffix, which makes it unclear whether a C_2 consonant is preserved. There is a final *-n* in Kamino and Afi *ø-núⁿ / á-* 'knee' but lacking in some other varieties, so it might be a frozen class marker, like the suffix seen in 'ear'. Kamino *gû* 'leopard' shows no C_2. Likewise in Buru, we can distinguish the reflexes of **ŋg* (e.g.

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ē-gáŋ ‘root’, *e-θɔ̄ŋ* ‘horn’) from the loss of simple **ŋ* (e.g. *ē-té* ‘ear’, *e-nú/a-nu* ‘knee’).

In summary, if the distinctions seen in Esimbi, Ugare, Buru and some Tivoid languages are systematic, then they might also be used to distinguish PCC **ŋg* from **ŋ*, in the way that PB and Mbe can be. The only Tivoid+ relics of the simple PCC **ŋ* seem to be in the word for ‘ear’ in a few languages where the velar nasal was protected by a CV suffix.

3.4 Mambiloid

Mambiloid deserves a separate section because Endresen (1990/1991: 191) noted three nouns where “The coda phoneme *ŋ* in Pre-Nizaa B corresponds to Proto-Bantu *ø*. Once again a Proto-Bantu innovation: loss of a phoneme that is retained in Nizaa”; see (7).

(7) Endresen’s correspondence of Pre-Nizaa-B **ŋ* to PB **ø*[20]
   a. ‘urine’: Nizaa *tʃúŋ̄* – PB *cò*
   b. ‘ear’: Nizaa *twã́ã̀*, Pre-Nizaa B **tÓŋa* – PB **tóì*
   c. ‘mouth’: Nizaa *nũ̀ũ̀*, Pre-Nizaa **nùŋ-Ù* – PB **nòà*.

But the value of the Nizaa data is less clear on further examination. First, only *tʃúŋ̄* ‘urine’ has the velar nasal, and Connell (2025b) considers the final nasal in this word the possible remnant of a class 6a marker (cf. Ba *nʤàm*, Mbenguedje *dʒ̀ìm*), as also seen in other Niger-Congo branches (PWN **cú* #82).[21] The other two words have a modern nasalized vowel from which the Pre-Nizaa reconstruction is imputed, but Nizaa nasalization also parallels PB **n* (*ɲĩ̀ĩ̀* ‘tooth ~ PB **ínò*) or PB **ŋg* (*cã̀ã̀* ‘guinea-fowl’ ~ PB **káŋgà*) as well as PB **d* and **m*. Nevertheless, there is no obvious reason for the nasal vowel in Nizaa *gulŭ̃ũ̃* ‘knee’ (if it comes from **kʊ-dúŋí*) except as a reflex of a velar nasal.

20 I have cited modern Nizaa forms based on the phonetic transcriptions in Endresen (1990/1991) or Endresen (1992). The orthography of modern Nizaa indicates the nasalization of long nasalized vowels by the use of a subsequent *ŋ*, e.g. *twáàŋ* [twã:] ‘ear’, which is to be distinguished from the actual velar nasal following short vowels, e.g. *tʃúŋ̄* ‘urine’.

21 A reviewer points out that the cognacy of Nizaa *tʃúŋ̄* ~ PB *cò* is made suspect by the unexplained difference in tone. For the Proto-Bantu reconstruction, the forms with **b* (**cùbà* ‘urine’ BH and **cùb(ad)* ‘urinate’ BDJFHM) look as early as those without (**cò* DFJKLMR, with Eastern D).

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We can add 'ashes' (PBC **toŋ* – PB **tóé*) to the list of words with velar nasal preservations in Mambiloid based on Ndoro *ātōŋā*, Oumyari (Wawa) *tōōŋgə̄*, Vute *tūúŋ* and Mbaw *àtə̂ŋ*.[22] But other than the exception of 'ashes' and the Nizaa forms above, Mambiloid languages seem to have lost the inherited velar nasal, which is not surprising since even in Nizaa the evidence is mostly the trace of a nasalized vowel. Rather, we find Ndoro *ŋwū* 'mouth' and Oumyari *nùk/nŭmə̀*, and even 'ear' is reported without the nasal in Ndoro *ʧɔ̄*, Oumyari *tɔ̄/tɔ́-mə̄*, and Vute *tṵ́*. This loss is in contrast to the frequent preservation of the pre-nasalized velar PBC **ŋg* ~ PB **ŋg*, as seen in PB **káŋg* 'fry' ~ Cambap (Mambila) *káŋgīâ*, Ndung (Kwanja) *káŋ*, Oumyari *kāŋgə̀n* 'cook', or PB **kúŋg* 'gather' ~ Vute *kóŋ*.

Mambiloid does not seem to provide any evidence supporting the PBC or PCC reconstruction of a simple velar nasal in final position. Rather, for PBC **miŋ* 'dew', we find Ndoro *ā-mɛ̌* 'dew'; for PBC **biŋ* 'excrement', Ndoro *bí* (Proto-Mambiloid **bid*, Connell (p.c.)); for PUC **bɔŋ* 'mosquito', Len *mòk*; and for PBC **kalaŋ* 'charcoal', Ndoro *ʧānā*, Maberem *ʧanɪ* and Vute *kāŋkāàr*.

In the case of de Wolf's reconstruction of PBC **toŋo* (*ì/í*) 'throat, voice', we do not have a PB reflex to distinguish whether the root has a velar nasal or a prenasalized velar. In Mambiloid, however, forms like Ndoro *tōŋgə̄*, Maberem *tɔ́ŋgɔ́* 'neck', and Mbaw *tɔ́k* 'throat, neck' indicate that the PBC and Proto-Mambiloid forms contained a prenasalized velar stop or consonant cluster. This would allow us to connect this root with the verb PB **tóŋg* 'crow, groan', Nizaa *tɔ̋ɔ̋* 'crow (v)', Vute *tóŋ-*.

So, Mambiloid languages apparently preserve a few traces of the PBC velar nasal. Some varieties may also provide helpful evidence to distinguish the inherited velar nasal from nasals of other origins.

3.5 Beboid and Yemne-Kimbi

In examining some other Bantoid branches, we find that once again the words for 'ashes' and 'ear' offer solid examples of preserved simple velar nasals, but few other words do. On the whole, it becomes

22 Unless otherwise specified, in this section Ndoro forms are cited from Connell & Blench (2014), Mbaw forms from GBWG, Wawa-Oumyari from Martin (2012), Vute from Thwing (1987) and other Mambiloid varieties from Connell (2025b).

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apparent that suffixed class markers were an important factor for the preservation of the inherited simple velar nasal.[23]

In Beboid and Yemne-Kimbi, the complex PBC **ŋg* (reflected in PB **ŋg*) has reflexes in simple *ŋ*, as seen in (8).

(8) Beboid and Yemne-Kimbi velar nasals corresponding to PB **ŋg*
PB: **gàŋgá* 'root', PB **dúŋgó* 'blood', **tóŋgʊ* 'horn'
Beboid: Sari *gwéŋ* 'root', Mungong *kàlúúŋ* 'blood'
Noni *ke-tóŋ* 'horn'
Yemne-Kimbi: Ajumbu *əgoŋ* 'root'

The words 'ear' and 'ashes' in (9) and (10) also maintain the inherited simple velar nasal, but apparently as part of old clusters:

(9) 'ear' (PBC **tuŋi* (*ku/a*) – PB **tóì* 15/6)
Beboid: Saari *kintɔ́ɔ̄ŋ*, Cung *ntônē*
Yemne-Kimbi: Abar *kətɔŋɔ*, Bu *kətuŋwɔ*

The Yemne-Kimbi and Beboid examples show various prefixes and suffixes, or suffix influence. Noni (Beboid) has a helpful doublet: in addition to the pair *ke-tú/bi-tém*, it has a reduplicated byform *kè-ntuŋ-túŋ/bì-*, which seems to preserve the velar nasal. Likewise, Koshin *kə̄-tṹ* has a diminutive *fə̄-túnə́*, which is likely derived from **fə̄-túŋ-lə́*.

(10) 'ash(es)' (PBC **toŋ* – PB **túé* 3)
Beboid: Sari *tāŋɛ̄*, Mungong *tāŋ*
Yemne-Kimbi: Bu *dʒəŋ*

As regular as these velar nasals may look, there are a number of surprises that suggest the frequent presence of suffixes or suffixal remnants. Beboid languages usually lose V_2; however, we see Sari *tāŋɛ̄* and Akweto *tə̄ŋgē* (GBWG) with V_2 and a surprising *ŋg* that look like developments from some suffixal cluster. Noni (Beboid) distinguishes final *m* (*ɲàm* 'animal'), *n* (*tin* 'five'), and *ŋ* (*ke-tóŋ* 'horn'), so Noni *taan* 'ashes' is also unexpected unless a suffix influenced it.

Elsewhere, for 'knee': Sari *nunu/nuuŋ* 5/6, Bukwe *ńnyũ* (Beboid) and Kenyang (Nyang) *né-nén/má-*. For 'excrement', Mekaf (Beboid) *m-bə̀-m* historically shows the same double affixes for cl. 6a that Noni

23 Unless otherwise indicated, Beboid is from the Eastern Beboid lists in Blench (n.d.) or GBWG, Esimbi and Ugare from Blench (2016), Yemne-Kimbi from the Western Beboid lists in Blench (n.d.) but I follow Good et al. (2011) for the term Yemne-Kimbi and name Ajumbu (instead of Mbu').

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has: prefix *m-* and suffix *-m*. The alveolar nasals in Yemne-Kimbi cognates like Koshin *tōmbín* (13) and Missong *kībán/bībán* (7/8) are more likely reflexes of the **d* seen in PGr **bÍd* and Mundabli *mbyɪĺ* (Voll 2017). Only Ajumbu *mwaiŋ* 'dew' might reflect PBC **miŋ*, with labialization from the class 3 prefix.

I have found no useful evidence in Beboid for velar nasal preservation in other words. In Noni, final *ŋ* (from **ŋg*) is preserved in class 6 but dropped in the singular form, e.g. *lēè / ɛ̄lə̄ŋ̀* 'pumpkin' (PB *dèŋgè* 5/6) and *gɔ́ɔ̄/ɛgɔ́ŋ* 'spear' (PB **gòŋgá*) (Hombert 1980: 90). From this pattern, Mekaf has generalized the pattern *ø/-ŋ* for a dozen nouns in classes 5/6, e.g. *dê/dâŋ* 'pumpkin' and *tū/tūŋ* 'horn', and so it is not possible to deduce any original value from Mekaf *gí/gáŋ* 'egg' or *ɲú/ɲúŋ* 'knee'. See also the discussion of 'egg' under Bantu below. There is also a final nasal or nasalization on the vowel in 'mosquito' in some Beboid varieties, e.g. Mbuk *bwén* ~ *bwɛ́ʸén* 5 'mosquito' and *βű:/βű* 'blood-sucking fly' 9/10 (Tschonghongei 2018).

In sum, unlike Ekoid and Bendi, which have several words preserving the PCC simple velar nasal, the other Bantoid branches we have discussed (Tivoid and neighbors, Mambiloid, Beboid and Yemne-Kimbi) provide solid examples only in 'ear' and 'ashes', often in forms with suffixal influence.[24] Otherwise the velar nasal in these languages reflects PCC **ŋg* or some other consonant structure. As we continue the Bantoid migration southeastward, we will see that even that short list diminishes, with Grassfields showing an inherited velar nasal only in suffixed forms of 'ear'. Even more reduced, Tikar has nasalized vowel reflexes of PBC **ŋg*, e.g. *ǹgán* 'guinea fowl' and *yán* 'roast', but apparently no remnant of **ŋ* in *ɗwí* 'knee', *ǹdì* 'root', and *mɛ̀ myì* 'dew'; the ancestor of the glottal stop in *ywí* 'ear' and *mɛ̀ ɓyi'* 'excrement' is unclear (Jackson 1988).

3.6 Grassfields

As the branch closest to Bantu, the Grassfields data is particularly relevant for assessing the stage of the loss of velar nasals. Final velar nasals are very common in Grassfields languages today where they

24 I do not include Dakoid in Bantoid, but for comparison relevant Dong forms from Blench (2009) for this study would be *tuŋwa* 'ashes' (the suffix *-wa* might have an origin as a class 3 concord, cf. Daka *tóòmáa*), *utuŋ* 'ear', *ruŋ* 'knee' (cf. Gaa *àlúŋa*), *vĩĩ* 'excrement' (nasalization apparently not due to loss of final *m*, cf. *wɔm* 'husband').

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arose as reductions of various consonants including original prenasalized velars, which are preserved in Bantu. See the examples in (11).

(11) Grassfields simple velar nasals as correspondences of PB **ŋg*
PB **gòŋgá* 'spear' – PGr **ɣòŋ`*
PB **gàŋgá* 'root' – PGr **ɣàŋ´*
PB **dàŋgí* 'bamboo' – PGr **dìŋí*
PB **bòŋgó* 'brain' – PGr **bóŋ*
PB **táŋg* 'count' – PGr **táŋ*

But there is very little evidence of the survival of the inherited velar nasal in Grassfields. The only good example is 'ear' (12) which has an unusual PGr structure with suffix *-li*.[25]

(12) 'ear' (PBC **tuŋi* (*ku/a*) – PB **túì* 5/6, 15/6 – PGr **túŋ-li*)
East Gr: Bandjoun *tăŋ*, Bafou *làtùŋɲ́*, Baba *tɔ́ŋlá*, Bazou *tòŋú*, Mankon *àtôŋnə́*
Momo: Njen *àtòŋə́*, Moghamo-Batibo *àtɔ̀ŋí*
Ring: Kom *àtúŋlə́*, Oku *kētóōlé*, Aghem *kátúŋɔ̄*, Isu *kə́túŋī*[26]
SW Gr: Tanka *ɛtoŋi*, Menka *ɔtɔ́ŋnɔ*, Atong *etɔ́ŋní*, Busam *ɪtóŋní*

Several things are of note here. First, these Grassfields forms are typically in genders 5/6 or 7/8. Secondly, V_2 of noun roots is typically not preserved in Grassfields, so the final vowel here is almost surely from the suffixation of the class 5 concord **dɪ-*, as Hyman and Elias reconstructed.[27] Thirdly, there is apocope of the final vowel of the root, creating the rare clusters *ŋl* and *ŋn* – which were then often simplified to simple *ŋ*. It looks like the velar nasal survived here only as part of a consonant cluster, because in other Grassfields words an inherited velar nasal is uncertain at best.

We have seen that most Bantoid branches have some velar nasal reflexes in the word for 'ashes': PBC **toŋ, PB *tóé* 3, PGr **tóe* (?). The evidence is limited for Grassfields (hence Hyman's question mark)

25 Grassfields forms (including Otang) are cited from the Grassfields Bantu Working Group (GBWG), and Babanki forms from Akumbu (2008). For the name and forms of "Southwest Grassfields", see Blench (2010a), although key lexical differences make me wonder if these languages should actually be included under the Grassfields umbrella.

26 Babanki *kàtyítyí?/àtyítyí?* (7/8) is clearly reduplicated but does it show loss of velar nasal or is the final glottal stop a remnant?

27 For other relics of a suffixed concord in Ring languages, see Akumbu and Wills (2024).

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because other roots are used for 'ashes' in most branches except in Southwest Grassfields, e.g. Obang *mátúə́* (6a), and some Momo, e.g. Lower Mundani *ḿmót*. The fricative in Atong (SW) *ntuɣɔ* is a common Western Grassfields hiatus filler, resolving the hiatus seen in the closely related Menka *ontʃúó*. In the case of preservation, we would expect the velar nasal itself, as in Atong *etɔ́ŋní* 'ear'. The important point is that nowhere in Grassfields is a velar nasal observed for this word, only the hiatus (or a hiatus filler) from the loss of the velar nasal. In contrast to forms of 'ashes' in other Bantoid branches, there is no evidence in Grassfields of suffixation, and also no evidence of preservation.

To reinforce the point, it is worth a look at other lexemes which show velar nasals in some Bantoid languages, but not in Grassfields. First are some examples with reconstructed medial velar nasals (13).

(13) Words without medial velar nasal reflexes in Grassfields

'knee' PBC **duno* ~ PCC **dúŋí* – PB **dúí* 5/6 – PGr **lúÌ*

No velar nasals observed in Grassfields, rather forms that share the Bantu loss, e.g. Babanki *àlwí*.

'mouth' PBC **nuŋa* – PB **nòà*

Grassfields branches regularly use another root (PGr **cùl*`), but SW Grassfields does have reflexes of the PBC root, e.g. Bantakpa *ɛŋu*. For Ambele, Jungraithmayr et al. (1975) give *é-nò(ŋ)/á-* but his Ambele words for 'ear' and 'ash' just have *-tO* with no C_2, while Blench lists Ambele *enu* 'mouth'.

Likewise, in (14) Grassfields provides several examples of words without the velar nasals reconstructed by de Wolf in final position:

(14) Words without final velar nasal reflexes in Grassfields

'charcoal' PBC **kalaŋ* (*li/a*) – PB **kádà* 5/6 – PGr **ké* `

No velar nasal found.

'dew' PBC **miŋ* (*ma*) – PB **mè* 3, 5 – PGr **mÙk*, **mèk*

No velar nasal is observed in Grassfields examples. Rather Hyman reconstructed a final stop based on the frequent C_2 seen in forms like Fe'efe'e (Bamileke) *mù?˚*, Adere-Dzodinka (Nkambe) *mə̀k˚*, Oku (Ring) *īŋwâk*, Aghem (Ring) *tímɔ́?ɔ̀*, Bum (Ring) *ātəmʉ́ʌkà*. These words for 'dew' look like forms of 'water' (PGr **mò*ˆ) with a diminutive suffix **ka*.

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‘egg’ PBC **kiŋ*, **tiŋ* (*li/a*) – PB **gí* 5/6

Eastern Grassfields, Momo and Ring use forms of **bum* ‘egg’, with the exception of the curious Ngwaw/Ngwo (Momo) *àkə̂n/èkə̂n* (7/8). But Ngwaw *àtùmé/ètùmé* (7/8) ‘ear’ suggests some nasals in that language are of uncertain history.

‘excrements’ PBC **biŋ* (*a-*) – *PB *bîî* 13 – PGr **bÍd*

No velar nasal is found in reflexes of this root, rather final stops: Moghamo (Momo) *tíbít*, Baleng (Bamileke) *ndzét*, Bamoun (Nun) *mbít* (note the stop also in Bamoun *tít* ‘ear’).

‘wing’ PBC **pabaŋ*, **babaŋ* (*li/a*) – PB **pàpá* 5/6, **bàbá* PGr **bàb`-li*

No velar nasal is observed in plentiful Grassfields examples, but the reconstruction PGr **bàb`-li* is based on class 5 reflexes like Mankon *nì-bàbì-nà* (see Elias 1984: 39), where the class marker could be a source for final nasals in other groups.

Although the simple inherited velar nasal is almost entirely lost in Grassfields languages, they regularly have the velar nasal as a reflex of PBC **ŋg* ~ PB **ŋg*, e.g. PB **gòŋgá* ‘spear’ ~ Bandjoun (Bamileke) *kùŋ*, Aghem (Ring) *ɪ̄ɣɔ̄ŋ*. Thus, Central Ring forms like Babanki *mən-lʉ́ŋ* ‘blood’ confirm that PGr inherited the **ŋg* seen in Bantu PB **dúŋgó* 6. The class 6a prefix in Babanki may also explain how a version with a **-ma* suffix could generate the many forms in *-m* that led to the reconstruction of PGr **lém`* ‘blood’ (cf. also Noni (Beboid) *ɛ̀lɛ̀mɛ́/bīlɛ́m* 7/8). The presence of the two versions with and without *-m* in adjacent Momo languages like Njen *àlʉ́ám`* and Lower Mundani *àlə́ŋ* 7 makes it unlikely that two different roots are involved, but cf. the alternative root PUC **dè* ‘blood’. Likewise, PGr **tóŋ* ’throat’ is reflected by velar nasals in every branch of Grassfields and makes it clear that the PBC reconstruction should be PBC **toŋgo* ‘throat/voice’ (the Isu compound *tóŋ́ˡfóŋ* helpfully seems to preserve some form of V_2).

4 Bantu data

Finally, we reach the Bantu languages, which have regularly lost inherited velar nasals, except in relation to a pre-nasalized velar **ŋg*. Noting the regular correspondence between stem-medial and stem-final **ŋ* in Proto-Upper Cross (PUC) and *ø* in Proto-Bantu, Dim-

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mendaal (1978: 233–34) cited *-tɔ̄ŋ* ‘ear’ and *-kyèŋ* ‘egg’ in Nyokon (A45) as exceptional and concluded, “The absence of */ŋ/* in PB can thus easily be explained as an innovation. This innovation could be used for sub-classification (i.e. as a criterion for defining a (very large) subgroup within Broad Bantu). The velar nasal has been lost, e.g., in all but one language of group A 40 in Bantu; */ŋ/* is still found in [Nyokon] (A 45) […]. If the assumption made above is correct, [Nyokon] did not share the innovation and should be reclassified.” While Nyokon’s phylogenetic placement in the Mbam group (A44–46, A601, A62) is currently not in doubt, the limited number of Bantu languages and words with inherited velar nasals is noteworthy.[28]

But first, it is important to remember that simple */ŋ/* is a standard phoneme in the Mbam group today as a regular reflex of PB **ŋg*, along with occasional */ŋg/*, as seen in (15).

(15) Examples of Mbam *ŋ* as the reflex of PB **ŋg*
‘blood’ (PB **dúŋgó* 6): Nyokon (A45) *mànoŋ*, Tunen (A44) *mànɔŋ*, Nomaande (A46) *manɔ́ŋɔ́*, Tuotomb (A461) *mànòŋàm*, Nugunu (A622) *manɔ́ŋɔ́*
‘horn’ (PB **tóŋgʊ* 5, PGr **ndóŋ*): Nyokon (A45) *à-ndòom*, Tunen (A44) *èndɔ́ŋ*, Nomaande (A46) *ɔndɔ́ŋɔ́*, Tuki (A601) *itóngɔ́*

4.1 Bantu forms of ‘ear’

Now in searching for relics of the inherited simple velar nasal, let us consider the critical word ‘ear’ (PBC **tuŋi* – PB **túì*) in Bantu zones AB + Jarawan (6–7). The preservation of the velar nasal is seen in only a few examples (16), with various results otherwise (17).

(16) Preservation of velar nasal is very rare in Bantu AB, Jarawan
a. Nyokon *ù-tɔ́ŋ* and Tuotomb *ɔ̀-tɔ́ŋà-lɔ̀y* (both cl. 3), Yambeta (A462) var. *ɔ̀ʔ-tɔ́ìŋ*
b. But no C_2 in Tunen *mùlu*, Nomande *oo-tú*, etc.
c. Jarawan: Bile *kiiruŋ*, but no C_2 in eight other varieties of Jarawan and A50
d. other nasal in Barombi-Kang (A41) *dĭwón*, Abo (A42) *ĭ-wón*

28 This Mbam subset has been identified for some time. Most recently, the phylogenies of Grollemund et al. (2015) and Koile et al. (2022: Figures SS1 and SS3) have these same languages in basically similar groupings. The forms cited for the languages in this section come from the database accompanying Grollemund et al. (2015). Tuotomb (Bonek) forms are cited from Mous & Breedveld (1986), which was also a source for some languages in Grollemund.

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(17) When V_2 is preserved, hiatus resolution is frequent
   a. occasional hiatus, e.g. Lefo (A141) *è-túì*
   b. or glide formation, e.g. Milenge (A15b) *è-twə̈ɔ̂*, cf. Koyo (C24) *ì-twéè*
   c. often *y*, e.g. Mpongwe (B11a) *o-royi*, Pinzi (B304) *toyi*
   d. sometimes *y* > *z*, e.g. Punu (B43) *di-tudʒi*, cf. Lega (D25) *i-túzi*

The velar nasal in this root is seen only in Nyokon, Tuotomb, Yambeta and Bile (Jarawan) with some possible remnant nasal features in A41–2 (which are not closely related to Nyokon). Tuotomb clearly has a suffixed form and possibly Nyokon and Yambeta once did too. I do not know enough about Jarawan word formation to speculate on suffixation there, but I note the variation in reflexes of PB **táànò* 'five' in Jarawan: Bile *tóŋnó*, Kulung *túŋnúŋ*, Duguri *tóón*; as well as the coda in Bile *murùŋ* 'head' (PB **túè*).

Nyokon is adjacent to the Eastern Grassfields languages (cf. Bazou *tòŋú* 'ear'), so one could imagine contact as an explanation, just as Yambeta (A462) *nè-bòm* 'egg' suggests influence of the distinctive PGr **bùm´* 'egg' on a neighboring Bantu language. But the location of Bile in Nigeria would need another explanation.

There is also a curious *n* in place of the velar nasal in Kande (B32) *ɲtoni* 'ear' and *motɔni* 'ashes', with the same coronal nasal instead of a labial nasal in *ɱbuni* 'belly' (< PB **bùmò*) and *nonene* 'tongue' (PB **dímì*). Apparently, all these C_2 nasals were merged in Kande before front vowels (in contrast to *motema* 'heart', *ndzima* 'ten'). Clearly some reduction was going on in the B30 group in that environment, cf. Pinzi (B304) *toyi* 'ear', *motoyi* 'ashes', *buyi* 'belly', *etsɔyi* 'shame' (PB **cónì*), but *motema* 'heart', *ndzima* 'ten'.

4.2 Other words in Bantu

Other than in 'ear', the Mbam-Bubi-Jarawan languages lack much evidence for a velar nasal in other words where it would be expected if the languages preserved the inherited phoneme (18).

(18) Bantu forms of other words with inherited velar nasal
'ashes' (PBC **toŋ* – *PB *túé* 3)
A40, 60: Nyokon *mù-ə́l*, Nomande *mɔotá*, Tuki (A601) *utú*, Tuotomb *mɔ̀ɔ̀tɔ́m* 6
Bubi *obo-tóm*
Jarawan: Bile *túbú*, Duguri *túb*, Bwazza *tú*

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Although the word for 'ashes' has a similar phonological shape to 'ear', it does not yield a velar nasal in Nyokon or related languages, even when protected by a suffix in several Jarawan languages and Ngoro-Bisoo (A61) *lì-sùp* – the suffix is apparently the cl. 14 marker **bu* seen as a prefix in Bubi. The final *-m* in Tuotomb and Bubi looks like the remnant of a class suffix. However, the reduplication in the unusual Lwel (B862) *ŋtúŋ-mtúŋ* 'ashes' seems to preserve the original velar nasal. Lwel *ŋur* 'person' shows that initial velar nasal is a typical reflex of the class marker **mʊ* in that language, but in the middle of the word both the original **ŋ* and class prefix *m-* are preserved (and then the reduplicant copies the coda of the first stem). See also the discussion of Kande (B32) *motɔni* 'ashes' above.

'knee' (PCC **dúŋí* – PB **dúí* 5/6)
Nugunu (A622) *i-núu*
Bubi (A31) *e-ru*, Bafia (A53) *rì-dú*`
Jarawan: Kulung *kúlúŋ*, cf. Bile *nkúŋnú*, Bwazza *nkúúnù*, Duguri *kuŋul*

Kulung has a velar nasal here, and Duguri perhaps with metathesis. For the Jarawan group, one might reconstruct a proto-form with the prefixing and suffixing of the class 15 marker **kʊ*, to which a nasal prefix was added later.

'egg' (PBC **kiŋ* – PB **gí* 5/6)
Nyokon *nì-kyèn*, Tunen *yɔ̀n*, Nomaande *yɔ́nɔ́*
Tuki (A601) *iga*, Nukalonge (A62a) *nì-kɛ̀ɛ́*
Jarawan: Bile *ǹkì*, Kulung *kiì*

As Dimmendaal noted, there is a final nasal in Nyokon *nì-kyèn* 'egg', but it is not the velar nasal and not restricted to Nyokon. Since the related A44–46 languages share the nasal, this might be a class marker that became affixed to the monosyllabic root. BLR3 offers a main reconstruction PB **gí* 5/6 with several variants: **gé*, **gìjé*, **gìjí*, and **gìdí*. This last variant (e.g. Tiene (B81) *ma-kɪlɪ*, Mongo (C61) *-kèlé*) probably reflects the incorporation of the class 5 concord marker **dɪ*, which would also account for the final nasal in the three A44–A46 languages. Parallel developments can be seen in Koshin (Yemne-Kimbi) *ngɛ́nə̄/ŋgə̄* (5/6), and Afi (Tivoid) *ŋgíñ/ákyí* where the nasal

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suffixes are found only in the singular for 'egg'.[29] Likewise in Mambiloid, Ndoro has *ŋɟɛ̀nā* rather than the more typical Mbaw *gʸé/bòŋgʸé*. At this point, we can re-examine the curious final vowel in the PUC reconstruction **kkèŋí*. PB **gí* suggests that PUC also had a single syllable root with the class suffix (i.e. **kkè-ní*). The other reconstructed PB variants look like they might be reduplications or contain the class 5 nominal marker **i*, hence Vove (B305) *ekɛyi*, but it is possible that a velar nasal developed (see below) and then was lost, e.g. **kkè-ní* > *kkè-ŋí* > **kkèí*, cf. PB **gìjí*.

'mouth, lip' (PBC **nuŋa* (*ú/tí*) – PB **nòà* 12, **nyòà*)
No velar nasal is observed in the expected languages (Nyokon *ɲùúl*, Tunen *mùnu*, Yambeta *ù-nù?*, Kulung *kûn*), but frequently there are suffixed class markers in that zone: Tuki *ungúté*, Nugunu *-nyuudé*. Final velar nasals are seen in Mangisa (A63) *ànùŋ*, Eton (A71) *à-nùŋ*, but note the suffix in the related Ewondo (A72a) *anyu-me*.

'louse' (PUC **dáŋ*, PLC **láŋ* – PB **dá* 9/10)
The most likely case for a velar nasal preservation would be Yambeta *òn-naŋ*, but not in Tunen *yìnə* or Nomaande *weené*. Since PB **d* > *n* in these languages, there are many forms with multiple nasals like Ngoro-Asom (A61) *ŋnìín* or Libie (A62C) *òŋìnì*, but it becomes difficult to sort them out when one considers the frequency of reduplication for the names of insects, as well as class suffixes.

In general, Bantu looks like Grassfields: there is evidence for the preservation of the velar nasal in the word for 'ear' in a few languages, but otherwise perhaps only in marginal cases like a reduplicated or suffixed form.

5 Analysis

The evidence of the Cross River, Ekoid-Mbe and Bantu languages seems sufficient to reconstruct the distinction between simple **ŋ*

29 I omit Nchanti (Beboid) *gínē/āgí* because Beboid languages show a more general rule for loss of C_2 in class 6 that might be at issue here, e.g. Nchanti *tɛ̄dɛ̄/ātā* 'stone', Bebe-Jatto *gə́βí/gé* 'egg', Akweto *gíkī/gû* 'egg', *līsì/líí* 'eye' (Hombert 1980: 90).

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and complex **ŋg* at the level of Proto-Cross-Congo. But, after several pages of scrutiny, we have found only a few surviving examples of the original simple velar nasal in Bantoid languages. In many groups, we can probably only reconstruct a simple velar nasal in 'ear' and 'ashes', and possibly also 'knee'. In Grassfields, that list is narrowed to 'ear', and in Tivoid and Bantu even that is very marginal. So, among Bantoid branches, Bantu is not really unusual for losing the PCC simple **ŋ*, but rather it is unusual for preserving PCC **ŋg*, which is often reduced to *ŋ* in most other languages.

A number of questions arise from this review which we will now examine:

i. In Grassfields and Bantu, we have enough evidence of V_2 to see the regular loss of the velar nasal in C_2. So, how do we explain the surviving relics?
ii. Was the loss of the velar nasal independent in each branch or shared by two or more branches?
iii. Why are there so few words with this phoneme at the PCC stage?

5.1 Explaining the phonological change

Because most Bantoid languages developed secondary velar nasals from original **ŋg* or consonants in coda position, velar nasals themselves are quite common in the Bantoid area and their occasional loss is also well known. This loss is quite common in the Teke group of Bantu. For example, in Tiene (B81), NC combinations were simplified to just N, e.g. *tùùmà* 'cook' (PB **tùmb*) and *kúóna* 'desire' (PB **kúnd-*), but the expected velar nasal in *túa* 'build' (PB **túŋg*) was lost (Hyman 2003: 50). The same NC simplifications and loss is seen in Bwala (B70z) *búò* 'knee' (PB **bóŋgó*), *ŋkîì* 'neck' (PB **kíŋgó*) (Bollaert et al. 2021). Even in Upper Cross languages, where the velar nasal is generally stable, it was lost in nouns in KoHumono *-ttō* 'ear', *-dū* 'knee', *-ttò* 'road' (PUC **ttòŋ*), "but for an unknown reason it was retained in verbs" (Dimmendaal 1978: 97, 105).

Often the deletion leads to assimilation or contraction of the adjacent vowels across morpheme boundaries. In Noni, we saw that the class 5 suffix *-e* creates an intervocalic environment that deletes stem final *ŋ* (from **ŋg*) with subsequent vocalic assimilation, e.g. **lēŋ-è* > *lēè* (pl. *ēlāǹ*) 'pumpkin' (PB *dèŋgè* 5/6) and **gɔ́ŋ-ē* > *gɔ́ɔ̄* (pl. *ēgɔ́ŋ*) 'spear' (PB **gòŋgá*) (Hombert 1980: 90). In Akoose (A15c), this dele-

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tion affected cl. 1 nouns where the suffix then merged with the stem vowel, e.g. Akoose *koŋ* 'keep' > *nkoo* 'keeper' (Hedinger 2008: 6, 26); cf. agents in Babanki (Ring) which show loss and vowel raising, e.g. *á-tàŋ* 'stay' > *wú-tǒ* 'one who stays' (Mutaka-Chie 2006: 84). In both of these languages, the deletion of the velar nasal with vowel effects also affected other contexts including possessive phrases, as seen in Babanki, e.g. *àsɔ́ŋ* 'tooth' vs. *àsū: ghɔ́má* 'my tooth' */àsóŋ à-ghómá/*, or *àkáŋ* 'dishes' vs. *àkó: wì?* 'dishes of a person' */àkáŋ á ẁik/* (Akumbu 2016). In Akoose, this same change is still in process, as the velar nasal *ŋ* frequently elides in a possessive phrase, e.g. *asoŋ á nzyɔg* > *asoó nzyɔg* 'tooth (tusk) of elephant'.

In fact, the loss may be less in need of explanation than the preservation is. Why are there relics at all if the loss of the simple velar nasal was a regular phonological change in many Bantoid languages? The best answer seems to be that the velar nasal survived in cases where there was a suffixed class marker. This is perhaps easiest to see in Grassfields, where the PGr reconstructions include a number of stems which incorporated the class 5 concord marker **li* as a suffix. Among them is PGr **túŋ-li* 'ear' with descendants like Kom *àtúŋlə́* and Mankon *atóŋ̀nə́*. The key feature is that these forms have lost V_2 of the root, leaving the velar nasal part of a cluster – presumably that was the phonological environment that blocked its loss. So, the loss of the velar nasal occurred in intervocalic positions, but not in consonant clusters which were generally formed either by suffixes or reduplication. Hence the singular-plural contrast of Evand (Tivoid) *kʷɔ́tɔ́ŋgɔ́k/átɔ̄* based on the difference between the consonantal cl. 15 **ku* and vocalic cl. 6 **a* suffixes.

Because of the uncertainty in reconstructing many velar nasals in final position, it is not clear whether final position was regularly an environment for the loss. Instances where the inherited velar nasal is now found intervocalically and finally are presumably later developments, i.e. Bazou *tòŋú* arose from a later simplification of the **ŋl* cluster and Bandjoun *tǎŋ* from the eventual loss of the final vowel of the suffix as well. Since the two most common conditions needed for the original velar nasal's preservation are class marker suffixation and loss of V_2, and both of those conditions are rare in Bantu outside zone A, it is not surprising that the rest of Bantu has almost no examples of velar nasal preservation.

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The suffixation of concord markers was a variable process, due to individual lexemes and the frequency of various syntactic structures. For example, we might reconstruct forms of 'ear' in two classes, which probably occurred both in Grassfields and Bantu languages:

Pr-Bantu-Grassfields **kʊ-tʊŋi* (15/6) > **kʊtʊ́ì* [*ŋ* loss]
(the common pattern in Bantu)
Pr-Bantu-Grassfields **tʊŋi-lɪ* (5/6) > **tʊŋlɪ* [vowel loss]
(the common pattern in Grassfields)

In languages like the Grassfields group, which lost class 15, it is not surprising that class 5 was used for the singular of class 6. Presumably the class 5 concord marker **li* became re-analyzed as a suffix and frozen in certain contexts leading to allomorphy with the plural or remnant **ku-* forms. The difference between these variants was originally morphological and then would have become phonological through the relevant losses, with the allomorphs being subject to analogical processes of levelling.

5.2 Was this loss independent in the various Bantoid groups?

The losses of the PCC simple velar nasal must have happened before the merger of **ŋ* and **ŋg* (or otherwise both would be lost), so we might posit the following processes of development (which did not happen in all languages):

Initial conditions of PCC: distinct **ŋ* and **ŋg*

1. cluster formation (via suffixation, reduplication, V_2 loss) – ongoing process
2. loss of **ŋ* except in cluster environments
3. merger of **ŋ* and **ŋg* > **ŋ*

Ekoid alone seems to preserve inherited velar nasals so it must have engaged only in Process 3 without any loss of **ŋ*, and Mbe engaged in Process 2 without apparent cluster formation. So, we can put aside Ekoid-Mbe from any developments shared with others. On the other hand, Grassfields and Bantu languages are closely related and have similar results (no inherited velar nasals except in 'ear'), so it is likely that their loss happened at some stage common to them. But most of the other Bantoid branches had significant exposure to the suffixation of class markers, V_2 loss and **ŋg* > **ŋ* in ways that could be independent or areal, so the loss of **ŋ* may also have been independent. The limited number of relevant roots reconstructed at the

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PCC stage and the limited number of exceptions makes it hard to know what a general pattern is.

5.2 The origin of *ŋ

The reconstructed Proto-Benue-Congo velar nasal has an uneven distribution: it is never initial, and even in C_2 position it is not very common.[30] It is true that PBC reconstructions are at an early stage and mostly just exist for nouns, but the marginality of the velar nasal suggests that it might have developed through conditioning in a narrow environment. For a clue to the possible environment, let us look at the word for 'firewood'. In Bantu we see doublets, one of which curiously shows the loss of a medial nasal:

PB **kónì* (9/10, 11/10) zones ABCD+ (BLR 2042)
PB **kúì* (9/10, 11/10) zones BCEF+ (BLR 1983)

Usually, a C_2 nasal is one of the most stable sounds in Bantu languages, but we could explain this loss if the nasal had become a velar nasal in some environment: **n* > **ŋ* > *ø*. In the case of 'firewood', the nasal's environment is between high back and front vowels, which is exactly the same environment we see in many of the words reconstructed with velar nasals: PBC **tuŋi* 'ear', PCC **tóŋé* 'ashes', PUC **dúŋí* 'knee', PUC *dáŋ* (Sur *dani*) 'louse'.[31] Did those velar nasals also develop from earlier alveolar or dental nasals? Was Mukarovsky right in reconstructing early **n* in some words?

If we look at de Wolf's PBC reconstructions for 'wood', 'fire' and 'firewood', we see several related forms which look like they have a common stem but vary by class and the addition of a suffix *-i*.[32]

PBC **kwon* (**ka/*ti*) 'tree'
PBC **kwoni* (**bu/*í*) 'firewood' – cf. BCCW *#kónì*
PBC **zwuŋi* (**ku/*a*) 'fire' – cf. PUC **k^{w}ɔ́n* 'fire'

We might want to reconstruct just one root **kún* with 'tree/wood' as the basic meaning but specified semantically by different class markers. In several Tiv and Grassfields languages, one class is used for 'tree' and another for 'firewood'. The suffix *-i* looks like the con-

30 The restriction of velar nasals to non-initial position is fairly common, occurring in about one-third of the languages which have the phoneme (Anderson 2013).

31 This environment was operative in Umbundu (R11), where we see the loss of a nasal after a back vowel and before *i* not only in *óló-hwĩ́* 'firewood' but also in *é-kwĩ́* 'ten' (PB **kúmì*) and *ó-sóyì* 'shame' (PB **cónì*).

32 For fuller data on this root, see Williamson (1989: 250–53).

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cord marker for classes 9 and 10 – exactly the gender of PB **kúnì* 'firewood'. So, these various allomorphs would provide a way to explain the presence or absence of the necessary conditioning environment for producing a velar nasal.

Another explanation for the restricted development of the velar nasal might be to start from **ŋg*, just as final */ŋ/* in modern English arose from */ŋg/* after the loss of final */g/*, as the spelling in spelling still indicates. Perhaps the incorporation of class suffixes (perhaps with syncope?) created a cluster which led to the deletion of *g: e.g. **tuŋg(i)-dɪ* 'ear' > **tuŋg-lɪ* > PGr **tuŋ-lɪ*, just as */ŋg/* is sometime reduced to */ŋ/* in pronunciations of the medial clusters in *language* and *English*. We might also wonder whether **ŋg* could also sometimes be reduced by a following **i*, in the pattern above?

Proto-Bantu has some, although not many, verb roots with double vowels or diphthongs which could in theory be the results of a consonant loss. As far as I know, none has been proposed as the result of the loss of the velar nasal – is that because PBC verbs were CVC and none incorporated a high-vowel suffix of the sort needed to generate the velar nasal?

6 Conclusion

It is not clear how far back the simple velar nasal **ŋ* itself should be reconstructed, but there is good reason to reconstruct five or more Proto-Cross-Congo noun roots containing it. However, its marginal status made it easy to be lost or merged with **ŋg*. The Ekoid-Mbe branch is distinctive in that it preserved the simple velar nasal in at least five of the stems seen in PCC, so its subsequent loss in Mbe is a phonological innovation. There are fewer surviving examples in other Bantoid languages, mostly just in the words 'ear' and 'ashes', often in suffixed forms. There is not enough data to support grouping together Bantoid branches based on this criterion, except possibly Grassfields with Bantu. The Grassfields examples particularly provide evidence to think that exemption from loss could be triggered by an environment in a consonant cluster caused by V_2 loss before a suffix.

Particularly useful is the fact that some Bantoid languages (most clearly Mbe) seem to parallel Bantu in having a distinction in reflexes of reconstructed PBC **ŋg* and **ŋ*. This parallel confirms that the dis-

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tinction should be reconstructed at the PCC stage and also enables improvements for the PBC stage. For example, contrary to de Wolf, I would reconstruct PBC **ŋg* in the words for 'blood' (de Wolf **luŋ*), 'horn, tusk' (de Wolf **tano*), and possibly 'leopard' (de Wolf **kpoŋi*). The absence of final velar nasals in the Bantoid forms for certain words also suggests that velar nasals should be removed from the reconstructions of the roots for 'mosquito, bee', 'egg', and 'wing'.

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Abbreviations

BCCW = Benue-Congo Comparative Wordlist
BCR = Benue-Congo Reconstructions
BLR = Bantu Lexical Reconstructions
C = consonant
GBWG = Grassfields Bantu Working Group
NC = Niger-Congo
PB = Proto-Bantu
PBC = Proto-Benue-Congo
PCC = Proto-Cross-Congo
PEM = Proto-Ekoid-Mbe
PGr = Proto-Grassfields
PJ = Proto-Jukunoid
PLC = Proto-Lower Cross
PP = Proto-Plateau
PUC = Proto-Upper Cross
PWN = Proto-Western Nigritic (Mukarovsky)
V = vowel

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Language maps and sociolinguistic data—Developing linguistic cartography of Bantoid languages

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> *Linguistic mapping is permanently evolving because it must follow not only the progress of the linguists' analysis, but also the intervention of sociolinguists and scientists from other disciplines—geography, history, economics, politology, etc.—who, one after the other, are discovering the importance of language and the interaction between language and other phenomena.*
> *(Breton 1993: 47/68)*

Abstract
Drawing language maps is not normally considered an important part of linguists' work. Nonetheless, language maps influence their users' perceptions and understandings of the characteristics of the languages that they represent. Therefore, given their communicative power, wide accessibility, and generalized use for educational purposes, attention must be paid as to what messages language maps convey about the languages that they visualize since different cartographic styles can be suited to representing some language ecologies better than others. However, decisions at this level are not normally made explicit by cartographers, and the ways in which certain ideologies surface in language maps can escape the attention of both linguists and cartographers alike. This article clarifies why these issues are especially relevant in a domain such as that of the study of Bantoid languages and proposes some novel cartographic models that have been used for representing the languages of Lower Fungom in western Cameroon. These include some cartographic strategies for the representation of the language ideologies of speaker communities and of individual multilingualism. The latter is both a key and underresearched feature in Bantoid sociolinguistics and the article suggests how scholars who are not sociolinguists may nevertheless contribute to its exploration.

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Keywords: language ideologies, small-scale multilingualism, Cameroon, language maps

1 Introduction

Linguistic cartography is the branch of geography that aims to represent linguistic data in the geographical space through the production of maps—though, as one anonymous reviewer pointed out, it is mostly practiced by linguists rather than geographers.[1] At a general level, language maps differ from each other depending on two basic factors: i) their relationship with the topology of real-world locations and ii) their purposes.[2] Concerning the former aspect, maps in which linguistic data are positioned in accordance with the topology of the locations are called "topographically faithful", whereas "topographically unfaithful" are those maps that transcend the topology of the locations. As an example that can be relevant to Africanist linguists, all the language maps found in Heine and Nurse (2008) are topographically faithful—i.e. linguistic features are positioned on a base map aiming to topographic accuracy—except for the first one (Heine & Leyew 2008: 32), where isoglosses representing the number of typological properties shared among the languages spoken in northern Nigeria lack any connection with real-world topography.

Concerning their purposes, language maps can be used to, e.g. represent the spatial distribution of single or interconnected linguistic features across languages (see, e.g. the several maps in Clements & Rialland (2008) and in Güldemann (2008)) and to visualize processes in language history (e.g. Dimmendaal (2008: 286)) or the geography

1 The research reported on here has been supported by NSF Awards BCS-1360763 and BCS-1761639. I thank Penghang Liu for his early collaboration on some of the cartographic issues discussed here. Thanks also go to Ling Bian, Clayton Hamre, Yujia Pan, Ljuba Veselinova, and Colin H. Williams for their stimulating insights on several aspects of the topic presented here. I am also grateful to two anonymous reviewers for their constructive remarks. I am solely responsible for the content of this chapter.

2 Since the audience of this article is expected to be mainly linguists, I decided to only cite a limited number of items of linguistic geographic literature. The interested reader can refer to works such as Williams 1991, Williams & Ambrose 1992, Lameli et al. 2010, and Rabanus 2020—as well as Di Carlo 2022, where a contextualization of the cartography of multilingualism can be found.

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of languages (e.g. Kießling et al. (2008: 187) and figure 1). These purposes by no means exhaust the potential of language mapping but the state-of-the-art of linguistic cartography in Africa seems to be by and large limited to these types of language maps. A quick look at synoptic works about language mapping (e.g. Lameli et al. 2010 or Rabanus 2020) is telling of how little of its potential has been exploited for African settings. In areas as linguistically complex as the Nigeria-Cameroon borderland, the contrast is even more extreme since linguistic cartography work on Bantoid languages is presently mostly limited to maps that, like that in figure 1 below, show the geographic locations that have been associated with these languages, where locations are represented through polygons encompassing areas that are known (or assumed) to be occupied by speakers of these languages.[3]

One would argue that this simply reflects existing limits as to the kinds and amount of data that are available for Bantoid languages. After all, how can one draw complex maps visualizing, for instance, bundles of differential features across the languages spoken in a given region, let alone across the varieties of a language, if data coverage is partial, fragmentary or simply not there altogether in the first place?[4]

3 This state of affairs is not limited to language mapping in African contexts only but, rather, is quite generalized. This makes the issues discussed in this article relevant also beyond the limits of research focused on African languages.

4 In this article, I will focus on conventional, static maps only, i.e. the maps that can be printed on paper. This is due mainly to the fact that developments in GIS technology and in online resources has not yet made dynamic maps sufficiently common for the representation of sociolinguistic data, which instead feature prominently in this article. As a side note, it must also be realized that, except for long-term, well-funded projects (like, e.g. the World Atlas of Language Structures https://wals.info), many online resources cited in isolated articles are no longer accessible just a few years after publication (see, e.g. the several links cited in Dahl & Veselinova 2005, none of which seems to be currently working). Restricting the attention to static maps only may seem old-fashioned: in fact, it stems from a realistic view on the present time because, especially for scholars based in African countries, dynamic maps have not so far featured sufficiently commonly to be used for an introduction like this article is intended to be. The fact that this situation closely resembles the one faced by Fardon & Furniss (1993: 26), is telling of existing obstacles for the global circulation of technological and epistemological advances among practitioners of the sciences of language.

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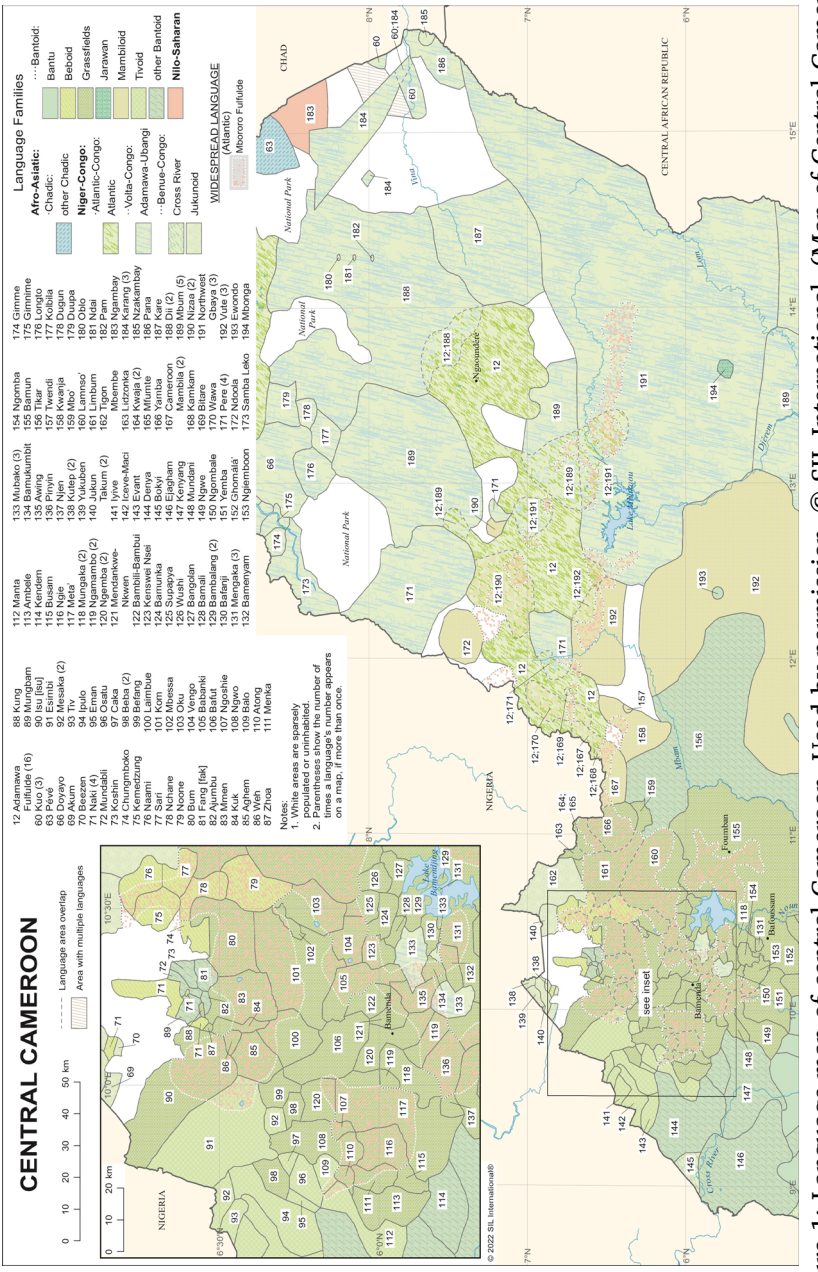

Figure 1: Language map of central Cameroon. Used by permission, © SIL International, (Map of Central Cameroon, 2021).

On the one hand, the relative lack of fine-grained linguistic data is clearly the main obstacle to the development of linguistic cartography on Bantoid languages. On the other hand, however, this *status quo* does not justify taking lightly the task of creating language maps of Bantoid languages. One should not forget that, given their wide accessibility and generalized use for educational purposes, language maps have important reverberations on what we might call the "linguistic imagination" of their users—crucially including young students as well as policy makers (see, e.g. Kay 1992). From this perspective, it is key that any linguists embarking in linguistic cartography be aware that language maps normally run the risk of disguising more about languages than they reveal, and that this risk is best mitigated by the existence of multiple, competing cartographic representations (cf. e.g. Luebbering 2011).

In a domain such as Bantoid linguistics—where between 150 and 200 languages (Blench 2014) are spoken mainly in hard-to-reach areas and specialists are relatively few—it is quite unlikely that a single language or area is studied so extensively that multiple competing cartographic representations are produced for it. In fact, the likelihood that a language or area is known through very few publications is quite high, also due to the fact that local communities are unlikely to produce language maps of their areas due to their relatively socioeconomically marginal status and so are local institutions. Bantoid linguists are thus more likely to become authorities in their particular fields, which is something that comes with its own share of responsibilities—not the least of which being that one's maps are likely to be uncritically cited or reproduced in subsequent publications.

In this short article, I would like to focus on two features of today's linguistic cartography of Bantoid languages that I find quite problematic. First, the systematic erasure of local perceptions of what counts as a language through the generalization of strategies of visualization that have been institutionalized throughout 19th-century Europe and essentially served the agendas of (then developing) nation-states. Second, the conspicuous absence of any information about patterns of multilingualism, individual multilingualism being not only among the most prominent sociolinguistic features of environments where Bantoid languages are spoken, but also an important factor shaping dynamics of language change that progressively more linguists are

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looking at with interest (e.g. Good 2023b). After providing a basic framework for the critical analysis of maps representing the geography of languages in the next section, I will address the two points above in section 3 and 4, respectively, and will conclude the article with a methodological section.

2 Visualizing the geography of languages: issues of accuracy, readability, and accountability

Working as a linguist-anthropologist in the field first in Pakistan (e.g. Di Carlo 2010) and then in the Lower Fungom region of western Cameroon (e.g. Di Carlo 2011, 2018), made me progressively aware of the depth of the hiatus that divides the reality on the ground from its cartographic representations. Being passionate about maps in general and relatively familiar with drawing maps of the areas of my research, I had first-hand experience of the fact that doing cartography is a selective act based on the creator's purposes and skills. Modern technological advances may make the results visually impressive for their feel of absolute precision, yet map users should keep in mind that accuracy or degree of detail does not make cartography any more "objective". Maps are representations of reality that must come to terms with a number of concrete factors, first and foremost their ease of readability. When they deal with languages, it becomes evident that "the extent of compromises that are made to depict the fluidity of language within the discrete confines of a map can result in a product that is far from reality not only in the location of features, but in the messages conveyed about the characteristics of language itself" (Luebbering 2011: 2). I will use the map in figure 1 in order to anchor the discussion on a concrete example, but the critical analysis I will outline in the following applies to any maps sharing the same cartographic style—especially those representing Bantoid languages.

In figure 1, we can see a map visualizing the spatial distribution of languages in central Cameroon. In this type of maps, the linguistic data that is represented amounts to language names, in their turn implying that professional linguists or speaker communities or both have sanctioned the scientific basis or political legitimacy or both of using particular labels for the identification of lexicogrammatical codes that are considered distinct from each other. Where these lan-

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guage names are placed and what kind of visual semiotics they are associated with—e.g. whether they are represented as polygons covering bounded territories or as point-related features—are decisions that a cartographer should normally make based on i) the availability of non-linguistic data justifying those decisions (such as, e.g. data gathered from censuses or surveys) and ii) the intended purposes of the map.

Looking at figure 1, we can see that language names are generalized to cover bounded land areas and that the resulting shapes are filled with different colors to reflect genealogical affiliations and juxtaposed to each other leaving out only the major tracts of uninhabited land. This is an extremely common type of map—which is why I will refer to the ensemble of these semiotic strategies as the "classical language map" in the following—and the only feature that breaks its otherwise perfect correspondence between discrete portions of land and discrete languages is that the symbol associated with one language, i.e. light-red dots for "Mbororo Fulfulde", is superposed to the others in order to allow to signal that the language is spoken by speaker communities scattered across the whole area.

If we compare this map with a language map of Europe (fig. 2) we can see that, along with important differences—first and foremost their scale since figure 1 covers an area of about 9,000 sq km whereas figure 2 covers an area of about 30,000,000 sq km if we include water surfaces—both follow the same representational logic: languages are represented as juxtaposed bounded territories and color fillings are used to signify their genealogical affiliations.

Historically, this mapping style was typical of 19th-century maps which, like the one in figure 3 below, aimed to represent the location and boundaries of nation states (see, e.g. Anderson 1991: 163–185). By reproducing this style, a map like the one in figure 1 also tacitly relies on its basic assumption—i.e. that there is a sort of "natural correlation" between a language, a people, and a territory. Among other critics, Auer (2004) recognizes this assumption as a fundamental ideological feature of nation-states instantiating linguists' "theoretical deficits" in dealing with the complex interplay between language and space (Auer 2004: 150).

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Figure 2: Language map of Europe. (User-generated map based on Garry & Rubino 2001: 435–439. From Wikimedia Commons, CC BY SA 4.0). Shades of green represent Slavic languages, shades of blue Romance languages, shades of red Germanic languages.

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At this point, one could argue that these criticisms are quite abstract, that the map in figure 1 is perfectly readable—although it lacks spatial reference allowing readers to quickly locate the area under analysis on the earth surface—and that having it available is surely better than having no maps of the languages of central Cameroon. I couldn't agree more. At the same time, however, there are a number of problems that must be acknowledged.

First, the sources that were consulted and on whose basis the map was drawn are not cited. If this was done, users would learn that language boundaries are not just putative but are in fact best viewed as a sort of by-product of the mapping style that was used, according to which languages must border one another except for the wider expanses of uninhabited land. As we will see, this is just one out of many styles that can be used to visualize languages in the geographic space. Given the evident lack of supporting information justifying on scientific grounds the very representation of language boundaries, let alone their position, one can conclude that the main source determining the location of boundaries (as well as their very existence) is the cartographer's own language ideology—i.e. what they consider a language to be, especially in terms of what relationship it has with space. I believe this is important information that should be made accessible to map users.[5]

Related to this point is a second problem concerning issues of social justice. We can summarize them in the following questions: at what stage of the creation of this map were communities of speakers of these languages involved? Has the cartographer collected any feedback from the communities about how their own languages are represented in publications meant to be used by people the world over? It is clear that these are rhetorical questions as communities in this part of the world normally have no voice in matters of this kind, which is unfortunate and unjust.

5 In the Ethnologue website, there is one page (https://www.ethnologue.com/methodology/#maps) that briefly deals with some general characteristics of the language maps it contains. There one reads that "[m]ost of the maps make use of polygons to show the approximate boundaries of the language groups. No claim is made for precision in the placement of these boundaries, which in many instances overlap with those of other languages." Ideally, individual maps should include information of this kind.

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Figure 3: Political map of Europe drawn by Samuel Augustus Mitchell in 1863. From The New York Public Library, retrieved from https://digitalcollections.nypl.org/items/510d47e2-087a-a3d9-e040-e00a18064a99

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Finally, a crucial corollary to the nation-state ideologeme, to use Auer's (2004) term, is that communities are inevitably represented as monolingual, which is exactly what one would gather from looking at both figures 1 and 2. We all know that in today's superdiverse Europe (Blommaert & Rampton 2011) most people (though by no means all) have some multilingual competence but this is a feature that is normally deemed irrelevant for the geography of languages also because, provided that a semiotic strategy is found that can aptly represent it, it would jeopardize the readability of a large-scale map such as the one in figure 2.

However, available evidence about patterns of multilingualism in areas of central Cameroon (see, e.g. many of the chapters in Di Carlo & Good 2020 for case studies from several areas in the Cameroonian Grassfields) points to sociolinguistic configurations that are of a completely different nature as compared to those commonly encountered in regions such as Europe because most speakers of a local language are not only proficient in one or more translocal languages (be they lingua francas or official languages or both), but also have varying degrees of competence in one or more neighboring local languages. I think this is not at all irrelevant to understanding the geography of languages spoken in hotspots of linguistic diversity such as the Nigeria-Cameroon borderland.

Having access to this information would enable map users to realize that, especially in some areas, notions such as "speaker community" and "language boundary" can be more problematic than one would be led to assume based on the state-based cartographic models. One salutary consequence would be an increased awareness that the map in figure 1, while appreciable for its overall readability, should be taken *cum grano salis*, as an oversimplified representation of the complex geography of these languages lacking certain important details that one should look for elsewhere in order to get a more complete view—ideally, in accompanying maps focused on what is known of local forms of multilingualism.

3 Competing cartographic models

In order to provide examples of how diverse cartographic outputs on Bantoid languages can be, in this section I will present and discuss some language maps that I and my collaborators created within the

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KPAAM-CAM project (https://kpaam-cam.org), a long-term project focused on the study of traditional patterns of multilingualism in rural areas of Cameroon.

3.1 Lower Fungom at a glance

So far, most of the work of KPAAM-CAM has focused on the languages and societies of Lower Fungom, an area of about 240 sq. km located at the northern fringes of the Cameroonian Grassfields. In 2017, Lower Fungom was inhabited by about 15,000 people distributed in thirteen villages, although at present most of the population left the area due to prolonged conflicts between Ambazonian separatists and the Cameroonian army (see, e.g. Pommerolle & Heungoup 2017). Traditionally, each of these villages is considered a politically independent chiefdom (Di Carlo 2011) but state institutions can now overrule the chief's authority. Linguists consider the speech varieties of this area to be manifestations of seven (or eight) distinct non-Bantu Bantoid languages (Good et al. 2011: 102). This characterization is at odds with the local conception of linguistic distinctiveness which views each of the thirteen village-chiefdoms as having its own *talk*. In the local context, the presence of a socially meaningful lect is a prerequisite for a village to claim political independence, which results in the local ideological equation "one village-chiefdom = one language" (Di Carlo & Good 2014: 233; Di Carlo 2018).

In this context of impressive linguistic diversity and geographical proximity between villages associated with different lects, individual multilingualism and multilectalism—i.e. proficiency in lects that, for their degree of similarity, are normally considered as varieties of the same language—is the norm. Sociolinguistic surveys based on the use of an ethnographically-informed structured interview guide carried out throughout the area between 2012 and 2018 (n = 300+; see, e.g. Esene Agwara 2020, Di Carlo 2023) could not identify a single monolingual speaker, the minimal repertoire including at least one local lect plus Cameroon Pidgin English (CPE). On average, individuals from Lower Fungom speak four local lects plus CPE, with only slight differences between men and women, the latter showing somewhat lower values. This data comes from self-reports but work on the assessment of speakers' competences in the local lects (Nsen Tem (2022) and Mba & Nsen Tem (2020)) substantially confirmed this picture.

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3.2 Linguistic cartography of the Lower Fungom languages

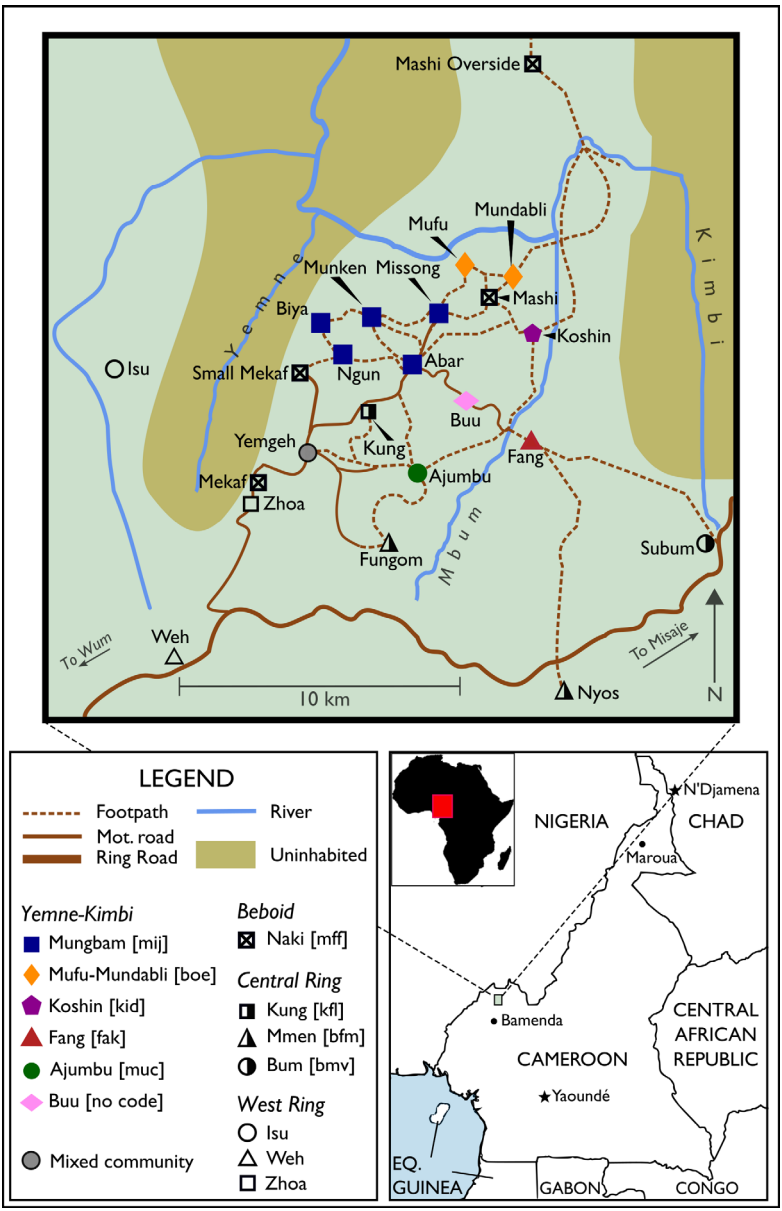

Figure 4a: Language map of Lower Fungom according to Di Carlo et al. 2019.

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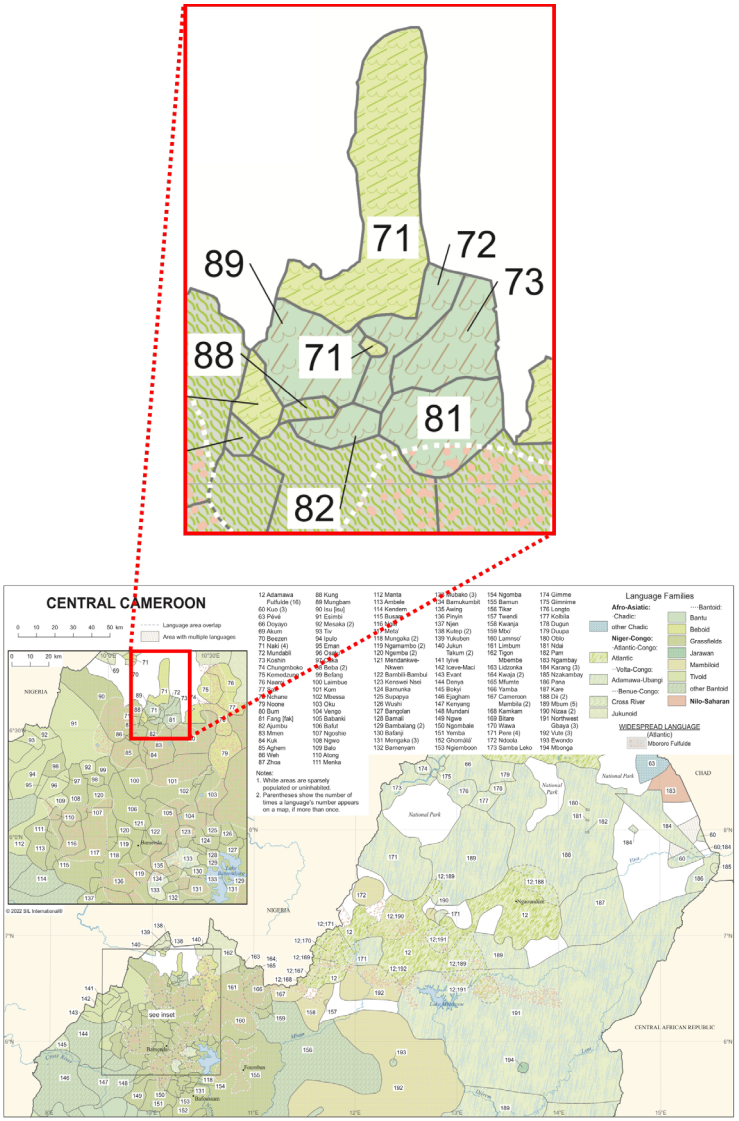

Figure 4b: Detail of language map of central Cameroon (Eberhard et al. 2021, see fig. 1 above) showing the languages of Lower Fungom. Used by permission, © SIL International, (Map of Central Cameroon, 2021), further redistribution prohibited without permission.[6]

6 Naki is n.71, Mungbam is n.89, Mufu-Mundabli (including also Buu) is n.72, Fang is n.81, Ajumbu is n.88, Koshin is n.73, and Kung is n.82.

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Figures 4a and 4b are two clearly different ways to represent the languages spoken in Lower Fungom. Figure 4b is an extract from figure 1, i.e. it is a classical language map where language data are generalized to cover land areas and the resulting polygons/shapes are juxtaposed, leaving out only the major expanses of uninhabited land. The map in figure 4a, by contrast, uses a point-symbol semiotic strategy: each symbol is anchored to the location of a village and represents the language that is associated with it. There are a number of reasons why I believe a cartographic model such as the one adopted in the map in figure 4a should be more common in language maps of Bantoid languages than is currently the case—a point made by Dahl & Veselinova (2005) for any languages "with several thousand speakers or less".

First, it avoids generalizing language information to land areas whose boundaries, in the absence of a census and official land registry, are de facto arbitrary. Second, by using point-symbols rather than juxtaposed shapes to locate languages, it gives visibility to an important trait of the local understandings of linguistic differentiation that is centered around the notion of village as a politically autonomous unit headed by a chief and speaking a distinct lect (see section 3.1). The map does not represent the local language ideologies entirely, though, because symbols are differentiated following the scholarly understanding of what are to be considered separate languages: e.g. Abar and Munken have the same symbol since for a linguist they are two varieties of Mungbam, while locals would consider them as two distinct (though similar) languages, each requiring a separate symbol of its own. The point-symbol representation is an attempt at a semiotic compromise between etic (i.e. community-external) and emic (i.e. community-internal) perspectives on local linguistic diversity. Native speakers of these languages have had access to this map, and my understanding is that they find it overall acceptable, though the map in figure 5 would perhaps be closer to their desiderata as it represents each village-chiefdom as having a distinct language—i.e. the closest possible approximation to their hyperlocalist stance of what counts as a language (see section 3.1).

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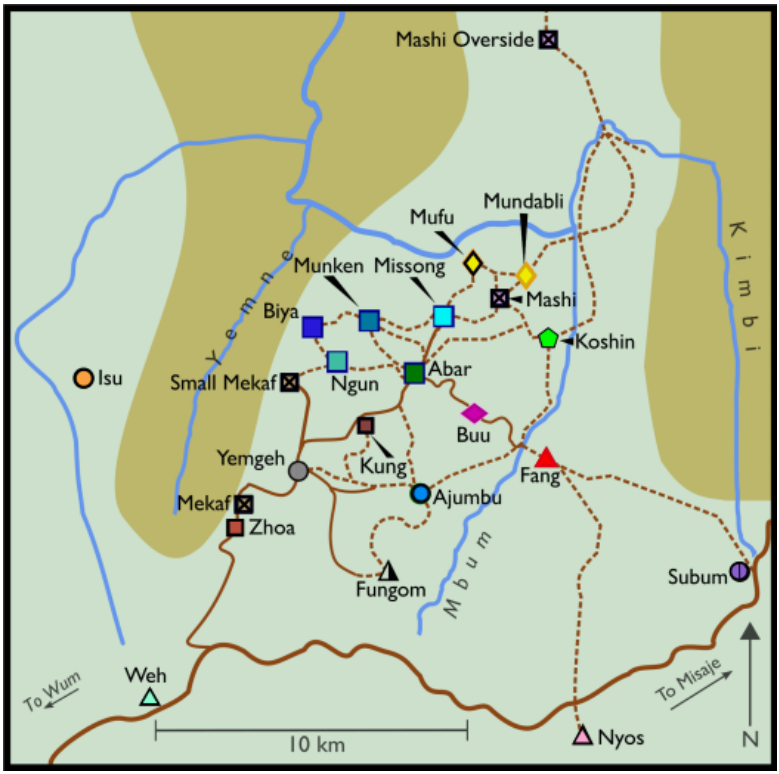

Figure 5: language map of Lower Fungom languages reflecting the localist language ideologies of their speakers.

The three maps presented in this section differ from each other at the level of the language ideologies they reproduce.

- As I said in section 1, the map in figure 4b is an instance of the state-based ideology, according to which there exists an exclusive relationship between a language, a (monolingual) community, and a territory.
- The map in figure 4a approximates local views by acknowledging the fact that each chiefdom should be considered individually in terms of the language it is associated with, while at the same time representing the scholarly view on the relationships among these lects.
- The map in figure 5 reflects local ideologies more clearly than does figure 4a as it symbolizes a one-to-one relationship between chiefdoms, on the one hand, and languages, on the other.

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4 Towards a cartography of multilingualism in Lower Fungom

It must be noted that, regardless of their degree of adherence to local language ideologies, the three maps we have just analyzed converge in portraying the region as being populated by monolingual communities. This is at odds with a real-world, tangible feature of the local language ecology, i.e. that nearly everyone is competent in multiple local linguistic codes (see section 3.1 for citations). This fact can be showcased through maps such as those found in figure 6.[7]

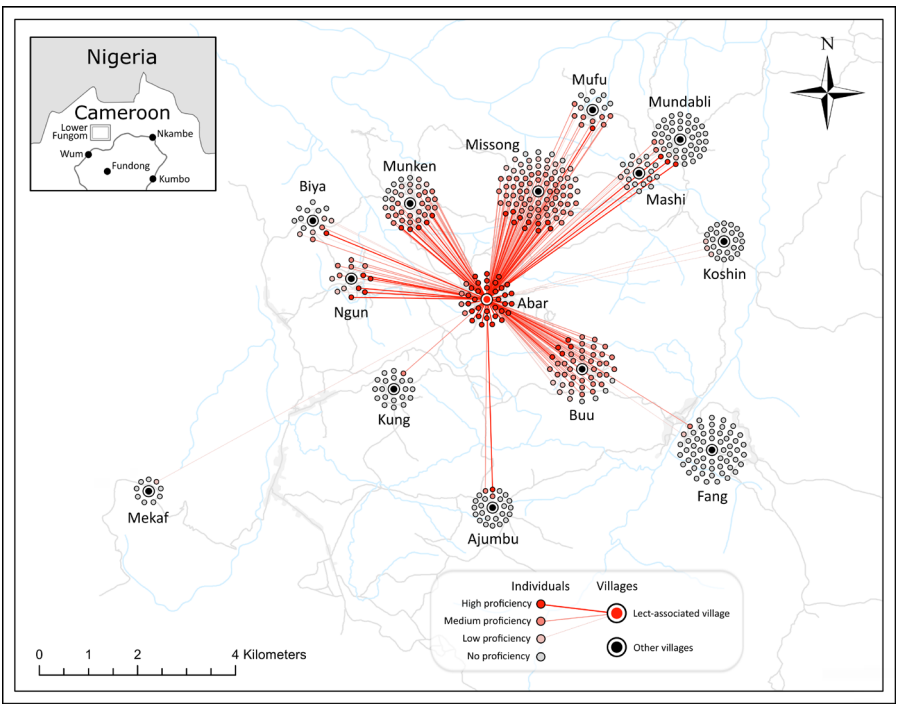

Figure 6a: Visualization of language networks of Abar.

7 Maps in figures 6a–d are visualizations of survey data. Lects are chosen in order to exemplify different types of spatial distributions. Each circle represents an individual survey respondent and different colors represent different degrees of proficiency. Edges connect respondents with language/village centers, where thicker edges = native proficiency reported. (Visualizations by Clayton Hamre)

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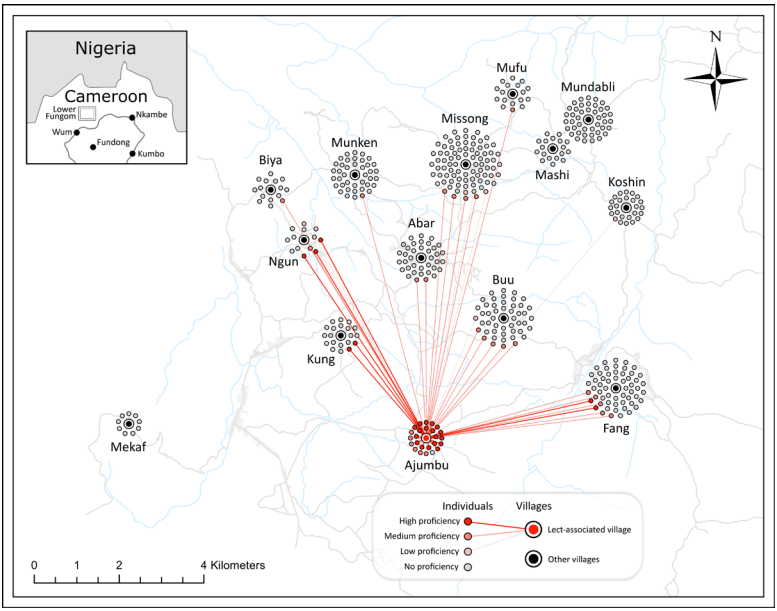

Figure 6b: Visualization of language networks of Ajumbu.

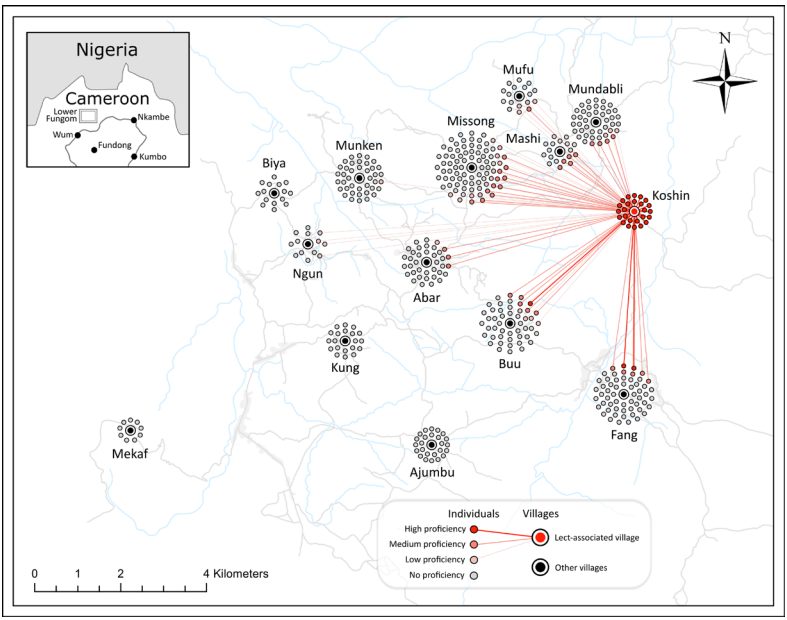

Figure 6c: Visualization of language networks of Koshin.

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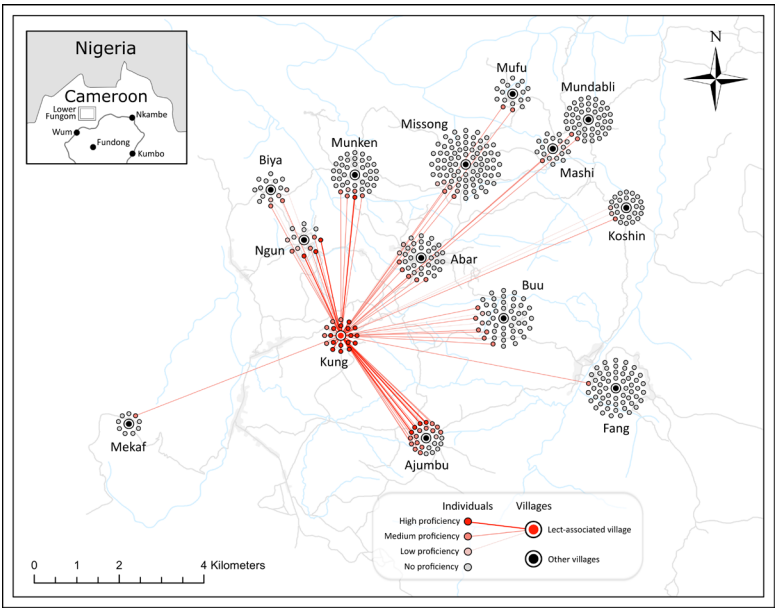

Figure 6d: Visualization of language networks of Kung.

Maps in figure 6 project in the space data about self-reported multilingual competences obtained from individual respondents through the use of the KPAAM-CAM sociolinguistic interview guide (see Di Carlo 2023). They are representations of "language-based networks" in the geographical space of Lower Fungom, i.e. networks where nodes (i.e. circles) are individuals who are able to communicate using a given language and edges (i.e. lines) are weighted according to the individual's reported degree of proficiency: the thicker the line the higher the proficiency. Language-based networks are point-symbol maps displaying survey data, and one of their goals is to show how diffuse the knowledge of a given language is among people residing in a given area.[8] To the best of my knowledge, maps of this kind have not

8 As one of the anonymous reviewers pointed out, these maps exemplify two different types of anchoring of the data to the space. On the one hand, individual respondents (i.e. circles) are placed around the village where they reside—i.e. a relatively objective anchoring—on the other hand, each language is anchored to its associated village-chiefdom—i.e. an ideological feature as we saw in section 3.1 and 3.2. Rather than being a choice intended to be meaningful, this is a by-product of the style that was chosen and which, ultimately, stemmed from the approach to language of the geographers that collaborated in KPAAM-CAM (primarily Ling Bian).

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been employed in previous linguistic cartographic work in general, let alone the cartography of Bantoid languages.

Since Lower Fungom languages are spatially focused in ideological terms (i.e. they are associated with individual village-chiefdoms, as displayed in figures 4a and 5), each language network is centered on the relevant village-chiefdom, and all the speakers of that language are connected to it. Individual speakers are spatially represented in their village of residence at the time of the interview (2012–2017). By representing all survey respondents on the map and distinguishing those who are part of the language-specific network (colored in orange) from those who are not (colored in gray), the representation makes use of two semiotic strategies that aim to provide information regarding diffusion of linguistic knowledge across each village.[9] I think that visualizing languages in this way sheds light on some important real-world phenomena that the other maps necessarily disguise.

While some maps appear to fit the particular realities of Lower Fungom better than others, the point is not to pick which map model is best since each of the models presented so far contributes to understanding certain aspects of the complex interplay between languages and space, as I try to summarize in Table 1 below. Rather, it is by using all of them that one can actually exploit the scientific potential that language maps have for linguistic research.

9 Sample size and distribution are obviously critical for the map to be considered more or less reliable as an accurate representation of the presented patterns. In our case, the sample is relatively large (n = 206, i.e. close to 1.5% of the total population) but its distribution is skewed as it reflects an intermediate stage in a longer data gathering process. One example is given by the oversampling of the village of Buu: it makes up no more than 5% of the total population of Lower Fungom but nearly 15% of the survey respondents are from Buu. So, while actual patterns may not be generalized on the basis of the maps in figure 6, it would be difficult to deny that visualizing survey data in this way helps recognize the limits of the maps in figure 4 and raises awareness that they represent abstractions rather than tangible, real-world phenomena.

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Table 1: Summary of the main dimensions of encoding of language-related information in select maps found in this article.[10]

Dimensions	**Figures 1 & 4b**	**Figure 4a**	**Figure 5**	**Figures 6a–d**
Language associated with land surfaces	yes	no	no	no
Language associated with settlements	no	yes	yes	yes
Speakers' own ideologies	no	(yes)	yes	(yes)
Individual speakers	no	no	no	yes
Degree of fluency (self-reported)	no	no	no	yes
Individual non-speakers	no	no	no	yes

5 Conclusions: which data for which maps?

The study of Bantoid languages has contributed significantly to enhancing linguistic theory and analysis—for example, the study of tones in the languages of the Cameroonian Grassfields has provided impetus for the advancement of tonology as a whole (see, e.g. Hyman 2014). Likewise, the study of the complex sociolinguistic situations characterizing most of the Bantoid languages, which are largely spoken by small communities of multilingual individuals who are competent in neighboring as well as translocal languages, has been consequential in reshaping the sociolinguistics of multilingualism in non-urbanized African settings (see, e.g. Lüpke 2016). This short article hints that the complex nature of the sociolinguistic, real-world settings where Bantoid languages are spoken requires innovations also at the level of linguistic cartography that will likely bring about important advances whose reach will go well beyond the Bantoid domain (see also Di Carlo 2022 for a fuller view of the linguistic cartographic options made possible by the study of a Bantoid setting).

10 Value "(yes)" means that the map does not have the goal of representing speakers' ideologies but, rather, that the data it represents are framed in ways that reflect speakers' ideologies—e.g. by representing speakers of Abar, the map in figure 6a is implicitly based on the locals' ideologies since Abar is a variety of Mungbam and a map based on the linguists' ideologies would instead aim to represent the distribution of speakers of Mungbam rather than of Abar only.

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More in general, the main goal of this article is to make readers aware that outputs of linguistic cartographic work are far from being objective as they invariably reflect both a particular viewpoint on what should be represented—e.g. linguists' as opposed to speakers' views of what counts as a language—and a choice of the semiotic means to be used—e.g. whether languages should be symbolized through polygons or point-like symbols. Cartographers should ideally make it clear what sources they used that support their decisions because this information will allow map users to realize the significance (and limitations) of the map content. Not doing so risks misleading users, a claim I tried to corroborate by showing that a single group of Bantoid languages can be represented in radically different ways, each of which sheds light on different aspects of their geography. Moreover, I showed how data about speakers' multilingual competences can be visualized in a map, and this is a crucial point that maps of Bantoid languages should try to address given how widespread multilingualism in neighboring languages still is throughout the regions where these languages are spoken (e.g. Warnier 1980).

The main obstacle for applying elsewhere the cartographic models I proposed here is not technical since all the figures I presented have been produced using relatively easy-to-use software. Rather, the obstacle is epistemological. Still today, linguists working on Bantoid languages rarely address issues related with speakers' multilingualism and this determines a generalized lack of data about it, which in its turn makes it impossible, amongst other things, to enrich the cartography of Bantoid languages and raise it from the current status of ancillary, dispensable work to that of a valid complement to linguistic research. In response to this situation, I would like to conclude this article by stressing the importance of collecting even basic information about the multilingual repertoires of speakers of Bantoid languages. When doing so, one should pay attention not to filter self-reports through the linguists' professional ideology, which not only distinguishes between languages and dialects but also tends to consider multilingualism to be real only when it involves the former. To the contrary, the goal should be that of collecting information that contributes to understanding "the totality of linguistic forms regularly employed in the course of socially significant interaction" (Gumperz 1964: 137). In practical terms, this means suspending judgments as to the language vs. dialect status of the codes in which respondents

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report that they can communicate, as well as to their actual degree of proficiency in any of these named codes. This can be valuable information which other specialists can further exploit, especially sociolinguists focusing on the study of multilingualism in rural Africa or "small-scale multilingualism" as it is currently often referred to in the literature.[11] Moreover, this information will contribute not only to a more comprehensive view of the spatial distribution of the communities speaking these languages, but also to an improved understanding of the dynamics of language change in a challenging and fascinating domain such as that of the Bantoid languages.

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Numeral mutation and ablaut in Lower Fungom languages

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Abstract
This paper provides new information on patterns of consonant mutation and vowel ablaut found in the numeral systems of four language varieties of the Lower Fungom region of Cameroon. This phenomenon is of interest in the context of the comparative investigation of noun class marking in Niger-Congo languages, and a particularly noteworthy pattern found in some of the varieties are apparent cases of mutated numeral roots being analogically extended to contexts where they would not be predicted to be found on the basis of regular patterns of sound change.

Keywords: numerals, consonant mutation, ablaut, Bantoid

1 Introduction

This article examines consonant mutation and vowel ablaut in numerals showing noun class agreement in the languages of the Lower Fungom region of Cameroon, which is located within the Cameroonian Grassfields.[1] According to Merrill (2018: 1), "consonant mutation is a linguistic phenomenon whereby two or more sets of consonant phonemes alternate systematically within roots (or other morphemes) in a way that is not entirely predictable from the phonological environment". Additionally, Kroeger (2005: 307–308), writes that, "[m]utation refers to a change in the quality of one or more phonemes in the base form. Vowel mutation is relatively common, and is often referred to by the more specific term ablaut." The term 'mutation' will be used as a general label encompassing both conso-

1 The first author had the primary responsibility for the data collection and analysis that underlies this paper, and he also created the first draft of the work. The second author contributed to the analysis, editing of the final text and addressing aspects of reviewer feedback.

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nant mutation and ablaut in this paper, and *ablaut* will be used specifically for mutations involving vowels.

An initial example of the phenomena of interest here can be found in the Lower Fungom variety Buu. The elicitation form of the number 'one' is *mō*, and this is the root for 'one' that is found when the number appears with a noun class agreement prefix. However, in some classes, there is no agreement prefix, and the word for 'one' shows agreement with the noun via both numeral mutation and ablaut, as seen for the class 3 noun *kpūn* in the phrase *kpūn ɲúō* 'one tree', where *ɲ* is found, rather than *m*, and *ʊo*, rather than *o*, in the numeral modifier.[2]

This paper is intended to be largely descriptive in orientation. The data of focus has been collected as part of ongoing research on the thirteen language varieties of Lower Fungom. Previous work has looked at consonant mutation and ablaut in just two of the region's thirteen varieties. For Mundabli, Voll (2017: 71–72, 152) discusses consonant mutation and vowel ablaut in numerals. For Koshin, Ousmanou (2014: 148–149) provides data on initial consonant alternations in the numerals 100 and 200. In his general survey of consonant mutation in Grassfields languages, Kießling (2010: 210) discusses consonant mutation in nouns in Koshin, based on data provided in Hombert (1980: 89), but not in numerals. Therefore, while the material presented in this paper overlaps with earlier work on the Lower Fungom varieties, substantial new information is provided as well.

The rest of this paper is organized as follows. In section 2, the general linguistic situation of Lower Fungom is briefly presented. In section 3, some overall patterns are discussed regarding the presence or absence of numeral mutation in Lower Fungom varieties, and the historical sources of mutation are briefly considered. In section 4, the numeral systems of the four language varieties of Lower Fungom where mutation is found are presented. A brief conclusion is provided in section 5. This paper presupposes that the reader has basic familiarity with Bantoid noun class systems. For those without the relevant background, Kießling's (2010) study of mutation patterns in other Grassfields languages provides relevant information in a study

2 Depending on the details of the agreement constructions, there may also be tone changes which could be considered an additional kind of mutation. This is seen in the example just discussed where the tone on the citation form for 'one' differs from the tone in the class 3 form for 'one'. In this paper, we consider only segmental mutations, and leave tonal alternations for future study.

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whose goals overlap with the present paper. A more general overview of Niger-Congo noun class systems from a diachronic and comparative perspective can be found in Good (2012).

2 Lower Fungom: A brief linguistic overview

The Lower Fungom area of the North West Region of Cameroon comprises thirteen villages (see Good et al. 2011). Each village is associated with a distinct linguistic variety. Current reference classifications group these varieties into seven languages. Four of the varieties show the segmental mutation patterns of interest to this paper, namely Buu, Mufu, Mundabli, and Mashi. Mufu and Mundabli are closely related varieties. Buu shows evidence of a close historical connection to Mufu and Mundabli but is quite different from them and, despite the fact that these three varieties are treated as a single language in reference sources, current evidence suggests that Buu should be treated as one language and Mufu-Mundabli as another (see Good et al. under review). The Mashi variety of Naki is not linguistically close to the other three varieties in the local context (though all of Lower Fungom's languages are related at some level within Bantoid). Figure 1 provides a map of Lower Fungom and the immediately surrounding region. Table 1 provides a list of its villages with an indication of their names and reference language codes. The names of varieties where numeral consonant mutation is attested are italicized in the table.

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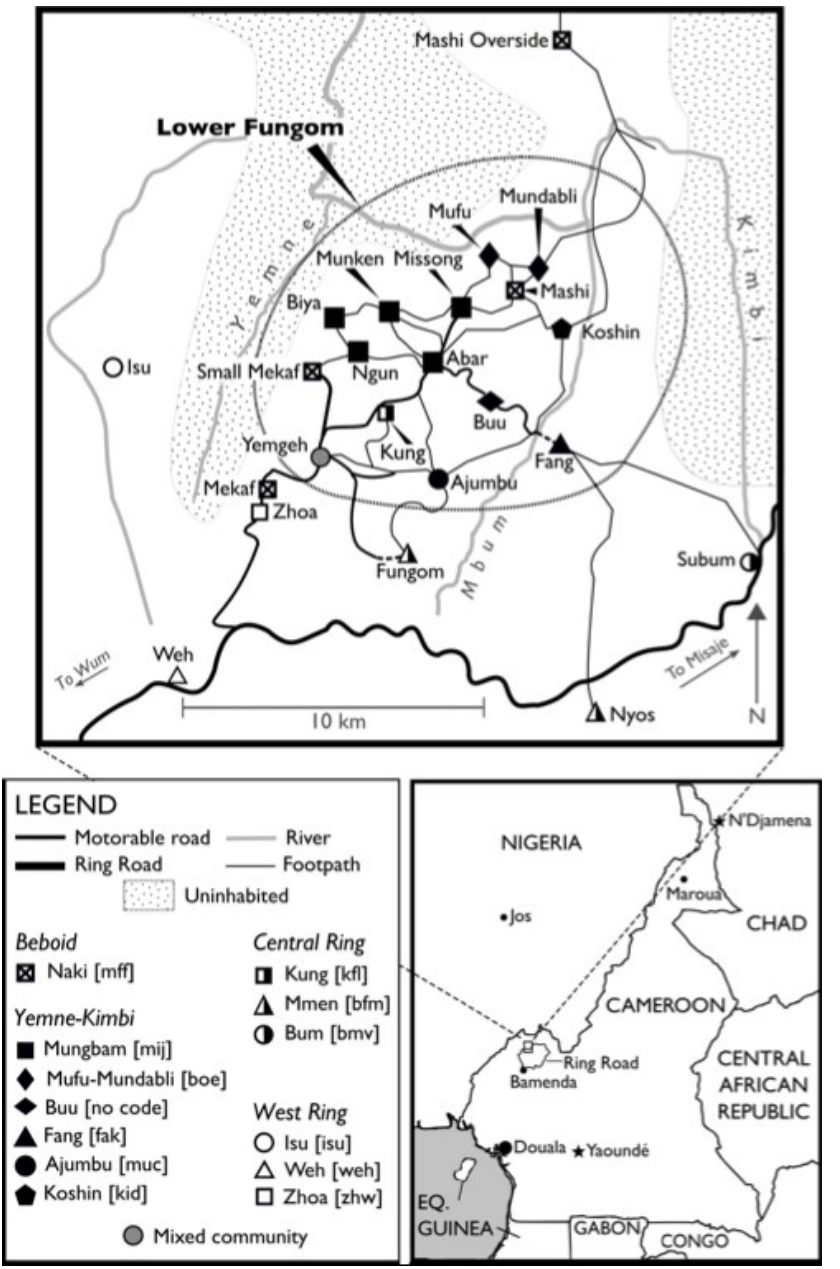

Figure 1: Villages and language varieties of Lower Fungom. Map created by Pierpaolo Di Carlo.

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Table 1. Language varieties of Lower Fungom

Language	Variety (if applicable)	639-3 code	Glottocode
Mungbam	Abar	mij	abar1238
	Biya	mij	biya1235
	Missong	mij	miss1255
	Munken	mij	munk1244
	Ngun	mij	ngun1279
Buu		—	buuu1246
Mufu-Mundabli	*Mufu*	boe	mufu1234
	Mundabli	boe	mund1340
Ajumbu		muc	mbuu1238
Fang		fak	fang1248
Koshin		kid	kosh1246
Naki	*Mashi*	mff	naki1238
Kung		kfl	kung1292

3 General patterns in the distribution of mutation and its historical origins

A general descriptive point that emerges when all of the Lower Fungom languages are considered together is that mutation in numerals is clearly connected to the noun class system, and its historical source is from alternations triggered by the presence of noun class prefixes on agreeing numerals. In some cases, the prefixes triggering mutation are still present, but, in others, they have been lost (see Kießling 2010).

For purposes of comparison, schematic overviews of the noun class systems of Abar—a variety lacking mutation in numerals—are presented alongside those of Mundabli and Mashi—varieties where mutation is found. The overviews include a noun class number (CL) which broadly follows general Bantuist conventions, the form of the noun class coding as found on nouns (most often a prefix, i.e. PFX), and an indication of the general shape of the initial consonant of forms that agree with nouns (AGR), including whether these forms are generally associated with a higher or lower tone (with the precise

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tonal realization depending on the specific forms involved). Shaded cells are used in cases when no corresponding noun class has been found in the relevant variety. Superscript *w* and *y* are used for cases where the singular/plural distinction on a small set of nouns is coded via initial consonant mutations involving a shift from labial-velar stops to coronal affricates (Voll 2017: 92). (While this is a minor pattern in Mundabli, it is included here due to its interest as another instance of mutation.) A capital C is used for a consonant whose form is depending on the final segment of the stem which a suffix that is part of the class-marking system attaches to. A capital N is used for a nasal that assimilates in place to the following consonant. As seen in the table, while Abar nouns generally show noun class prefixes, this is not the case for Mundabli and Mashi. However, contemporary patterns of mutation are clearly connected to the historical presence of these noun class markers, whether or not they are still attested. The forms in the table in largely follow (Good et al. 2011), with additional information drawn from Lovegren (2013: 138).

As outlined in Kießling (2010b: 203), the development of mutations as part of the encoding of noun class systems is linked to the presence of vowels in prefixes that influenced the articulation of consonants and vowels in the stem that they appeared with. Even when these vowels are lost, the alternations that they conditioned can remain, resulting in synchronic patterns of mutation (see also Merrill, 2018: 68). It is worth noting that semantics does not appear to play a role in patterns of numeral mutation. Nouns for human and non-humans in a given noun class behave the same way with respect to mutation alternations. In Table 2 below you would find the schematic overview of the noun classes of Abar, Mundabli and Mashi drawn from Good et al. (2011: 23, 34, 54) since ablaut correlates with the nature of the noun class prefix.

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Table 2. Schematic overview of Abar, Mundabli and Mashi noun class systems

Abar		
CL	**PFX**	**AGR**
1	*ù-/ø-*	*ẁ -*
2	*bə-/a-*	*bẃ -*
3	*ú-*	*ẃ -*
4	*í-*	*ý -*
5	*ì-*	*ý -*
6	*aN-/məN-*	*mɥ́ -*
4a	*í-*	*ý -*
7a	*kə-…(-lɔ)*	*kýˊ -*
12	*kə-/a-*	*kˊ -*
8	*bi-/í-*	*bý -*
9	*ì-*	*ý̀ -*
10	*í -*	*ý -*
19	*shi-*	*shˊ -*
18a	*mN-*	*ḿ̩ -*
6a	*aN-/N-*	*mɥ́ -* */mw-*
14	*bu-/ú-*	*bẃ -*

Mundabli		
CL	**PFX**	**AGR**
1	*Ø-*	*ẁ -*
2	*bə̀-*	*bˊ -*
3	*ʷ-*	*ẃ -*
4	*ʸ-*	*ýˊ -*
5	*Ø-*	*ẃ -*
7a	*Ø-*	*kˊ -*
7	*Ø-*	*kˊ -*
8	*Ø-*	*bˊ -*
9	*-̀*	*ý̀ -*
10	*-́*	*ýˊ -*
19	*fi̋-*	*fˊ -*
18	*mù-*	*mˊ -*
6a	*N-*	*mˊ -*
14	*Ø-*	*bˊ -*

Mashi		
CL	**PFX**	**AGR**
1	*Ø-*	*ẁ -*
2	*bu-*	*bˊ -*
3	*Ø-*	*ẃ -*
6	*ø/-ŋ*	*nˊ -*
7	*a-*	*kˊ -*
8	*bi-*	*bˊ -*
9	*-̀*	*ý̀ -*
10	*-́*	*ýˊ -*
19	*fi-*	*fýˊ -*
18	*N-*	*mˊ -*
6a	*N-*	*mˊ -*
14	*u-*	*wˊ -*

4 Data collection methodology

This paper presents results of a larger study examining individual-based lexical and grammatical variation among languages of Lower Fungom (see Good et al. under review).[3] Part of this work has involved extensive elicitation with speakers of Lower Fungom's thirteen linguistic varieties using a standardized wordlist and set of grammatical elicitation prompts, including those designed to look for agreement patterns in numerals, in particular the numerals from

3 The recordings of the data collection on which this study relies are deposited at Tschonghongei (2024).

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'one' to 'ten'.[4] This allows us to verify previously reported patterns and to present newly discovered ones. As discussed in section 1, Voll (2017) previously described numeral mutation in Mundabli, which she found for numerals 'one', 'two', and 'three'. Our data collection largely verifies her earlier findings, but with some differences, as discussed below.[5]

In the rest of this section, we present an overview of our findings across each of the four varieties where mutation is found in numerals, with section 4.1 focusing on Buu, section 4.2 on Mufu, section 4.3 on Mundabli, and section 4.4 on Mashi.

4.1 Buu

In Buu, numeral mutation is found in classes 1, 3, 4, 9, and 10, and in numerals 'one', 'two', and 'three'. This can be seen in Table 3, which provides the forms of the numerals from one to ten across Buu's noun classes. Forms which show mutation in comparison to the listed citation forms of the numerals are bolded. As can be seen in the table, numerals between 'one' and 'eight' show agreement with the noun they modify, while the forms for 'nine' and 'ten' are invariant. Because the first member of the class pairings in the table represents singular nouns, the agreement forms for 'one' only apply to that member of the pairing, while the agreement classes for the other numbers apply to the second member of the pairings, since these are plural classes. In the data used in this study, there was additional individual-based variation of clear interest. Specifically, some speakers also provided a mutated form of the stem as the citation form, namely *ɲúō:* for 'one', *ʃ̍ē:* for 'two' and *tʃā:* for 'three'.

4 Systematically analyzing the cases of individual-based variation discovered during the course of the larger study is outside of the scope of this paper, though this is discussed to a limited extent for the Buu variety in section 4.2. In those cases where consultants did not produce the same forms as each other for the data of focus in this paper, representative consultants were chosen favoring those who lived longer within the village that a given variety is associated with and who were married to another individual from that same village.

5 One other case of mutation in a numeral system is noted in Ousmanou's (2014) study of Koshin. Specifically, mutation is found between the singular and plural forms of the numeral for 'hundred'. This is not considered in detail here since it is not connected to agreement but, rather, is an instance of a nominal singular/plural alternation. The relevant forms are *gbī* 'hundred' and *dzī* 'hundreds', and this numeral in Koshin grammatically behaves like a regular noun (Ousmanou 2014: 37).

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Table 3. Buu numeral mutation patterns

	'one'	'two'	'three'	'four'	'five'	'six'	'seven'	'eight'	'nine'	'ten'
CITATION	*mō:*	*fʲē:*	*tā:*	*ɲàlə*	*kpàɲtə*	*tă:lə*	*nĕtá:*	*nànnə*	*kpàntə́bàɲì*	*dʒōːfə*
1/2	*ɲóŏ:*	*bəfʲē:*	*bə́tá:*	*bàɲàlə*	*kpàɲtə*	*bə́tá:lə*	*bànĕtá:*	*bànànnə*	*kpàntə́bàɲì*	*dʒōːfə*
3/4	*ɲóō:*	*fʲē:*	*tʃā:*	*ɲàlə*	*kpàɲtə*	*tá:lə*	*nĕtá:*	*nànnə*	*kpàntə́bàɲì*	*dʒōːfə*
3/7a	*ɲóō:*	*kə́fʲē:*	*kə́tá:*	*kàɲàlə*	*kpàɲtə*	*kə̀tá:lə*	*kànĕtá:*	*kànànnə*	*kpàntə́bàɲì*	*dʒōːfə*
7/8	*kə́mó:*	*bəfʲē:*	*bə́tá:*	*bàɲàlə*	*kpàɲtə*	*bə́tá:lə*	*bànĕtá:*	*bànànnə*	*kpàntə́bàɲì*	*dʒōːfə*
9/10	*ɲòò:*	*fʲē:*	*tʃā:*	*ɲàlə*	*kpàɲtə*	*tá:lə*	*nĕtá:*	*nànnə*	*kpàntə́bàɲì*	*dʒōːfə*
19/18a	*fəmó:*	*màmfʲē:*	*màntá:*	*màɲàlə*	*kpàɲtə*	*màntá:lə*	*mànĕtá:*	*mànànnə*	*kpàntə́bàɲì*	*dʒōːfə*

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As can be seen in Table 3, mutation for ‘one’ involves a mix of consonant mutation and ablaut, while for ‘two’ and ‘three’, only consonant mutation is involved. These patterns of mutation seem to represent the final diachronic stage for the development of such mutations in languages of the Grassfields area as proposed by Kießling (2010: 203), where an original segmental agreement prefix is lost, and mutation is the sole reflex of its former presence. The specific forms of the mutations are understandable in light of the reconstructions of the noun class prefixes for classes 1, 3, 4, and 9, where classes 1 and 3 are associated with a **u-* and classes 4 and 9 with an **i-* (see, e.g. Hyman 1980: 179). The **u-* has led to labialization (in the form of an *ʊ*) in the relevant class 1 and 3 forms for ‘one’, and the **i-* has led to palatalization in the relevant class 4 and class 9 forms. The class 1 and 3 forms have been impacted by a secondary process of palatalization of their initial consonant. While the precise phonetic basis for this is not completely clear, labialization of the vowel accompanied by palatalization of the consonant has been found elsewhere in the region, namely in the Central Ring language Mmen (Kießling 2010: 195), though in the case of Mmen sibilants are targeted rather than a nasal.

4.2 Mufu

In Mufu, mutation in numerals is seen in classes 1, 4, 9, and 10, in the numerals for ‘one’ and ‘two’. The agreement patterns for the numerals from ‘one’ to ‘ten’ are presented in Table 4. Forms showing mutation in comparison to the citation forms are bolded. Agreement is found on all numerals in the data except for ‘ten’.

Mutation in Mufu involves labialization and vowel ablaut for the number ‘one’, where the form shifts from *mɔ́ʔ* to *mwɔ̀ː*. Part of this shift also involves a change in the syllable structure from a closed to open syllable. It is not clear at the moment how best to analyze this aspect of the change since descriptive work on Mufu remains limited. The closely related variety of Mundabli has pharyngealized vowels, and cognates for these roots in Mufu often have coda consonants (Voll 2017: 42). It is possible that some phonetic coda consonants in Mufu could instead be analyzed phonemically as encoding distinct vowel qualities (in this case, a glottalized vowel) as a transitional stage between phonemic coda consonants and the full phonetic integration of glottalization into the preceding vowel. Under such an

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analysis, the loss of the glottal stop in the forms *úmwò:* and *yímwó:* could be considered to be part of an ablaut process. For 'two', mutation involves palatalization of the consonant in the numeral stem.

In the Mufu case, the numerals showing mutations also retain agreement prefixes, and the process can be seen as less advanced than in Buu in the diachronic model of Kießling (2010: 203). At the same time, the process is not phonologically predictable since the class 3 form for 'one' does not show any alternation despite having a prefix of the same form as class 1. More surprisingly, the class 9 form appears with a root that appears to have been labialized historically even though the class 9 prefix does not contain a round vowel. This suggests its root has developed via some process other than regular sound change, such as analogy. Taken together, even if these alternations may be partly predictable in some forms, there is also evidence that they have phonologized and morphologized along the lines of what one would expect for segment mutations.

Another interesting historical question is raised by the comparison of the class 7a and 8 forms against the class 4 and 10 forms for 'two'. These forms show the same synchronic phonological environment with a high front vowel appearing before the first consonant of the stem, but a mutation is only found in the class 4 and 10 forms. It is not clear whether these can be accounted for via sound change (e.g. if the *i* vowels in the prefixes have different historical sources) or some other explanations is required.

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Table 4. Mufu numeral mutation patterns

	'one'	'two'	'three'	'four'	'five'	'six'	'seven'	'eight'	'nine'	'ten'
CITATION	*mɔ̀ʔ*	*fyɛ̄ː*	*tá*	*ndē*	*kpān*	*tsítá~tɪ́tá*	*nɔ̌ːtā*	*nɛ̀nɛ̀*	*kpɛ́ʔnɛ̀*	*gɻ́ɔ́ːfɔ̄*
1/2	*ùmwɔ̀ː*	*bɔ́fyɛ̄ː*	*bɔ́tā́ː*	*bàndɛ́ː*	*bɔ́kpā́n*	*bɔ̀tsítá*	*bɔ̀nɔ̌ːtā́ː*	*bɔ̀nɛ̀nɛ̀*	*bɔ̀kpɛ́ʔnɛ̀*	*gɻ́ɔ́ːfɔ̄*
3/4	*ùmwɔ́*	*yɪ́fyɛ́ː*	*yɪ́tā́ː*	*yìndɛ́*	*yɪ́kpā́n*	*yìtɪ́tá*	*yìnɔ̌ːtā́ː*	*ínɛ̀nɛ̀*	*ɪ̀kpɛ́ʔnɛ̀*	*gɻ́ɔ́ːfɔ̄*
3/7a	*ùmɔ́ʔ*	*kɪ́fyɛ̄*	*kìtà:*	*kìndɛ́*	*kɪ́kpā́n*	*kìtsítá:*	*kínɔ̌tā́:*	*kìnɛ̀nɛ̀*	*kìkpɛ́ʔnɛ̀*	*gɻ́ɔ́ːfɔ̄*
7/8	*kìmɔ́ʔ*	*bɪ́fyɛ̄*	*bítā́ː*	*bìndɛ́*	*bɪ́kpā́n*	*bìtsítá:*	*bínɔ̌ːtā́ː*	*bìnɛ̀nɛ̀*	*bìkpɛ́ʔnɛ̀*	*gɻ́ɔ́ːfɔ̄*
9/10	*yímwɔ́ː*	*yɪ́fyɛ́ː*	*yɪ́tā́ː*	*yìndɛ́*	*yìkpā́n*	*ɪ̀ttā́:*	*yɪ́nɔ̌ːtā́ː*	*yínɛ̀nɛ̀*	*yìkpɛ́ʔnɛ̀*	*gɻ́ɔ́ːfɔ̄*
19/18a	*fə̀mɔ́ʔ*	*mɔ́fyɛ̄ː*	*múntā*	*mùndé*	*múnkpán*	*múntitá*	*mùnnɛ̌ːtá*	*mùnɛ̀nɛ̀*	*mùnkpɛ́ʔnɛ̀*	*gɻ́ɔ́ːfɔ̄*

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4.3 Mundabli

Mundabli is the one variety reported on here where numeral mutation has already been described in an earlier source, namely Voll (2017: 72–73). Our data is largely in agreement with that of Voll (2017), but with some noteworthy differences. We have no specific explanation for these differences beyond the fact that individual-level variation is not unusual in Lower Fungom (see Good et al. under review) and that the forms provided by her primary consultants may simply differ from those provided by ours. Voll (2017) describes mutation patterns for the numerals 'one', 'two', and 'three'. Classes 4 and 10 are part of the mutation pattern, as also found in Buu and Mufu. The situation for the singular classes is somewhat different since, in our data, the attested alternation does not appear to be conditioned by class but, rather, is a difference between the citation form of 'one' and the forms when it acts as a modifier. Voll (2017: 152) finds something comparable except, in her data, the class 7 form of 'one' matches the vowel of the citation form, unlike in our data.[6] The forms we collected are provided in Table 5, and agreement is found in all numerals in the data except for 'ten'. The forms for 'two' and 'three' showing mutation in comparison to the citation form are bolded, as are all the non-citation forms for 'one'.

The palatalization pattern seen in the forms for 'two' and 'three' largely follows what was seen for Buu. The situation for 'one' is somewhat unusual in all non-citation contexts since the numeral root has the form that would be expected for forms which were historically prefixed with a *u* vowel (or a vowel with a similar quality), but this form of the root is found even for class 9, which historically is associated with an *i*. It appears as though a process of analogical leveling has impacted the agreement forms for 'one' in Mundabli in our data, in a more extreme version of the analogical change proposed for Mufu in section 4.2. If this proposal is correct, it suggests that, for Voll's (2017) speakers, the process of analogy had extended to all forms except the class 7 form.

6 Specifically, in her data, the citation form of 'one' is *m̀mó̱* and the form showing class 7 agreement is *kī́-mó̱*.

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Table 5. Mundabli numeral mutation patterns

	'one'	'two'	'three'	'four'	'five'	'six'	'seven'	'eight'	'nine'	'ten'
CITATION	*mā~ mɔ̄ːɦ*	*fyé*	*tɔ́ː*	*ndéː*	*kpɔn*	*tʃítā*	*nɔ̌ːtɔ́~ nɔ̀ːtɔ́ː*	*nɛ̀nɛ̀~ nɔ̀nɔ̀*	*kpámì~ kpáɦnà*	*dzɔ́ːfɔ̄*
1/2	*ùmùò*	*bəfyé*	*bətɔ́ː*	*bɔ́ndé*	*bɔ́kpón*	*bətʃítá*	*bɔ́nɔ̌ːtɔ́*	*bónɔ̀nɔ̀*	*bəkpáʔnə̀*	*dzɔ́ːfɔ̄*
3/4	*úmùò*	*yíʃyē*	*yítsō*	*yîndé*	*ɦkpōn*	*yítʃítá*	*yínɔ̌ːtó*	*yínɔ̀nɔ̀*	*yìkpáɦnə̀*	*dzɔ́ːfɔ̄*
3/7a	*úmūō*	*kífyē*	*kítɔ̄*	*kíndé*	*kəkpōn*	*kìtʃítā*	*kɲ́ǒtɔ̄ː*	*kânɔ̀nɔ̀*	*kəkpáʔnə̀*	*dzɔ́ːfɔ̄*
7/8	*kámūō*	*bífyé*	*bítɔ̄*	*bîndé*	*bɦkpɔ̄n*	*bìtʃítá*	*bínɔ̌ːtɔ́ː*	*bínɔ̀nɔ̀*	*bìkpáɦnə̀*	*dzɔ́ːfɔ̄*
9/10	*ỳmùò*	*yíʃyē*	*yítsɔ̄*	*yìndé*	*yìkpōn*	*yìtʃítà*	*yínɔ̌ːtɔ́ː*	*yìnɔ̀nɔ̀*	*yìkpàɦnə̀*	*dzɔ́ːfɔ̄*
19/18a	*fómúó*	*múfyē*	*múntɔ́*	*mùndé*	*múnkpɔn*	*múntʃítá*	*múnnɔ̌ːtɔ́ː*	*múnɔ̀nɔ̀*	*mùnkpáɦnə̀*	*dzɔ́ːfɔ̄*

The Mundabli data also shows a pattern noted for Mufu in section 4.2, where only classes 4 and 10 are associated with consonant mutations even though they create the same phonological environment before the stem vowel of the numeral as classes 7a and 8. (In the Mundabli case, this pattern extends to 'three', unlike Mufu, which lacks mutations for the forms for 'three' entirely.) As is also the case for Mufu, we are not able to provide a historical account for this pattern here.

4.4 Mashi

Unlike Buu, Mufu, and Mundabli, which are all only associated with Lower Fungom, Mashi is a variety of the Naki language, which is also spoken outside of Lower Fungom, and which also appears to be related to a number of other languages classified as Beboid. Other Beboid languages have been described as showing mutation in numeral systems. For example, in Kemezung mutation is found in the agreement for numerals 'one', 'two', 'three', and 'four' (Smoes 2010:16). Similar patterns are found in Naami (Tabah 2020: 14–15) and Noni (Hyman 1980: 28–29). Although the data is not presented in detail, Mungong (Boutwell 2014: 13) and Nchane (Boutwell 2020: 143) show some numeral mutation as well, though in a more limited form. By contrast, another Beboid language, Mbuk (Tschonghongei 2018: 360–361) does not show any sign of numeral mutation.

The Mashi variety of Naki patterns with the Beboid languages showing a relatively high degree of mutation in their numeral systems. Mutation is found in classes 4, 9, and 10, and for numerals 'one', 'two', 'three', 'four', and 'five'. Mashi's numeral forms are presented in Table 5.[7] Those forms showing mutation in comparison with the citation forms are bolded. Agreement is found only in numerals 'one' to 'six', with those from 'seven' to 'ten' being invariant.[8]

7 The class 18a form for 'six' shows an unexpected long vowel. Since this is change in vowel length, rather than quality, we do not treat it as an example of ablaut here.

8 There is some variation regarding the presence of final coda consonants in some of the data in Table 10, as seen, for example, in the class 10 form for 'two', which lacked a code in the collected data that was found in the other forms for two. In the forms for 'four', some lightly articulated codes were found for the class 4 and class 10 forms. It is not clear if this variation is systematic or not based on the data available to us.

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The patterns of mutation involve vowel ablaut and consonant change, or both. Ablaut is found in the cl. 9 form for ‘one’ and the cl. 4 and cl. 10 forms for ‘four’. Consonant change is found in the cl. 10 forms for ‘two’, ‘three’, ‘four’, and ‘five’, as well as the cl. 4 form for ‘five’. The cl. 10 form for ‘four’ is notable exhibiting both kinds of change. The relevant classes are those associated with a historical **i* (see section 4.1), and the changes observed are in line with that, involving vowel fronting and raising and consonant palatalization. Like Buu, numeral mutation in Mashi appears to represent the final diachronic stage of the process proposed by Kießling (2010: 203) since no prefixes are present on the mutating forms.

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Table 6. Mashi numeral mutation patterns

	‘one’	‘two’	‘three’	‘four’	‘five’	‘six’	‘seven’	‘eight’	‘nine’	‘ten’
CITATION	*mū*	*fwə́ɣ*	*tá:t*	*nâ:*	*tsɨ̄~fi:*	*sí:*	*fùmədʒə̂ŋ*	*dʒə̀ŋ*	*fúmədzó:fó*	*dzó:fú*
1/2	*mû*	*búfwə́ɣ*	*bútát*	*búnâ:*	*bútɨ̂*	*wúsí*	*fùmədzə̂ŋ*	*dʒə̀ŋ*	*fúmədzó:fó*	*dzó:fú*
3/4	*mū*	*fwə́ɣ*	*tá:t*	*nə̂^{h}*	*ʃɨ̂*	*ósí*	*fùmədzə̂ŋ*	*dʒə̀ŋ*	*fúmədzó:fó*	*dzó:fú*
7/8	*mū*	*bífwəɣ*	*bítát*	*bínâ:*	*bítɨ̄:*	*ósí*	*fùmədzə̂ŋ*	*dʒə̀ŋ*	*fúmədzó:fó*	*dzó:fú*
9/10	*mì*	*fyə́*	*tʃā*	*ɲyə̂^{y}*	*ʃɨ̂*	*ósí*	*fùmədzə̂ŋ*	*dʒə̀ŋ*	*fúmədzó:fó*	*dzó:fú*
19/18a	*fímū*	*múmfwəɣ*	*múntát*	*múnnâ:*	*múntɨ̄:*	*wúsɨ̄:*	*fùmədzə̂ŋ*	*dʒə̀ŋ*	*fúmədzó:fó*	*dzó:fú*

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4.5 Summary of findings

Across the four Lower Fungom varieties showing patterns of numeral mutation, there are a number of commonalities as well as divergences. In Table 7, we summarize the patterns found in the data including: (i) the numerals where mutation is attested, (ii) the classes where mutation is attested, and (iii) whether prefixes are found or not on the mutated forms.

Table 7. Overview of mutation patterns across the four varieties

Variety	Numerals	Classes	Prefixes
Buu	'one', 'two', 'three'	1, 3, 4, 9, 10	absent
Mufu	'one', two'	1, 4, 9, 10	present
Mundabli	'one', two', 'three'	all sg., 4, 10	present
Mashi	'one', 'two', 'three', 'four', 'five'	4, 9, 10	absent

5 Conclusion

In this paper, we have presented new data on patterns of segment mutation, including both consonant mutation and vowel ablaut, in the numeral systems of four varieties of the Lower Fungom region of Cameroon. We thus contribute to the existing literature on processes of consonant mutation in languages of the Grassfields area (Kießling 2010). While there are some ways in which the data that we presented parallels previously collected data, there are some interesting patterns of variation as well, which suggest that our comparative understanding of the development of mutation and numeral systems in the Grassfields area would benefit from further targeted study of the varieties of Lower Fungom. Of particular note, in our view, are the apparent cases of analogical spread of mutation patterns within the numeral systems of Mufu (sect. 4.2) and Mundabli (sect. 4.3) which indicate that morphological change, in addition to sound change, is a potential source of mutation in numerals in this part of the world. As a final remark, while we were not able to present data on modifiers other than numerals here, we have found mutations on some additional attributive modifiers in the languages of Lower Fungom. We hope to present this study systematically in future work so that it can be compared to the data seen here for numerals.

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Information structure in Nda'nda'

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Abstract
This paper describes how a syntactic constituent can be manipulated within the structure of a sentence in Nda'nda' in order to give it pragmatic prominence. To achieve this, attention has to be paid to the various means used by Nda'nda' speakers to bring listeners to focus their attention on the constituent bearing the special information they want to pass across. Two main categories of prominence in information structure are usually differentiated in language generally: topic and focus. Focus in Nda'nda' is encoded by cleft constructions, pseudo-cleft constructions and the adverbial *ndà?* 'only'. While analyzing focus via cleft construction we argue that there is similarity between the object cleft construction and the relative clause. The focus marker *nda?* marks restrictive focus with concomitant morphosyntactic changes. Topic constructions are restricted to noun phrases and are achieved essentially through left-dislocation to mark contrastive topic with an additional pronoun in resumptive function whose form varies depending on whether the topicalized element is human or non-human.

Keywords: Bamileke, cleft constructions, Eastern Grassfields Bantu, focus, information structure, left-dislocation, topic

1 Introduction

According to Chafe (1976), as quoted by Dejan (2015), "the term information structure refers to the ways linguistically encoded information is presented relative to the speaker's estimate of the temporary mental state of the receiver of the message". Information structure is a vital concept in linguistics because it helps us understand how information is organized, encoded, and transmitted in both spoken and written language. It focuses on how speakers or writers structure their propositions to highlight specific information and make it more comprehensible for the listener or reader. In par-

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ticular, the study of information structure examines how focus and topic are used to manage the flow of information in discourse. While focus is concerned with presenting new or unexpected information, topic deals with given or expected information around which the sentence is structured. To illustrate these concepts, each example in this study is introduced with a question that the given utterance answers. This approach provides a clear context for understanding focus and topic, demonstrating their functions in discourse and enhancing the reader's comprehension of these concepts. By using questions in this way, the study not only clarifies the concepts of focus and topic but also helps to demonstrate their pragmatic functions and improve the overall readability of the analysis. Before delving into the expression of focus and topic in Nda'nda', it is important to first understand the language's background and basic grammatical structures, which provide the necessary context for analyzing how these elements are used to manage information flow and create coherence in discourse.

2 Language background

Nda'nda' is an Eastern Grassfields Bantu language of the Bamileke subgroup spoken in the Nkam division of the Littoral Region and in the Nde and Koung-Khi divisons of the West Region of Cameroon.[1] It has two main dialects: Undimeha (East Nda'nda') and Ungameha (South and West Nda'nda'). Our data was collected from Batoufam, an East-Nda'nda' sub-dialect, referred to by native speakers as *ghom a tswefap*. The language is spoken in the Batoufam village and the neighbouring villages either speak Nda'nda' (Bandrefam, Bangwa and Bagang-Fokam) or Ghomala' (Bayangam and Bandjoun). According to Hammarstöm et al. (2023), the language is not endangered but rather vigorous. Nda'nda' speakers are in their majority bilingual as they also speak French, one of the two official languages of the country. Some, mostly learned ones, also speak English, the second official language. Generally, those living in the village speak and/or understand neighboring languages such as Ghomala' (spoken in the neighbouring villages of Bayangam and Bandjoun) and Medumba (Bangangté).

1 Its Glottolog and ISO codes are ndan1241 and nnz, respectively.

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There are a number of works that are relevant in understanding the structure of the language on the one hand, and focus in Grassfields Bantu languages on the other hand. As far as Nda'nda' is concerned, four works can be presented. Ngantchui Debana (2009), in the field of discourse analysis, studies the preeminence of nominal structures in Nda'nda'. Gueche (2019) discusses multiverb constructions and the homorganic nasal in Nda'nda'. Gueche (2021) investigates noun formation processes in the language to account for the way the language expands its vocabulary and explores the Nda'nda' noun class system (Gueche 2022). As concerns information structure few authors can be accounted for. Aboh et al. (2007) study focus strategies and focus-related phenomena in a range of African languages, most of which have been under-represented in the theoretical literature on focus. Tamanji (2009) highlights the similarity between content question formation and focus marking in Ngemba-Bafut. For instance, in both construction types, the questioned constituent and the focused constituent occur in situ. Chiarcos et al. (2009) describe tools and resources for the study of information structure in African languages developed at the Collaborative Research Centre "Information Structure". Nana (2018) discusses the way focus and topic find linguistic expression in a number of African languages. The chapter presents the prosodic, syntactic, morphological and lexical strategies that speakers explore in their attempt to highlight significant and/or new information. Fiedler et al. (2018) analyze the different patterns found across sub-Saharan African languages to express information structure. Based on languages from all four African language phyla, they document the great diversity of linguistic means used to encode information-structural phenomena and are therefore highly relevant for some of the most pertinent questions in linguistic theory.

3 Preleminaries on Nda'nda'

Nda'nda' is a language with analytic structure and inflexible SVO word order, as illustrated in (1).

(1) *pɨ́g-ă nētsə̄ pà?*
pɨ́k-ă MT-*nɛ̀tsə̀* *pà?*
2PL-P_1 P_1-arrange house
'You have arranged the house.'

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From their syntactic position, *pík* 'you' is the subject, *ă nɛ̄tsə̄* 'have arranged' is the inflected verb and *pà?* 'house' is the direct object.

Nda'nda' is a gender language with six noun classes defined by their agreement patterns. Gueche (2022) observes that these noun classes are not marked as pervasively as in other Grassfields Bantu languages, since the only contexts in which the full range of noun classes can be differentiated are in the concord of possessive and demonstrative determiners. In the following noun phrases in 2), the concord prefix of each of the six noun classes is exemplified, glossed by numbers 1 through 6.

(2)a. *sɔ́gà wɔ́*
sɔ́k ***ø***-*à* ***w***-*ɔ́*
bird **1**-1SG.POSS **1**-D_2
'This bird (that is mine).'

b. *sɔ́k pɨgə̀ pɔ́*
sɔ́k ***p***-*ɨgə̀* ***p***-*ɔ́*
birds **2**-2SG.POSS **2**-D_2
'These birds (that are yours).'

c. *súbá jɔ́*
súp ***ø***-*à* ***j***-*ɔ́*
needle **3**-1SG.POSS **3**-D_2
'This needle (that is mine).'

d. *súp mɛ̀ mɔ́*
súp ***m***-*ɛ̀* ***m***-*ɔ́*
needles **4**-1SG.POSS **4**-D_2
'These needles (that are mine).'

e. *tʃjɔ́? tsɛ̀ tsì*
tʃjɔ́? ***ts***-*ɛ̀* ***ts***-*ì*
hat **5**-1SG.POSS **5**-D_3
'That hat (that is mine)'

f. *lɔ̀ŋgɛ́ tsùp tsɔ́*
lɔ̀ŋgɛ́ ***ts***-*ùp* ***ts***-*ɔ́*
buckets **6**-3PL.POSS **6**-D_2
'These buckets (that are theirs)'

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Concordial patterns of the possessive determiners are summarized in table (1).

Table 1. Concord in the Nda'nda' possessive determiners

	My	Your	His/Her	Our	Your	Their
Class 1	***ø***-*ɛ̀/à*	***ø***-*ò/ù*	***ø***-*è/ì*	***w***-*ɔ̀*	***w***-*ìgə̀*	***w***-*ùp*
Class 2	***p***-*ɛ̀*	***p***-*ò*	***p***-*è*	***p***-*ɔ̀*	***p***-*igə̀*	***p***-*ùp*
Class 3	***ø***-*ɛ̀/à*	***ø***-*ò/ù*	***ø***-*è/ì*	***j***-*ɔ̀*	***ʒ***-*ìgə̀*	***ʒ***-*ùp*
Class 4	***m***-*ɛ̀*	***m***-*ò*	***m***-*ə̀*	***m***-*ɔ̀*	***m***-*ìgə̀*	***m***-*ùp*
Class 5	***ts***-*ɛ̀*	***ts***-*ù*	***ts***-*ə̀*	***ts***-*ɔ̀*	***ts***-*igə̀*	***ts***-*ùp*
Class 6	***ts***-*ɛ̀*	***ts***-*ù*	***ts***-*ə̀*	***ts***-*ɔ̀*	***ts***-*ìgə̀*	***ts***-*ùp*

An overview of concords of the demonstrative determiners is presented in table (2).

Table 2. Concord in the Nda'nda' demonstrative determiners

	Close to the speaker	Close to the person spoken to	Far from both speaker and person spoken to
Class 1	***w***-*ɔ̀*	***w***-*ɔ́*	***w***-*ì*
Class 2	***m***-*ɔ̀*	***m***-*ɔ́*	***m***-*ì*
Class 3	***j***-*ɔ̀*	***j***-*ɔ́*	***ʒ***-*ì*
Class 4	***p***-*ɔ̀*	***p***-*ɔ́*	***p***-*ì*
Class 5	***ts***-*ɔ̀*	***ts***-*ɔ́*	***ts***-*ì*
Class 6	***ts***-*ɔ̀*	***ts***-*ɔ́*	***ts***-*ì*

Nda'nda' distinguishes seven tenses, as presented and exemplified in table (3). All of them are expressed by means of morphological or/and tonological markers. The tonological marker for tense is a replacive floating tone which docks rightwards to replace the tone(s) of the verb. Apart from tone, the tense marker includes a segmental component which is placed in front of the verb and a homorganic nasal which, depending on the tense, associates to the verb. Most of the time, this homorganic nasal consonant triggers some morphological changes in the initial consonant of the verb (Gueche 2015).

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Table 3. Tenses in Nda'nda'

Tenses	Markers	Examples
Immediate past	*ă* + MT	*pă kpē* *pɔ̀* *ă*-MT *kpè* 1PL P_1-P_1 eat 'We have eaten'
Recent past	*â* + HT	*pâ kpé* *pɔ̀* *â*-HT *kpè* 1PL P_2-P_2 eat 'We ate'
Remote past	*â* + MT + *lá?* + N-	*pâ lá? ŋkpē* *pɔ̀* *â*-MT *lá?* N-*kpè* 1PL P_3-P_3 UM P_3-eat 'We had eaten'
Present	HT + N	*pɔ́ ŋkpé* *pɔ̀* HT-N-*kpè* we PRS-PRS-eat 'We eat'
Simple future	*ʃí* + HT + N-	*pɔ́ ʃí ŋkpé* *pɔ̀* *ʃí* HT-N-*kpè* 1PL F_1 F_1-F_1-eat 'We will eat'
Distant future	*ndzí* + HT + N-	*pɔ́ ndzí ŋkpé* *pɔ̀* *ndzí* HT-N-*kpè* 1PL F_2 F_2-F_2-eat 'We will eat'
Uncertain future	*lá?* + MT + N-	*pɔ́ lá? ŋkpē* *pɔ̀* *lá?* MT-N-*kpè* 1PL UM F_3-F_3-eat 'We shall eat'

4 Focus in Nda'nda'

According to Crystal (2008: 192) focus is "a term used by some linguists in a two-part analysis of sentences which distinguishes between the information assumed by speakers, and that which is at the centre (or 'focus') of their communicative interest; 'focus' in this sense is

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opposed to presupposition". In other words, focus is on unexpected information that might be new. To bring listeners to focus their attention on the constituent bearing the special information they want to pass across, Nda'nda' speakers will make use of cleft, pseudo-cleft constructions and the adverbial *ndà?* 'only'.

4.1 Focus via cleft and pseudo cleft constructions

Cleft and pseudo cleft sentences are used to highlight specific information within a sentence. Though they differ in their structure and the way they emphasize the focused elements, both of them involve a relative clause which contains background information in contrast to which the focus is construed in the main clause as complement of the copula. This section will start with a brief presentation of relative clauses before elaborating on each of the focus constructions.

4.1.1 Relativisation in Nda'nda'

In Nda'nda' relativization is carried out with the help of the relative marker, *jə* and a definitivizer that can either be *lə́* or either *á* or *é* depending on the last vowel of the preceding word. Within the relative clause, the relativised constituent can either be represented by the ordinary personal or the possessive pronouns in resumptive function (Gueche 2015), as demonstrated by examples (3a–f).

(3)a. *màtwá jəwě mə́ ndʒí màpfɔ́k lə́ səsə*
màtwà *jə* *w-ě* *mə́* N-HT-*jí* *lə́* *səsə*
car REL CL1-PR ASP PRS-PRS-go DEF black
'The car that is moving well is black.'

b. *ŋwə́ jĭ ʃí hɔ́? á mə́ fə́?*
ŋwə́ *jə́* *ʒìk* *ʃí* HT-N-*hɔ̀?* *á* *mə́* N-*fə̀?*
child REL 3SG F_1 F_1-F_1-come DEF ASP work
'The child who will come is working.'

c. *ntóp jə pɨ́k ʃí ŋkpé ɛ́ pfɔ́k*
ntóp *jə* *pɨ́k* *ʃí* HT-N-*kpé* *ɛ́* *pfɔ́k*
potatoes REL 2SG F_1 F_1-F_1-eat DEF good
'The beans you are eating are delicious.'

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d. *wúp má ntʃɔ́k ŋwá jə̀ mɔ́k ʃí ŋké lá*
wùp *má* N-*tʃɔ́k* *ŋwá* *jə̀* *mɔ́k* *ndzí* HT-N-*ké*
3PL ASP PRS-seek child REL 1SG F_2 F_2-F_2-carry
lə́
DEF
'They are seeking the child that I will carry.'

e. *mɔ́k ʃí ŋkpé tsúp jə̀ wú ʃí ndzú lá*
mɔ̀k *ʃí* HT-N-*kpé* *ŋkú* *jə̀* *wù* *ʃí* N-HT-*jú* *lə́*
1SG F_1 F_1-F_1-eat rice REL 2SG F_1 F_1-F_1-buy DEF
'I will eat the rice that you will buy.'

f. *fɔ̀ jə̀ ŋwê má nɔ́k lá â kpɨ́k*
fɔ̀ *jə̀* *ŋwá* *ø-é* *má* HT-N-*nɔ̀k*
chief REL child 1-3SG.POSS ASP PRS-PRS-dance
lá *â* *kpɨ́k*
DEF P_2 die
'The chief whose child is dancing is dead.'

In subject relative clauses, the antecedent is replaced by a subject personal pronoun (here achieving resumptive functions), the form of which depends on whether the head noun is a non-human (*wě* in 3a) or a human (*zɨ̀k* in 3b) entity. The head noun can be the grammatical object of the relative clause, therefore yielding an object relative clause like in (3c–e). Object relatives and subject relatives make use of the same relative elements whether human (3d) or non-human (3e). In contrast to the subject relative clauses in (3a–b), where the antecedent—the relativized subject—is resumed by a personal pronoun in the subject position within the relative clause, it appears that in object relative clauses (3c–e), the antecedent—the relativized object—leaves a gap within the relative clause. This gap remains empty and is not filled by any element. When a genitive construction is relativized, the possessor leaves behind a possessive determiner (achieving a resumptive function), namely the 3rd person singular possessive pronoun *é* (3f).

4.1.2 Focus via cleft constructions

The clear case of syntactically marked focus in Nda'nda' is the cleft construction. The cleft sentence is basically used to mark counter assertive focus. A cleft construction can be considered as a focusing

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construction in which the focused constituent (focus) occurs as a predicated element preceding the background dependent clause. The focused constituent is highlighted by a cleft marker, the copula *ə́*. The background dependent clause can either be a relative clause or a subordinate clause depending on the nature of the focused element, as schematized in the following formula: COP FOC {SUB, REL}.

When the subject is focused via cleft constructions, a conjunctive subordinate clause is used instead of a relative clause and the subordinating morpheme introducing it varies depending on whether the subject is human or non-human. In case it is human, the subordinator is *mbí* as exemplified in (4–5).

(4)a. *ə́ wɔ́ mbí mə́ N-kwí pà?*
COP 3SG CONJ ASP PRS-build house
'Who is it that is building the house?'

b. *ə́ ʒík mbí mə́ ŋkwí pà?*
*ə́ **ʒík** mbí mə́ HT-N-kwí pà?*
COP 3SG CONJ ASP PRS-PRS-build house
'It is her who is building the house.'

(5)a. *ə́ ʃímí mbí ʃí N-kúp késàŋgɛ́ ljɛ̀?*
COP Chimi CONJ F_1 F_1-peel cassava today
'Is it Chimi that will peel cassava today?'

b. *ŋgák. ə́ Sá?bɛ́t mbí ʃí ŋkúp késàŋgɛ́ ljɛ̀*
*ŋgák ə́ **sá?bɛ́t** mbí ʃí HT-N-kúp késàŋgɛ́ ljɛ̀*
no COP Sabet CONJ F_1 F_1-F_1-peel cassava today
'No. It is Sabet who will peel cassava today.'

When the subject is non-human, it is *pí* that is used as subordinating conjunction as exemplified in (6–7).

(6)a. *ə́ kɔ́ **pí** mə́ N-tʃwɛ́ pá?á*
COP 3SG CONJ ASP PRS-cry so
'What is crying like that?'

b. *ə́ púsí pí mə́ ntʃwɛ́ pá?á*
*ə́ púsí **pí** mə́ HT-N-tʃwɛ́ pá?á*
COP 3SG CONJ ASP PRS-PRS-cry so
'It is the cat that is crying like that.'

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(7)a. *ə́ kɔ́ **pí** ndə̀p pə̀ɣə̀*
COP 3SG CONJ on bag
'What is on the bag?'

b. *ə́ mbák pí ndə̀p pə̀ɣə̀*
*ə́ mbák **pí** ndə̀p pə̀ɣə̀*
COP pot CONJ on bag
'It is the pot that is on the bag.'

When the object is focused in cleft constructions such as (8–9), the background clause is a typical relative clause.

(8)a. *ə́ kɔ́ jə̀ wùp ă jɔ̄ ntíp mbák lə́?*
COP what REL 3PL P_1 see in pot DEF
'What is it that they have seen in the pot?'

b. *ə́ ɲú jə̀ wubă jɔ̄ ntíp mbák lə́*
*ə́ **ɲú** jə̀ wùp ă* MT-*jɔ́ ntíp mbák lə́*
COP snake REL 3PL P_1 P_1-see in pot DEF
'It is the snake that they have seen in the pot.'

(9)a. *ə́ wɔ́ jə̀ wú ʃí* N-*kχútsə́ fíndzɨ̀k á?*
COP man REL 2SG F_1 F_1-help morning DEF
'Who is it that you will help in the morning?'

b. *ə́ mbàɣà jə̀ mɔ́k ʃí ŋkχútsə́ fíndzɨ̀gá*
*ə́ **mbàɣà** jə̀ mɔ́k ʃí* HT-N-*kχútsə́ fíndzɨ̀k á*
COP man REL 1SG F_1 F_1-F_1-help morning DEF
'It is the man whom I will help in the morning.'

When adverbials of time or prepositional phrases are focused via cleft constructions as in (10), the relative marker *jə̀* is replaced by the subordinating conjunction *tə̀* and the definitiser *lə́* which is generally restricted to relatives is also necessary.

(10)a. *ə́ fíndzɨ̀k tə̀ mɔ́k ʃí ŋkχútsə́ mbàɣà lə́*
*ə́ **fíndzɨ̀k** tə̀ mɔ́k ʃí* HT-N-*kχútsə́ mbàɣà lə́*
COP morning CONJ 1SG F_1 F_1-F_1-help man DEF
'It is in the morning that I will help the man.'

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b. *á ntíp mbák tə̀ wúbə̌ jɔ̄ ɲú lá*
á **ntíp** **mbák** *tə̀* *wùp* *ă* MT-*jɔ́* *ɲú* *lá*
COP in pot CONJ 3PL P_1 P_1-see snake DEF
'It is in the pot where they have seen the snake.'

Using *tə̀* without the definitiviser will render a sentence such as (11b) ungrammatical as shown in (11a).

(11)a. **á Dwɛ́lɛ́ tə̀ mɔ́k ʃí ndzí*
á ***Dwɛ́lɛ́*** *tə̀* *mɔ̀k* *ʃí* HT-N-*jí*
COP Douala CONJ 1SG F_1 F_1-F_1-help
Intend. 'It is to Doula that I am going.'

b. *á Dwɛ́lɛ́ tə̀ mɔ́k ʃí ndzí lá*
á ***Dwɛ́lɛ́*** *tə̀* *mɔ̀k* *ʃí* HT-N-*jí* *lá*
COP Douala CONJ 1SG F_1 F_1-F_1-help DEF
'It is to Doula that I am going.'

When the clefting concerns an adverbial of place (that is not preceded by a preposition like in (10b), a relative clause is used and the gap left by the adverbials, i.e. *ntɔ́* 'market' (12a) and *nʃə̀* 'river' (12b), is filled by the place adverb *wá* 'there'.

(12)a. *á ntɔ́ jə̀ mɔ́k ʃí ndzí wá lá*
á ***ntɔ́*** *jə̀* *mɔ́k* *ʃí* HT-N-*dʒí* *wá* *lá*
COP market REL 1SG F_1 F_1-F_1-go there DEF
'It is to the market that I will go.'

b. *á nʃə̀ jə̀ sáʔbɛ́t ndzí só màtwá wá lá*
á ***nʃə̀*** *jə̀* *sáʔbɛ́t* *ndzí* HT-N-*só* *ntáp*
COP river REL Sabet F_2 F_2-F_2-wash shoes
wá *lá*
there DEF
'It is at the river that I will wash the shoes.'

Comparing the cleft structure in (12) with (10b) raises the following question: Why is the cleft focus on place adverbials different from that of other adverbials (time) and similar to the object cleft focus? The difference between the clefting of an adverbial of place and that of an adverbial of time stems from the fact that in Nda'nda' they belong to different syntactic categories. The adverbial of place is often a noun, e.g. *nʃə̀* 'river' (12b) and *ntɔ́* 'market' (12a) above, whereas

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that of time is usually an adverb. This explains why the adverbial of place is focused like objects that are actually nouns in object position.

Table (4) gives an overview of cleft constructions in Nda'nda' and their crucial properties.

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Table 4. Cleft constructions in Nda'nda'

Types of cleft constructions	**Subordinating morpheme**	**Nature of the subordinating morpheme**	**Focused elements**	**Formula**
Subject cleft constructions	*mbí*	Subordinating conjunction	human subject	COP FOC [{*mbí, pî*} CL]$_{SUB}$
	pí	Subordinating conjunction	non-human subject	
Adverbial of time and propositional phrases cleft constructions	*tà*	Subordinating conjunction	adverbials of time, prepositional phrases	COP FOC [*tà* CL DEF]$_{SUB}$
Object cleft constructions	*jà*	Relative marker	object	COP FOC [*jà* CL DEF]$_{REL}$
Adverbials of place	*jà*	Relative marker	adverbials of place	COP FOC [*jà* CL *wá* DEF]$_{REL}$

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4.1.3 Focus via pseudo-cleft constructions

In the Nda'nda' pseudo-cleft construction as in the Bafut case (Tamanji 2009: 186), the focused element appears at the end of the sentence preceded by the copula that can also be referred to as highlighter. Both of them are preceded by a relative clause that is modifying a noun, as exemplified in (13) and (14), according to the following formula: REL COP FOC.

(13)a. *mbàɣà jə̀ wúp ʃí* N-*ké lə́ ə́ wɔ́*?
man REL 3PL F_1 F_1-carry DEF COP who
'Who is the man whom they will carry?'

b. *mbàɣà jə̀ wúp ʃí ŋké lə́ ə́ ʃímí*
mbàɣà jə̀ wúp ʃí HT-N-*kè lə́ ə́* ***ʃímí***
man REL 3PL F_1 F_1-F_1-carry DEF COP Chimi
'The man whom they will carry is Chimi.'

(14)a. *ʒwə́ jə̀ wú* N-*tʃɔ́k lə́ ə́ ŋgə̀fí*?
thing REL 2SG PRS-search DEF COP corn
'Is it corn you are searching for?'

b. *ʒwə́ jə̀ mɔ́k má ntʃɔ́k lə́ ə́ ŋké*
ʒwə́ jə̀ mɔ́k má HT-N-*tʃɔ́k lə́ ə́*
thing REL 1SG ASP PRS-PRS-search DEF COP
ŋkɛ́
money
'The thing I am searching for is money.'

4.2 Restrictive focus with *ndà?*

Restrictive focus can be achieved with an independent word *ndà?* 'only' which is placed in front of the word or phrase to be highlighted. This type of focus can be used for either verb or noun phrases.

4.2.1 The focus marker ndà? with noun phrases

For indicating restrictive focus, the marker *ndà?* is simply placed immediately before the respective noun phrase, as exemplified in (15–16).

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(15)a. *wú ʃí ndʒú ŋgəʔfí pú kəlɔ̀k*?
2PL F_1 buy corn or plantains
'Will you buy corn and plantains?'

b. *wú ʃí ndʒú ndàʔ kəlɔ̀k*
wú ʃí HT-N-*jú ndàʔ* ***kəlɔ̀k***
2PL F_1 F_1-F_1eat only plantains
'You will buy only plantains.'

(16)a. *wú ă kpē ntóp pú ŋgəʔfíʔ*
2PL P_1 eat corn or plantains
'Have you eaten corn and plantains?'

b. *mă kpē ndàʔ ntóp*
mɔ̀k ă MT-*kpé ndàʔ* ***ntóp***
1SG P_1 P_1-eat only potatoes
'I have eaten only potatoes.'

The item *ndàʔ* can also be used to apply restrictive focus in cleft (17b) and pseudo-cleft constructions (18b).

(17)a. *ə́ wɔ́ mbí mə́* N-*kwí pàʔ*
COP who CONJ ASP PRS-build house
'Who is building the house?'

b. *ə́ ndàʔ ʒík mbí mə́ ŋkwí pàʔ*
ə́ ndàʔ ***ʒík*** *mbí mə́* HT-N-*kwí pàʔ*
COP only 3SG CONJ ASP PRS-PRS-build house
'It is only her/him that is building the house.'

(18)a. *wúp ʃí ʒwə́ sábɛ́t kə̀ ʃímíʔ*
3PL F_1 kill Sabet or Chimi
'Will they kill Sabet or Chimi?'

b. *mbàɣà jə̀ wúp ʃí ʒwə́ lə́ ə́ ndàʔ ʃímí*
mbàɣà jə *wúp ʃí* HT-N-*ʒwə́ lə́ ə́ ndàʔ*
man REL 3PL F_1 F_1-F_1-kill DEF COP only
ʃímí
Chimi
'The man that they will kill is only Chimi.'

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4.2.2 The focus marker ndà? with verbs

The use of *ndà?* with verbs follows the following formula: S V (O) (PP) *ndà?* V̀. For focalization the verb is repeated with a low tone and preceded by the restrictive focus marker *ndà?*, as illustrated in (19–20).

(19)a. *wù ă ɣə̄ kɔ́*
2SG P_1 do what
'What have you done?'

b. *mă fā? ndà? fà?*
mɔ̀k ă MT-*fà? ndà? fà?*
1SG P_1 P_1-work only work
'I have just worked.'

(20)a. *wù ʃí* N-*ɣə́ kɔ́*
2SG F_1 F_2-do what
'What will you do ?'

b. *mɔ̀k ʃí ŋkpé ndà? kpè*
mɔ̀k ʃí HT-N-*kpé ndà? kpé*
1SG F_1 F_1-F_1-eat only eat
'I will just eat.'

In (19b) *fà?* 'work' is a low tone verb. It becomes *fā?* due to the mid tone that is part of the immediate past tense marker. The reduplicand after the restrictive focus marker has to bear a low tone. In (20b) the high tone verb *kpé* 'eat' receives a homorganic nasal by the tense marker for simple future becoming *ŋkpé*. Its reduplicand receives a low tone to become *kpè*.

When the tense requires a homorganic nasal on the verb, as in the present tense (21a) and the simple future (21b, 20b), it is only the first instance of the original verb that is inflected by it; the reduplicand following the focus marker does not inflect with the homorganic nasal.

(21)a. *mɔ́k ndzí ndà? tsì*
mɔ́k HT-N-*tsí ndà? tsì*
1SG PRS-PRS-sleep only sleep
'I am just sleeping.'

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b. *sáʔbét ʃí ŋgɣú ndàʔ ɣù*
sáʔbét *ʃí* HT-N-*ɣú* *ndàʔ* *ɣù*
Sabet F_1 F_1-F_1-laugh only laugh
'Sabet will just laugh.'

In transitive constructions where the complement of the verb can either be a direct object or a prepositional phrase, it is only the verb that is repeated, but not its complements, as shown in (22a–b).

(22)a. *wú mə́ ndɔ́ kák ndàʔ lɔ̀*
wú *mə́* HT-N-*lɔ́* *kák* *ndàʔ* *lɔ̀*
2PL ASP PRS-PRS-take dishes only take
'You are just taking dishes.'

b. *ʃímí ʃí ndʒí mə̀ ntɔ́ ndàʔ jì*
ʃímí *ʃí* HT-N-*jì* *mə̀* *ntɔ́* *ndàʔ* *jì*
Chimi F_1 F_1-F_1-go to market only go
'Chimi will just go to the market.'

5 Topicalization in Nda'nda'

The topic is something the speaker assumes is known or can be inferred from the context, and the rest of the sentence provides new information about that subject. In Nda'nda', like in other languages, topicalisation helps in highlighting the given information being introduced, setting it apart from the new information in the rest of the sentence. In Nda'nda', this process is restricted to noun phrases. In other words adjectives, verbs, and other phrasal categories cannot be topicalized.

One of the most prominent functions of Nda'nda' topics is the contrastive one. Topics are marked by fronting as in (23b) and (24b) and generally with intonation as there can be a rise in the pitch too.

(23)a. *ʃímí* *mə́* *ŋkpé* *kɔ́*?
Chimi ASP eat what?
'What is Chimi eating?'

b. *sáʔbét, ʒík mə́ ŋkpé mbɛ̀*
sáʔbét *ʒík* *mə́* HT-N-*kpé* *mbɛ̀*
Sabet 3SG ASP PRS-PRS-eat meat
'Sabet, she is eating meat.'

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(24)a. *wǔ ʃí ŋkpé ŋgəʔfí*?
who F_1 eat corn
'Who will eat corn?'

b. *mbɛ̀, sáʔbɛ́t ʃí ŋkpé jé*
mbɛ̀ *sáʔbɛ́t* *ʃí* HT-N-*kpé* *jé*
meat Sabet F_1 F_1-F_1-eat it
'The meat, Sabet is eating it.'

The contrastive topic in (23b) is *Sáʔbɛ́t* and in (24b) it is *mbɛ̀* 'meat'. In both sentences they are left-dislocated and the gap they leave is filled by personal pronouns achieving resumptive functions namely *ʒík* for *sáʔbɛ́t* and *jé* for *mbɛ̀*. In both sentences, it is clear that there is a shift in prominence. For instance in (23b) *Sáʔbɛ́t* is in contrast with *ʃími* because the person asking the question in (23a) is interested in what *ʃímí* is eating but the answer he receives is about what somebody else, *Sáʔbɛ́t*, is eating, making it contrast with their expectations. In (24a) the person asking the question has only corn to propose and is asking who could join them. But the answer in (24b) indicates instead another foodstuff *mbɛ̀* 'meat' that will be eaten, therefore creating a contrast.

Topicalization in Nda'nda' can be achieved through several syntactic strategies, including fronting, clefting, and right dislocation. However, the most productive strategy in Nda'nda' is left-dislocation. Left-dislocation involves moving a constituent, usually a noun phrase or a clause, to the beginning of a sentence, thereby marking it as the main topic of the discourse. According to Augustin (2007), this construction serves to introduce new topics into the discourse, a function typically associated with focus. In this process, the speaker assumes that the referent is accessible to the hearer based on prior discourse or the physical context. By placing the topic at the left edge of the clause, speakers can highlight the most important or salient information in the discourse, creating a more fluid and coherent structure. This strategy often establishes a contrast between the left-dislocated topic and the rest of the sentence, drawing attention to new or unexpected information. Barnes (1985) describes left-dislocation as a construction where a full lexical noun phrase (NP), prepositional phrase (PP), or pronoun is placed at the beginning of a sentence, immediately preceding a syntactically complete clause. This initial element is then typically co-referred to by a pronoun later in the sentence. In

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Nda'nda', when a noun is left-dislocated and occupies the pre-subject position, a pronoun is needed to perform a resumptive function, filling the gap left by the moved element. Both subjects and direct objects can undergo left-dislocation in the language.

(25)a. *ŋwə́ lá? à wɔ́ ʃí fə́?*
child home COP who F_1 come_back
'The child is at home. Who will come back?'

b. *ŋwə́ ʃí ntə́p*
ŋwə́ ʃí HT-N-*tə́p*
child F_1 F_1-F_1-go_out
'The child will go out.'

c. *ŋwə́, ʒík ʃí ntə́p*
ŋwə́ ʒìk ʃí HT-N-*tə́p*
child 3SG F_1 F_1-F_1-go_out
'The child, it will go out.'

Many sentences typically have a theme-rheme structure, where the theme is what is given or known, and the rheme is what is new or added. In (25a), a question is asked about the identity of the person coming back. Contrastively, the answer in (25b) is about someone, *ŋwə́* 'child', going out. In this context, *ŋwə́* 'child' serves as the theme, as it is the starting point or point of departure of the sentence, indicating what the sentence is about. The phrase *ʃí ntə́p* 'will go out' is the rheme, providing the new information about the theme. The terms "theme" and "topic" are often used interchangeably, but they have distinct functions in discourse. The theme is the element of the sentence that provides a contextual anchor, setting the stage for the information that follows. It is what the sentence is about. The topic, however, is the element that is being highlighted as the main point of interest in the current discourse. The pragmatic effect of left dislocation in this example is to create emphasis or contrast. By placing *ŋwə́* 'child' at the beginning of the sentence and resuming it with the pronoun *ʒík* 'it', the speaker signals that *ŋwə́* is particularly salient or noteworthy in the context of the conversation. This strategy can enhance clarity, foreground important information, or facilitate the flow of discourse. In summary, while *ŋwə́* 'child' in its usual position as the subject would provide a contextual anchor for the sentence (the "theme"), left dislocating *ŋwə́* 'the child' and resuming it with *ʒík*

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'it' emphasizes *ŋwə́* as the main point of interest (the "topic"). This syntactic strategy highlights the topic and distinguishes it from the background information. The left dislocation of a subject differs from a normal sentence in several ways. In (23b), there is a discontinuity between the dislocated subject *Sə́ʔbɛ́t* and the rest of the sentence. As discussed earlier, this discontinuity is marked by the insertion of the personal pronoun *ʒík* to fill the gap left by the moved subject. Additionally, in spoken language, this prominence is marked by intonation through a rise in the pitch of the voice. This adds pragmatic information to the sentence, such as emphasizing the topic and connecting it to previous discourse.

5.1 Topicalisation of the subject

Left-dislocation of a subject in a topic construction is a syntactic process that involves moving a subject to the front of a sentence and leaving a coreferential pronoun in its original position. This way, the subject is marked as the topic of the sentence or the discourse. When the nominal subject is left dislocated, a pronoun fills the gap that the movement has created. This pronoun varies according to semantic parameters of the subject.

When the subject is a noun (common or proper) referring to a human being, the pronoun used for resumptive function is a subject personal pronoun, i.e. *ʒík* (26c) and (27c) and *wúp* (28c).

(26)a. *ŋwə́ lə́ʔ ə̀ wɔ́ mə́ fə́ʔ*?
child home COP who ASP work
'The child is at home. Who is working?'

b. *ŋw ə́ mə́ ŋkpé*
ŋwə́ mə́ HT-N-*kpé*
child ASP PRS-PRS-sleep
'The child is eating.'

c. *ŋwə́ jɔ̀, ʒík mə́ ŋkpé*
ŋwə́ j-ɔ̀ ʒìk mə́ HT-N-*kpé*
child 3-D_1 3SG ASP PRS-PRS-sleep
'This child, it is eating.'

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d. *ŋwâ, ʒík má ŋkpé*
ŋwá *ø-à* *ʒìk* *má* HT-N-*kpé*
child 3-1SG.POSS 3SG ASP PRS-PRS-sleep
'my child, it is eating.'

(27)a. *Sáʔbét ndáɣə̀ ə̀* *wɔ́* *ʃí* *nɔ́k*?
Sabet inside COP who F_1 dance
'Sabet is inside the house. Who will dance?'

b. *Sáʔbét ʃí ndzí*
sábét *ʃí* HT-N-*tsí*
Sabet F_1 F_1-F_1-sleep
'Sabet will sleep.'

c. *Sáʔbét, ʒík ʃí ndzí*
sábét *ʒìk* *ʃí* HT-N-*tsí*
Sabet 3SG F_1 F_1-F_1-sleep
'Sabet, she will sleep.'

(28)a. *bɔ̀ʔkɔ́p pú ʃímí láʔ ŋgéʃə̀ má ndzíʔ*
Bokop with Chimi house Gueche ASP sleep?
'Bokop and Chimi are in the house. Is Gueche sleeping?'

b. *bɔ̀ʔkɔ́p pú ʃímí ké tsí pɔ́ʔ*
bɔ̀ʔkɔ́p *pú* *ʃímí* *ké* *tsí* *pɔ́ʔ*
Bokop and Chimi NEG sleep NEG
'Bokop and Chimi do not sleep.'

c. *bɔ̀ʔkɔ́p pú ʃímí, wúp ké tsí pɔ́ʔ*
bɔ̀ʔkɔ́p *pú* *ʃímí* *wúp* *ké* *tsí* *pɔ́ʔ*
Bokop and Chimi 3PL NEG sleep NEG
'Bokop and Chimi, they are the ones not to sleep.'

Common nouns need to be specified by a demonstrative (26c) or a possessive (26d) under left dislocation. In ex. (26), (27) and (28), it is actually the pronouns *ʒík* and *wúp* of the independent personal pronoun set shown in table (5) that are used for resumptive function to stand for *ŋwá*, *sáʔbét* and *bɔ̀ʔkɔ́p pú ʃímí*.

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Table 5. Independent personal pronouns

PERSONS	SINGULAR	PLURAL
First	*mɔ̀k*	*pɔ̀*
Second	*wù*	*pɨ̀k*
Third	*ʒìk*	*wùp*

However, when the subject refers to a non-human entity like an inanimate item such as a pot (29b) or a car (30b) for instance, a resumptive pronoun is used to fill the gap left by subject dislocation.

(29)a. *mbák kíʃíp á kɔ́ j-é má* N-*kχə́*?
pot kitchen COP what 3-RP ASP PRS-burning
'The pot is in the kitchen. What is burning?'

b. *mbák jɔ́ má ndáp*
mbák j-ɔ́ má HT-N-*láp*
pot 3-D_2 ASP PRS-PRS-stink
'This pot is stinking.'

c. *mbák jɔ́, jé má ndáp*
mbák j-ɔ́ *j-é má* HT-N-*láp*
pot 3-D_2 3-RP ASP PRS-PRS-stink
'This pot, it is stinking.'

(30)a. *màtwá mbɔ́k, pá?* *wɔ́* *w-é kɛ́ pfɔ̀k*?
car near house who 1-RP NEG nice
'The car is near the house. Whose house is not nice?'

b. *màtwá sá?bɛ́t kɛ̀ pfɔ̀k*
màtwá sá?bɛ́t kɛ́ pfɔ̀k
car sabet NEG nice
'Sabet's car is not nice.'

c. *màtwá sá?bɛ́t, wé kɛ̀ pfɔ̀k*
màtwá sá?bɛ́t *w-é kɛ́ pfɔ̀k*
car sabet 1-RP NEG nice
'Sabet's car, it is not nice.'

The resumptive pronouns *jé* (29c) and *wé* (30c), respectively, stand for the nouns *mbák* 'pot' and *màtwá* 'car', as indexed by agreement markers for noun classes 3 and 1. Table 6 presents resumptive pronouns that replace non-human entities in Nda'nda'. These resumptive

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pronouns are peculiar in the Nda'nda' pronominal system because they are used only when the subject is left-dislocated. Resumptive pronouns of classes other than 1 are illustrated in (31).

(31)a. *ŋgíp, pé ʃí mbé*
ŋgíp ***p-é*** *ʃí* HT-N-*pè*
hens 2-RP F_1 F_1-F_1-come_back
'Hens, they will come back.'

b. *kíʃìp mɔ̀ mì, mé ʃí ndáp*
kíʃìp *m-ɔ̀* *m-ì,* ***m-é*** *ʃí* HT-N-*láp*
kitchens 4-1PL.POSS $4\text{-}D_3$ 4-RP F_1 F_1-F_1-stink
'Those kitchens (that are ours), they are stinking.'

c. *ntóp tsɔ́, tsé mə́ má?ɲǒ*
ntóp *ts-ɔ́,* ***ts-é*** *mə́* N-*má?ɲà* *ǒ*
tomato $5\text{-}D_2$ 5-RP ASP PRS-disturb 2OBJ
'This tomato, it is disturbing you.'

d. *tsɔ́? tsú, tsé pfɔ́k*
tsɔ́? *ts-ú* ***ts-é*** *pfɔ́k*
place 6-2SG.POSS 6-RP good
'Your place, it is not good.'

Table 6. Resumptive pronouns

Noun class	Resumptive pronoun
1	*wé*
2	*pé*
3	*jé*
4	*mé*
5	*tsé*
6	*tsé*

Irrespective of whether referring to humans (ex. 26, 27, 28) or non-humans (ex. 29, 30, 31), common noun antecedents require determination by a possessive (31d), a demonstrative (31c) or a nominal (30c) for the topicalization process to be effective. Proper nouns such as *Sabet* in (27c), however, do not require such a determiner because they usually have unique reference. Only when there are

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many people bearing the same name, demonstrative pronouns must be used with the proper noun to identify the referent, as in (32).

(32) *sáʔbɛ́t jɔ́, mâ kê*
sáʔbɛ́t j-ɔ́ mɔ̀k â HT-*ké è*
Sabet 3-D_2 1SG P_2 P_2-carry 3OBJ
'This Sabet, I carried her.'

The above sentence is only grammatical if there is more than one person bearing the name Sabet.

5.2 Topicalisation of the direct object via left-dislocation

The direct object in Nda'nda' can also be left-dislocated as illustrated in (33–34).

(33)a. *pɔ́ má ntʃɔ́k mbàʔ ʒík ʃí ndʒú ntáp*?
1PL ASP look.for houses 3SG F_1 buy shoes
'We are looking for a house. Will she buy shoes?'

b. *mbàʔ mɔ̀, ʒík ʃí ndʒú mé*
mbàʔ m-ɔ́ ʒík ʃí HT-N-*jú m-é*
houses 4-D_2 3SG F_1 F_1-F_1-buy 4-RP
'These houses, she/he will buy them.'

(34)a. *pɔ̀nt̪ɨ̀k láʔ wù â ké wɔ́*?
people house 2SG P_2 carry who
'People are in the house. Whom have you carried?'

b. *ŋwá fɔ̀, mâ ké*
ŋwá fɔ̀ mɔ̀k â ké é
child chief 1SG P_2 carry 3OBJ
'(As for) the chief's child, I carried her.'

c. *pfóŋkχá jɔ̀, mâ ké wúp*
pfóŋkχá j-ɔ̀ mɔ̀k â ké wúp
children 2-D_1 1SG P_2 carry 3PL
'(As for) these children, I carried them.'

The resumptive pronouns for non-human entities do not vary whether they are in subject position (29c) or in object position (33b). As for human entities in object position, they use object personal pronouns for resumptive functions as summarized in table 7 below.

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Table 7. Object personal pronouns used for resumptive function

	SINGULAR			PLURAL		
	1	2	3	1	2	3
First series: verbs ending with *a, ɔ, o* or *ə*	*á*	*ó*	*é*	*wɔ́*	*wə́gə́*	*wúp*
Second series: verbs ending with *i*	*ɛ́*	*ú*	*í*			
Third series: verbs ending with *ɛ* or *e*	*ɛ́*	*ó*	*é*			
Fourth series: verbs ending with *ɨ* or *u*	*á*	*ú*	*í*			
Fifth series: verbs ending with a long vowel or the structure VCV	*wɛ́*	*ɣú*	*ʒík*			

6 Conclusion

This paper set out to discuss strategies used by the Nda'nda' speaker to narrow down their attention to a single point of interest either for focus or for topic functions. Focus is that piece of information that the speaker or writer highlights as most salient for the hearer or reader, often contrasting it with other possibilities or expectations, whereas topic is given information that the speaker presupposes as known to the hearer about which a statement is being made. Morphosyntactic strategies used in Nda'nda' to mark focus include cleft, pseudo-cleft constructions and the restrictive focus marker *ndà?*. As for topic, only left-dislocation has been identified as a relevant syntactic strategy. Both focalisation and topicalisation allow Nda'nda' speakers and writers to effectively profile information in a sentence or conversation. This helps them in ensuring clarity, coherence, and effective communication. Focus and topic therefore appear to be the two key concepts that determine how information is organized in discourse. This consecrates the similarity between topic and focus that is highlighted by Gundel et al. (1999) who observe that topic and focus have been associated to various syntactic structures across languages, especially ones where a constituent has been displaced from its canonical position in a clause to occupy a syntactically more prom-

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inent position. While the study has effectively illustrated how these strategies contribute to clarity, coherence, and effective communication in Nda'nda', it became evident that a more in-depth exploration of prosodic focus was needed. Consequently, the section on prosodic focus has been omitted from this version of the paper to maintain clarity and coherence in the current analysis. Future research will investigate the nuanced role of prosody in marking focus, specifically examining how different tonal categories—such as high, mid, and low tones—are utilized to express focus in Nda'nda'. This would involve exploring how pitch variations, intonation patterns, and duration contribute to the expression of focus and how these features interact with existing morphosyntactic strategies. Additionally, instrumental studies could provide valuable insights into the phonetic realization of focus across tonal categories, which was beyond the scope of this paper.

Abbreviations

ASP aspectual marker, AM associative marker, CONJ conjunction, COP copula, D_1 speaker-proximal demonstrative, D_2 hearer-proximal demonstrative, D_3 distal demonstrative, F_1 simple future, F_2 distant Future, F_3 uncertain future, FOC focus, HT high tone, MT mid tone, N homorganic nasal, NEG negation marker, NP noun phrase, OBJ object, P_1 immediate past, P_2 recent past, P_3 remote past, PL plural, PP prepositional phrase, PR pronoun, PRS simple present, QM question marker, REL relative marker, RP resumptive pronoun S subject, SG singular, SUB subordinate clause, UM uncertainty mood marker, V verb.

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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 Ngəmba[2], 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. *mə-sə̌ŋ* *mɛ́* *njáŋ* *ppa* *wwʉ̀*
6-teeth child CLF < STICK[3] two fall
'Two of the child's teeth have fallen out.'

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2 Within Eastern Grassfields Bantu, Ngəmba is classified as a variety of Ghɔmálá? called Ghɔmálá?-West (Dieu & Renaud 1983: 124) or Ghɔmálá?-Ngemba (Eberhard & al. 2022). Alternative names are Western Ngəmba (Watters 2003), Bamileke-Bamendjou (Joshua project) and Ngemba (Ghɔmala?) (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, Bansoa 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.

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b. *mə-nttshœ́* *mɛ́* *mím-ppa* *wwʉ̌* *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 *mà-sɔ̀ŋ* '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 *nttshœ́* (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 procedes 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

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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.

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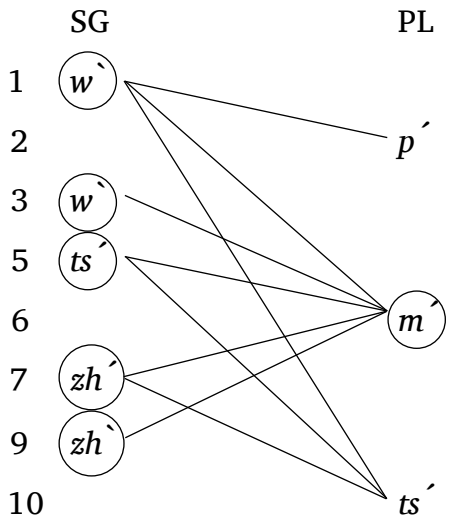
(2) Ngəmba agreement classes and concordial series

class	number	A possessive pronouns	B numerals, 'how many?'	C prenominal demonstratives, 'which?'	D postnominal demonstratives, relative pronoun	E 'what, who, where'
1	SG	*ẁ - ~ ̀*	*wít-*	*w-*	*ø-*	*ø-*
3		*ẃ - ~ ́*				
7		*zh́ - ~ ́*	*zhít-*	*zh-*		
9		*zh̀ - ~ ̀*				
5		*tś -*	*tsít-*	*ts-*	*ts-*	
10		*tś -*	*tsít-*	*ts-*	*ts-*	*ø-*
2	PL	*ṕ -*	*mə́-*	*p-*	*p-*	*p-* 'who, where'
6		*ḿ -*	*mə́-, mít-*	*m-*	*m-*	*m-* 'what'

Noun class numbering follows the canonical Bantu system according to the Bleek-Meinhof 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 inquorate 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. *fɔ́k* (1/6~10) 'cowife'.

(3) Ngəmba gender system



Gender 1/2 accomodates mostly nouns for humans. Exceptions include nouns like *kkhʉ́p~mə-kkhʉ́p* (1/2) 'fingernail'. However, not all designations for humans are assigned to this gender, e.g. *fɔ́k* (1/6~10) 'cowife'. Apart from nouns for humans, it also accommodates all nouns that originate in compounds with *mɛ́/pɔ́* (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 accomodates 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

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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, CALABASH, 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>

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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>

Classifiers with transparent etymologies in co-existant 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

Ngəmba 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-existant 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) Ngəmba sortal classifiers

classifier (source form)	(source) meanings of classifier items
mbaŋ (3/6) 'kernel'	small roundish objects: groundnut, bean, corn, rice, taro, palmnut, macabo, African plum, person [...]
ndɔ́ŋ (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
njáŋ (9/6) 'stick, string'	longish and thin objects: wood, broom, tooth, hair, syringe (injected with fluid), grass […]

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classifier (source form)	(source) meanings of classifier items
ŋgɔ̀m (9/6) ‘grain’	smallish grainy things with curvy outlines: nuts, pepper, bean, corn, fish, bee, cricket, mosquito, worm, lice, ant, ticks, weevil, fly […]
pằp (7/6) ‘stain’	flat objects: leaf, plot of land, textile, iron sheet, plank […]
tằ (7/6) ‘well, borehole’	medium-sized roundish objects: avocado, orange, pineapple, coconut, papaya, mango, onion, tomato […]
tthwó (7/6) ‘head’	sizable roundish objects: cabbage, pineapple, papaya, faeces, soil, salt, stone […]
cwɔ̀ʔɔ̀ (7/6) ‘species of jujube’	maize
sáʔ (7/6) ‘needle’	tick ‘without eggs yet’
tǿ (7/6) ‘calabash’	pumpkin
ŋgʉ́t (9/6)	offshoot-like object or splash of liquid: mushroom, splosh of water […]
nɔ̀ʔ (1/6)	objects with a non-straight buckled shape: banana, plantain, sweet potato, cassava, worm […]
ntɛ̀ (9/6)	long flexible string-like objects: thread, liana, cable […]
tɛ̌m (7/6)	sizable roundish solid tubers: macabo, taro, Irish potato […]

In the following, three of these sortal classifiers, i.e. *mbaŋ, ŋgɔ̀m* and *nɔ̀ʔ*, 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).

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(6) Ngəmba sortal classifier *mbaŋ*

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

(7)a. *ŋwɛ̌ pɛ́ mbaŋ nə́kkhwa nə́ŋ mbáŋá*
gather.IMP taro CLF < KERNEL four put pot
'Gather four (small) taros and put them in the pot!'

b. *ppǐ taʔ mbaŋ mə́-kwʉ́*
sow one CLF < KERNEL 6-bean
'Sow one bean!'

c. *ppǐ mə́-kwʉ́ mbaŋ nə́ghə́m*
sow 6-bean CLF < KERNEL ten
'Sow ten beans!'

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

e. *mə́ ŋwak n-jó pɔ̀ mbaŋ nə́ghə́m*
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), *mbaŋ* (7/6) 'kernel' can be used for referential individuation of transnumeral terms that have a basic generic meaning such as *mə̀kwʉ́* (6) 'beans' as in (8b–c).

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

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b. *ppǐ* *mbaŋ* *mə́-kwʉ́*
sow kernel 6-bean
'Sow a (single) bean!'

c. *ppǐ* *mə-mbaŋ* *mə́-kwʉ́*
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* *ttsɔ́* *tso* *mbaŋ* *tɛ̀*
3sg eat African.plum CLF < KERNEL five
'S/he ate five African plums.'

b. *á* *ttsɔ́* *tsôn*[4] *á* *zh-é*[5] *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 Ngəmba, 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.

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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) Ngəmba sortal classifier *ŋgɔ̀m*[6]

classifier	generalised classifier meaning and range of application
ŋgɔ̀m (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, cockcroach […] fish, worm, jigger that has eggs already […] thoughtful word, advice […] traditional Bamileke bead […]

(11)a. *pé* *tà?* *ŋgɔ̌m* *mbəzháŋ* *n-cwí*
take.IMP one CLF < GRAIN groundnut CS-give.to.me
'Take one groundnut and give it to me.'

b. *məŋgɔ́ép* *mpfɛt* *ŋgəsáŋ* *ŋgɔ̀m* *tét*
chicken eat corn CLF < GRAIN three
'The chicken ate three grains of corn.'

c. *mamá* *ˡlá* *ná?* *pə́na* *məlúlú*
Mummy cook sauce ASS type.of.dry.fish
ŋgɔ̀m *nàkkhwà*
CLF < GRAIN four
'Mummy cooked the sauce with four fish.'

d. *á* *hii* *tà?* *ŋgɔ̀m* *nàghà* *a* *nə̌*
3SG give.3SG one CLF < GRAIN word 3SG MIT

6 There is some overlap in the range of application of the classifiers *ŋgɔ̀m* and *mbaŋ* 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.

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ncchyǽ
stay
'S/he gave him/her one thoughtful word, and s/he stayed quiet.'

e. *mə* *kə̀* *hâ* *ntə̀ghə̀* *mbbúu* *ŋgə̀m* *tét*
1SG P2.IPFV give advice to.3SG CLF < GRAIN three
mə̌
on.it
'I gave him/her three pieces of advice about that (issue).'

In collocation with the numeral *tà?* 'one', *ŋgə̀m* (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?* *ŋgə̀m* *sshyə̌nnò* *cə̌*
CS-be one CLF < GRAIN intelligence NEG
tthwúu *bhɔ́*
head.3SG.POSS NEG
'S/he does not even have one bit of intelligence in his/her head.'

b. *mû-ŋgə̀m* *sshyə̌nnə̌* *bhá?á* *m-bə́*
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, *ŋgə̀m* (9/6) 'grain' can be used for referential individuation of transnumerals that have a basic generic meaning such as *ŋgəsáŋ* (9) 'corn' as in (13a–b).

(13)a. *məŋgǽp* *mpfɛt* *ŋgə̀m* *ŋgəsáŋ*
chicken eat grain corn
'The chicken ate a grain of corn.'

7 In both cases, *ŋgə̀m* (9/6) 'grain' could be replaced by *njáŋ* (9/6) 'stick; string' as well.

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b. *məŋgɛ́p* *mpfɛt* *mə́-ŋgɛ̌m*[8] *ŋgəsâŋ* *m-á*
chicken eat 6-grain corn 6-1SG.POSS
'The chicken ate my grains of corn.'

c. *məŋgɛ́p* *mpfɛt* *ŋgəsâŋ* *à* *ŋgɛ̀m* *tét*
chicken eat corn 1SG.POSS CLF < GRAIN three
'The chicken ate my three grains of corn.'

d. *mbbvɔ́* *mpfɛt* *físsy-à* *ŋgɛ̀m* *tét*
6-dog eat fish-1SG.POSS CLF < GRAIN three
'The dogs ate my three fish.'

Examples (13a–b) prove that the numeral classifier *ŋgɛ̀m* is actually derived from a coexistent full-fledged noun *ŋgɛ̀m* (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 *mə̀-ŋgɛ̀m* '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 *ŋgɛ̀m* is used in both singular (11a) and plural contexts (11b–c; 13c–d).

3.1.1.3 *nɔ̀ʔ* (1/6)

The sortal classifier *nɔ̀ʔ* 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* *kə̀nccyɛ̌* *à* *nɔ̀ʔ* *ppa* *nə́*
take banana 1SG.POSS CLF.BUCKLED two with
ŋ-ke *mɛn* *ă*
CS-feed child PROX
'Take two bananas of mine and feed this child with them.'

b. *cə̀cchɔ̀* *ɛ̌* *nɔ̀ʔ* *tɛ̌* *fɔ́* *cchyœ*
caterpillar DIS CLF.BUCKLED five leave up

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

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ŋ-ggwú *ssi*
CS-fall ground
'Those five caterpillars fell down from above.'

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

(15)a. *pé* *nɔ̀ʔ* *kə̀nccyǎ* *w-ʉ* *w-ě* *ná*
take buckled.item banana 1-2PL.POSS 1-DIS with
ŋ-ke *mɛn* *ă*
CS-feed child PROX
'Take that banana of yours and feed this child with it.'

b. *pé* *má-nɔ̌ʔ* *kə̀nccyǎ* *m-á* *ná* *ŋ-ké*
take 6-buckled.item banana 6-1SG.POSS with CS-feed
mɛn *ă*
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 *nɔ̀ʔ* may have been derived, it clearly betrays a nominal origin, as attested by its plural form of noun class 6 *má-nɔ̀ʔ* 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 *nɔ̀ʔ* (16a), as discussed in section 3.1.1.3 above; reference to a bundle of bananas can be achieved by the classifier *ncwaŋ* (16b), as discussed in section 3.1.2.1.1, and the entire bunch is referred to as *ttshɔ̀* (16c).

(16)a. *pé* *kə̀nccyǎ* *nɔ̀ʔ* *ppa* *ná* *ŋ-ke* *mɛ(n)*
take banana CLF.BUCKLED two with CS-feed child
ă
PROX
'Take two bananas and feed this child with them.'

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b. *má ˡlá kànccyǎ ncwaŋ tét*
1SG cook banana CLF.BUNDLE three
'I have cooked three bundles (hands) of bananas.'

c. *kànccyǎ w-ək w-ă ttshɔ̀ ppá chíˡná ndœ*
banana 1.PL.EXCL 1-PROX CLF.BUNCH two stand 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 *mbaŋ* (17a) or to individual grains by *ŋgɔ̀m* (17b).

(17)a. *mbəzháŋ mbaŋ ppa*
groundnut CLF < KERNEL two
'two groundnuts (pods)'

b. *mbəzháŋ ŋgɔ̀m 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 *mbaŋ* can be used alternatively to construe the item as rather smallish (18b).

(18)a. *pɛ́ **tǎm** ppa*
taro CLF.ROUNDISH.TUBER two
'two taros'

b. *pɛ́ **mbaŋ** 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 *ŋgɔ̀m* (19a), but *mbaŋ* can be used for the non-local variety with a bigger size (19b).

(19)a. *tà? ŋgɔ̀m sɔ́k*
one CLF < GRAIN pepper
'one (grain of Cayenne) pepper'

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b. *tà?* *mbaŋ* *sɔ́k*
one CLF < KERNEL pepper
'one (grain of big size) pepper'

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

(20)a. *tà?* *njáŋ* *nàghà*
one CLF < STICK word
'one word'

b. *tà?* *ŋgɔ̀m* *nàghà*
one CLF < GRAIN 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
ncwaŋ (1/6) 'woven object, bundle (with multiple extensions)'	items that come in multiple extensions: plantain, banana
mbə̀? (9/6) 'bundle'	bundle of items: clothes, firewood, liana, bamboo, grass […]
nə̀kə̌? (5/6) 'pile, heap'	pile or heap: stone, cloth, grass, vegetable, firewood, ants, bee […]
nsshyɔ̀ (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 […]

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classifier (source form)	(source) meanings of classifier items
vɔ̀ŋ (7/6) ‘troop, group’	long and thin group of individuals: people, animals, goats, cows, ants […]
kə̌ (7/6) ‘troop, group’	short and large group of individuals: swarm of bees, people, friends […]
nə̀pŭʔ (5/6) ‘package, parcel’	any bundle wrapped in a cover: cooked koki, couscous, or pumpkin seed […] textile, money, book, money, tobacco, thread, [...]
ŋgɛ̀ (9/6) ‘pod’	pods: kolanut […]
tŭʔ (7/6) ‘tuft’	tuft of very short stubbly items: grass, hair, thread, soap […]
ttshœ̀ (7/6) ‘entire bunch’	items that come in a natural bunch: entire bunch of plantain, banana, palmnut, rafia fruit and coconut […]

In the following, two of these mensural classifiers, *ncwaŋ* and *nə̀pŭʔ*, will be presented in detail.

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

The aggregational noun *ncwaŋ* 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. *mə́* *zhwʉ* *tàʔ* *ttshœ̀* *kə̀ndɔ̀ŋ* *a* *hà*
1SG buy one CLF < BUNCH plantain 3SG give
ncwaŋ *nə̀kkhwà*
CLF < BUNDLE four
‘I bought one bunch of plantain, and it yielded four bundles.’

b. *há* *tàʔ* *ncwə̌ŋ* *kə̀ndɔ̌ŋ* *mbbó* *mò*
give one CLF < BUNDLE plantain to 1SG
‘Give me one bundle of plantains!’

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c. *pé* *kàndɔ̀ŋ* *á* *ʒh-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* *máŋkkʉ* *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 *kànccyǒ* (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* *kənccyǒ* *w-ǎ*
CLF < BUNDLE 1.banana 1-PROX
'This is a bundle of banana.'

b. *mə̀-ncwǎŋ* *kənccyǒ* *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 *mə-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.

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

The aggregational noun *nə̀pŭ?* (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. *cyǽ* *tà?* *nə̀pŭ?* *kokí* *mbaŋá* *pfɛ́t*
take.out.IMP one CLF < PACK koki pot eat.IMP
‘Take one ball of koki from the pot and eat.’

b. *cyǽ* *kokí* *zh-ʉ́* *zh-ě* *nə̀pŭ?*
take.out.IMP 7.koki 7-2SG.POSS 7-DIS CLF < PACK
tét *pfɛ́t*
three eat.IMP
‘Take three balls of that koki of yours and eat.’

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

d. *mə́* *zhwʉ* *ŋwà?nə̀* *nə̀pŭ?* *nə̀ghə́m* *mbbó*
1SG buy book CLF < PACK ten to
fɛ́l *à*
lovely.junior 1SG.POSS
‘I have bought ten packages of books for my lovely junior sibling.’

e. *mə́* *zhɔ* *ŋkap* *nə̀pŭ?* *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, *nə̀pŭ?* 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).

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(25)a. *ŋ-gɔ* *nə-kkhwɔ́* *nà-pŭʔ* *ts-á* *mbò* *pə́* *cɛ̀nə̀*
1SG-go INF-receive 5-pack 5-1SG.POSS then SID send
'I am going to collect my parcel that they have sent.'

b. *cyǽ* *mə-mbŭʔ* *kokí* *m-ě* *nə́* *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 *nə̀pŭʔ* as a numeral classifier and its emancipation from the source noun *nə̀pŭʔ* (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 *mə-mbŭʔ* '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 *nə̀pŭʔ* 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 accomodate 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

Ngəmba 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 *ntáʔ* (9/6) have transparent etymologies in co-existent nouns that occur outside the classifier construction.

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(26) Ngəmba mensural classifiers for partitions or portions

classifier (source form)	(source) meanings of classifier items
ssă (5/6) 'flat side' < *nàssă* 'buttock'	flat surface: house, farm […]
ntá? (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) […]
pàk (7/6) 'slice, peeling'	part: any part of a whole that is obtained by splitting […]
kàm (7/6) 'short piece, cut section'	part: any part of a whole that is obtained by cutting […]
pə́? (7/6) 'fragment, broken piece'	piece: meat, wood, yellow yam, macabo […]
nàghă? (5/6) 'meagre portion'	meagre portion: meat, food, person, plot of land […]
khʉ̀m (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 […]
nəkhʉ̆? (5/6) 'component with its fruits still attached'	coffee, groundnut
ŋkhʉ́?nə́ (9/6) 'component with its fruits or tubers detached'	sweet potatoe, groundnut, pumpkin
mbə́? (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 *pàk* or to haptic criteria pertaining to the shape, texture and consistency of the resulting parts as with *khʉ̀m*, *mbə́?*, *ntá?* and *ssă*. The partitional numeral classifier *nàghă?* is special in that it includes an evaluative notion of pejorativity. The classi-

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fier *pə́?* seems to be the most neutral one in that it lacks any other semantic notions beside partition. In the following, two of these mensural 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 functions. 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 activating 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. *mɛ́ lɛ tə̀ ccyœ́ məttshœ́ 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. *pə̀k ghə̌ llə̌ ndəŋ ntá? nàghə́m*
1PL.EXCL F0 take bamboo CLF.EXTENSION ten
nə̌ kwʉ́t ŋkə̌ŋkə́?
with build fence
'We are going to use ten bamboo poles to build the fence.'

c. *tà? ntá? sshyœnə́tsə̀k fɔ nà-tsə̀k*
one CLF.EXTENSION tear leave 5-eye
i fí?í́
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. *mɛ́ lɛ tə̀ cyœ́ ntá? məttshœ́*
child cry until emit extension snot
'The child has cried to the extent that it had snot running from the nostril.'

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b. *mɛ́ lɛ tə̀ cyœ́ mə-ntá? mətshœ́*
child cry until emit 6-extension snot
'The child has cried to the extent that it had snot running from the nostrils.'

c. *mə̀-ntá? shshyœnátsə́k kwě nə-tsək ì*
6-extension tear come.out 5-eye 3SG.POSS
nchwò nálɛ̀
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 classifer constructions, whereas the plural form *mə-ntá?* is retained in contexts of individuation (28b–c).

3.1.2.2.2 *nàghă?* (5/6) 'slim and tiny peel; meagre portion'

The partitional noun *nàghă?* (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. *pɔ̀ (nà)ghă? ppa sŭ? chú?cə̀*
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
(nà)ghă? ppa
CLF.MEAGRE.PORTION two
'I have my two meagre plots of land.'

c. *ssœ̌ tà? (nà)ghă? mbap*
detach.fiber one CLF.MEAGRE.PORTION meat

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n-cwí *mà* *pfɛ́t*
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), *nàghǎ?* (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. *(nà-)ghǎ?* *ne* *kkhwǒ* *mɛ́* *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* *lɔ̀ʔɔ́* *ŋkabh* *ǐ* *nà-ghǎʔ*[9] *lɔ̀ŋɔ̀*
3SG hide money 3SG.POSS 5-tiny.peel stone
'S/he has hidden his/her money in the tight space under the stone.'

c. *mà-ghǎ?* *tthwʉ́ʉ* *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 Ngəmba numeral classifier constructions

Syntactically, Ngəmba 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 *Nàghǎ?* as head of the noun phrase *nàghǎ? lɔ̀ŋɔ́*, i.e. the tiny space between a big stone and the ground, cannot undergo morphological reduction by dropping the prefix *nà-*.

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This is illustrated in (31). The singular numeral classifier construction in (31a) requires the numeral *tà?* 'one' in initial position preceding the classifier *njáŋ* 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 *ntɔ̀ghɔ́* 'six'.

(31)a. *lɔ́ktă sŏp tà? njâŋ sá? nəl i*
doctor prick one CLF < STICK needle on O3SG
'The doctor gave him/her one injection.'

b. *lɔ́ktă sŏp sá? njáŋ ntɔ̀ghɔ́ nál 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 *ndɔ́ŋ* (9/6) 'horn' below. Thus, pronominal possessives such as 1SG *á* and demonstratives such as the proximal *ă* '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 *nələ?* (class 5) 'sweet yellow yam', rather than the concordial prefix *ʒh-* of class 9, i.e. the noun class of the classifier's source noun *ndɔ́ŋ* (9/6) 'horn' (32b–c).

(32)a. *fĭn nəlâ? ts-á ts-ă*
sell.IMP sweet.yellow.yam 5-1SG.POSS 5-this
ndɔ́ŋ nàghám
CLF < HORN ten
'Sell these ten sweet yellow yams of mine!'

b. **fĭn nəlâ? *ʒh-á *ʒh-ă*
sell.IMP 5.sweet.yellow.yam 9-1SG.POSS 9-this
ndɔ́ŋ nàghám
CLF < HORN ten

c. **fĭn nəlâ? *ndɔ́ŋ *ʒh-á*
sell.IMP 5.sweet.yellow.yam CLF < HORN 9-1SG.POSS
**ʒh-ă nàghám*
9-this ten

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Modification in classifier constructions is only possible for the enumerated noun, yielding structures such as [N_1 CP_1-POSS CP_1-DEM] [CLF NUM]. Alternative constructions such as *N_1 CLF_2 CP_2-POSS CP_2-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 *njáŋ* and the numeral *ntɔ̀ghɔ́* 'six' by intrusion of the prepositional phrase 'on him/her' (33a) and an additional adverbial *ta* 'until' (33b).

(33)a. *lɔ́ktă sŏp sá? nə́l i njáŋ ntɔ̀ghɔ́*
doctor prick needle on O3SG CLF < STICK six
'The doctor gave him/her six injections.'

b. *lɔ́ktă sŏp sá? nə́l i ta njáŋ*
doctor prick needle on O3SG until CLF < STICK
ntɔ̀ghɔ́
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 *njáŋ* by intrusion of the prepositional phrase 'on him/her' (34a) and additional adverbials such as *ndă?* 'only' (34b), the emphasis marker *mbə* (34c), and the adjective *fə́fɔ́k* 'white' (34d).

(34)a. *lɔ́ktă sŏp sá? nə́l i tà? njáŋ*
doctor prick needle on O3SG one CLF < TICK
'The doctor gave him/her but one injection.'

b. *lɔ́ktă sŏp sá? nə́l i ndă? tà?*
doctor prick needle on O3SG only one
njáŋ
CLF < STICK
'The doctor gave him/her but just one injection.'

c. *lɔ́ktă sŏp sá? nə́l i bhə ndă? tà?*
doctor prick needle on O3SG EMPH only one

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njáŋ
CLF < STICK
'The doctor unexpectedly gave him/her but just one injection.'

d. *lɔ́ktă* *sŏp* *tà?* *njáŋ* *fə́fɔ́k* *sá?* *nə́l*
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. *lɔ́ktă* *sŏp* *sá?* *njáŋ* *nə́l* *i* *ntɔ̀ghɔ́*
doctor prick needle CLF < STICK on O3SG six

*b. *lɔ́ktă* *sŏp* *tà?* *ndă?* *njáŋ* *sá?* *nə́l* *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.

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3.3 The emergence of a numeral classifier category

Ngəmba 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 Ngəmba classifiers, as summarized in table (36).

(36) Parameters of nominal decategorization in Ngəmba 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. *tà?* *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 Ngəmba 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).

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c. *mə-tthwó* *mín-tét*
6-head 6-three
'three heads'

(38)a. *tà?* *păp*
one 7.stain
'one stain'

b. *păp* *ʒhít-tɛ̀*
7.stain 7-five
'five stains'

c. *mə̀-păp* *mín-tɛ̀*
6-stain 6-five
'five stains'

(39)a. *tà?* *nə̀-pŭ?*
one 5-package
'one package'

b. *nə̀-pŭ?* *tsít-ppa*
5-package 5-two
'two packages'

c. *mə̀-mbŭ?* *mím-ppa*
6-package 6-two
'two packages'

(40)a. *tà?* *nə̀-ssă*
one 5-buttock
'one buttock'

b. *nə̀-ssă* *tsít-ppa*
5-buttock 5-two
'two buttocks'

c. *mə̀-ssă* *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* *shû*
one CLF < HEAD cabbage
'one cabbage'

b. *shû* *tthwó* *tét*
cabbage CLF < HEAD three
'three cabbages'

(42)a. *tà?* *păp* *pə̀láŋ*
one CLF < STAIN plank
'one plank'

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b. *pàláŋ* *pǎp* *tɛ̀*
plank CLF < STAIN five
'five planks'

(43)a. *tà?* *nàpǔ?* *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 *nàghǎ?* (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 *nɔ̀?* (3.1.1.3), *ntɛ̀*, *tǎm* 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.

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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.

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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 *ŋgɔ̀m* (9/6) ‘grain’ (see section 3.1.1.2) in counting.

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(46) Ngəmba: 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**
mbaŋ 'kernel'	1				1		2	1	
ndɔ́ŋ 'horn, whistle'					1		3		
njáŋ 'string'	1			1	3		3		
ŋgɔ̀əm 'grain'		8			1		3	1	
ŋgʉ́t									
pə̌p 'stain'		1					3		1
tə̌ 'well, borehole'		1			2		1		
tthwó 'head'							2		
nɔ̀ʔ		2					1		
ntɛ̀				1					1
tœ̀m									
sáʔ 'needle'		1							
khʉ̀m		1					3		
tʊ́ 'calabash'									
ncwaŋ 'woven object, bundle (with multiple extensions)'		1					1		
mbəʔ 'bundle'		1		1	1				2
nəkə̌ʔ 'pile, heap'		8		1	1		3		1
nəpʉ̌ʔ 'package, parcel'				1					1

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	1/2	1/6	1/10	3/6	5/6	5/10	7/6	7/10	9/6
ŋgɛ̀ ‘pod’									
tǐ? ‘tuft’					1		1		
ttshɑ̀ ‘bunch’		1					1		
ssə̌ flat side’ < *nàssə̌* ‘buttock’							1		1
ntá?					1		2		1
pàk ‘slice, peeling’		3			2		6		2
kàm ‘short piece, cut section’		1					1		2
pə̀? ‘fragment, broken piece’		3					5		
nàghə̌? ‘meagre portion’	1						1		
mbə́? ‘bite’									
vɔ̀ŋ ‘troop, group’	3	1	3						
nsshyɑ̀ ‘portion’									
nàkhɯ̌? ‘component with its fruits still attached’									
ŋkhɯ́?mə́ ‘component with its fruits or tubers detached’									
kə̀ ‘troop, group’	2	2	3						
cwɔ̀?ɔ̀ ‘specie of jujube’									

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

	1	**3**	**5**	**6**	**7**	**9**
mbaŋ ‘kernel’	7		2	1	2	2
ndɔ́ŋ ‘horn, whistle’	3	1		1	2	
njáŋ ‘string’	6	1			5	1
ŋgɔ̀m ‘grain’	12	1	1	2	4	8
ŋgʉ́t		2			1	
pǎp ‘stain’						
tǎ ‘well, borehole’	9		3		4	1
tthwó ‘head’	3			2	1	
nɔ̀ʔ	1				2	1
ntɛ̀	1					2
tɔ̌m	2				1	
sáʔ ‘needle’						
khʉ̀m	1	1		4	4	2
tǿ ‘calabash’			1			
ncwaŋ ‘woven object, bundle (with multiple extensions)’						
mbàʔ ‘bundle’					1	1
nàkǎʔ ‘pile, heap’	10	1	1		8	6
nàpǔʔ ‘package, parcel’	5		1	1	6	4
ŋgɛ̀ ‘pod’			1			
tǔʔ ‘tuft’	2				1	2
ttshɔ̀ ‘bunch’			1		2	
ssǎ flat side’ < *nàssǎ* ‘buttock’					1	
ntáʔ	1	2		1	3	
pàk ‘slice, peeling’	9		3	1	6	2
kàm ‘short piece, cut section’	1	1			1	1
páʔ ‘fragment, broken piece’	11		2		8	3
nàghǎʔ ‘meagre portion’					2	1
mbáʔ ‘bite’	2			1		2
vɔ̀ŋ ‘troop, group’	1				1	

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	1	**3**	**5**	**6**	**7**	**9**
nsshyɔ̀ ‘portion’	10	1	3		6	2
nə̀khʉ̌ʔ ‘component with its fruits still attached’	2			1	1	1
ŋkhʉ́ʔnə́ ‘component with its fruits or tubers detached’	2		3	1	1	
kà ‘troop, group’					1	
cwɔ̀ʔɔ̀ ‘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:
$$\frac{\text{(cells filled - minimum cells filled)}}{\text{(possible cells - minimum cells filled)}} = \frac{(67 - 34)}{(306 - 34)} = \frac{33}{272} = 0.12$$

b. Single class genders:
$$\frac{\text{(cells filled - minimum cells filled)}}{\text{(possible cells - minimum cells filled)}} = \frac{(99 - 34)}{(204 - 34)} = \frac{65}{170} = 0.38$$

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

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of nominal classification that operate concurrently in Ngəmba 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 *cwɔ̀ʔɔ̀* '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

Ngəmba 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 Ngəmba system clearly

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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 *khʉ̀m* '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 phythomorphic 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).

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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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Towards reconstructing the numeral classifier system of Proto-Tivoid[1]

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Abstract:
The Tivoid subgroup of Bantoid presents an evolving numeral classifier system with restricted lexical coverage, as attested for a number of various subgroups of the Benue Congo languages of Nigeria and Cameroon (Kießling 2018). Semantically, these classifiers categorise counted items for their shape and texture (e.g., oblong and rigid vs. flat vs. small and globular) as well as for their aggregation type (bundle vs. heap) and partition (half, piece) with an occasional conflation with the notion of counterexpectual scantiness. On the morphosyntactic and etymological level, they can be seen to develop from full-fledged generic nouns denoting concepts such as LEAF, SEED, FRUIT and HEAP used as head nouns in associative constructions. Eventual loss of nominal properties indexes an incipient functional split of the lexical source item and the newly emergent word class of numeral classifier. A comparison of numeral classifier systems in two Tivoid varieties, i.e. Tiv (Angitso 2020) and Ugare (Angitso & Kießling 2021), reveals both substantial overlap and variation. For example, cognate classifiers such as Tiv *ítíné* (5/6) and Ugare *ítʃín* (5/6), both used for counting longish outgrowths from a base and applicable to items like plantains and hair, allow for a Proto-Tivoid reconstruction, whereas non-cognates such as Tiv *ì-ké* (9/6) ‘testicle’ vs. Ugare *kù-kwà* (9/10) ‘palm nut’, both used for counting items such as mangos and cashews, attest to the application of different cognitive models. Based on a comparison of the Tiv classifier system and its Ugare counterpart, the contribution explores the extent to which a numeral classifier system can be reconstructed for the Proto-Tivoid stage.

1 We would like to thank Elizabeth Adzer and Prisca Igelle for contributing their Ugare expertise, the University of Hamburg and the DFG for granting funds that enabled us to carry out the research on which this contribution is based. We are also very grateful to two critical reviewers for their remarks and comments that have helped to improve this contribution considerably.

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1 Introduction

The Tivoid languages form a distinct Southern Bantoid subgroup within the Benue-Congo branch of Niger-Congo (Williamson & Blench 2000: 31). Geographically, they straddle the border of Nigeria and Cameroon extending far into eastern and central Nigeria. With several million L1-speakers, Tiv is one of the major languages of Nigeria enjoying institutional support. It can boast of the best descriptive coverage among Tivoid varieties (see Angitso 2020). Ugare, listed under the xenonym Mesaka in the Ethnologue, is spoken by more than 10,000 speakers on the Cameroonian side of the border (Eberhard et al. 2024). Its descriptive coverage is poor with grammatical sketches by Cassetta & Cassetta 1994a, b, c forming the only available sources so far. While Tiv aligns with a number of demographically much smaller languages such as Iceve, Evand, Itang, Iyive and Ipulo in the Southern Tivoid branch, Ugare seems to form a separate branch of its own within Tivoid (Blench 2016). The internal classification of the entire group still remains to be worked out properly though.

Beside a full-fledged noun class system inherited from their Bantoid predecessor, the Tivoid subgroup presents an evolving numeral classifier system with restricted lexical coverage. Based on a comparison of two varieties, i.e. Tiv and Ugare which represent two different branches of the Tivoid spectrum, we explore their numeral classifier systems and the extent to which a prior system of numeral classifiers may reconstruct at Proto-Tivoid level from their commonalities, i.e. a core of cognate classifier items shared by both Tiv and Ugare.[2] The

2 Two reviewers have expressed reservations about the issue of reconstructing an evolving system of numeral classifiers at Proto-Tivoid level, arguing that the claim of an early stage of development of classifiers in contemporary Tivoid languages contradicts the possibility of reconstruction at Proto-Tivoid level. We regard this as a misunderstanding, as will be justified in the conclusion.

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restriction to Tiv and Ugare is due to the fact that these are the only Tivoid languages for which sufficient data is presently available.[3]

As typical members of Bantoid, Tivoid languages have full-fledged noun class systems with a solid Bantoid etymology and some Tivoid specific complexities, e.g. circumfixation of adnominal noun class markers. Table (1) gives a comparative overview of Tiv and Ugare noun classes, according to the adnominal noun class affixes[4], i.e. prefixes (NPx) and suffixes (NSx), and their corresponding associative markers (AM), as one of the concordial agreement targets. The number of classes ranges between 12 in Tiv and down to 8 in Ugare. Noun class numbering follows the canonical Bantu system according to the Bleek-Meinhof conventions (Katamba 2003).

3 All Ugare data are in audio file form of the wav type. They are sourced from two female speakers, Ms. Elizabeth Adzer and Ms. Prisca Igelle, and have partially been transcribed, translated and analysed in the Fieldworks program (FLEX). Since the first phase of the project fell into the Corona period when personal contact was restricted, the data had to be collected in a distant mode, i.e via telephone and WhatsApp calls from Hamburg (the data collector's location) to Ikyogen in Benue state, Nigeria (Ms. Adzer's location at the time), and Buea in Cameroon (Ms. Igelle's location). During a fieldtrip conducted in 2022 after suspension of Corana-induced restrictions, the data were checked face-to-face with other Ugare speakers. We are very grateful to all Ugare consultants for their cooperation. All Tiv data have either been taken from Angitso 2020 or added by Michael Terhemen Angitso himself.

4 Details of adnominal noun class marking have been suppressed for the sake of clarity, as indicated by [...].

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(1) Tivoid noun class systems: Tiv vs. Ugare

	Tiv			**Ugare**	
	NPx- -NSx	**AM**		**NPx- -NSx**	**AM**
1	*∅-<w>-ɣ̀[…]*	*ù*		*à-, ∅-, v-, […] (-̀)*	*ù=*
1a	*∅- -pè […]*	*pè*			
2	*m̀bà- -v̀[…]*	*m̀bà-*		*(v)à-, (v)é- (-́) […]*	*(v)é=*
3	*ú- -́*	*ú*		*ú- (-́)*	*ú=*
5	*í- -́*	*í*		*í- (-́)*	*í=*
6	*á- -́*	*á*		*á- (-́)*	*é=*
6a	*ḿ- -ḿ*	*m̀mà*		*à-, (-̀) […]*	*è=*
7	*í- -ɣ́*	*kì*		-	-
8	*í- -v́*	*m̀bì*		-	-
9	*ì- -∅/-̀*	*ì*		*∅-, kù-, (-̀) […]*	*ì=*
10	*í- -́*	*í*		*í- (-́)*	*í=*
14	*ú- -v́*	*m̀bù-*			
15	*ú- -ɣ́, í- -ɣ́*	*kù*		-	-

2 The associative construction as source of the Tivoid classifier construction

Before delving into the discussion of the classifiers themselves, it is necessary to briefly outline the formation of Tivoid associative constructions, since they are crucial for the understanding of the classifier constructions which are directly derived from them. Generally, the association of a modifying noun (N2) with a preceding head noun (N1) in an associative construction is marked by two morphosyntactic operations in Tivoid: (i) both nouns are linked by an associative marker that indexes the noun class of the head noun and (ii) the prefix of the modifier noun becomes low (Angitso 2022; Angitso 2020). Since both, associative marker and noun class prefix of N2, tend to undergo fusion, this often results in the formation of a falling contour tone, as seen in the Ugare examples in (2) below.

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(2) Ugare: Tonal noun class suffix deletion in terminal modifier nouns[5]

a. *á-tsŭm* (3/6) 'songs' < *á-tsùm-́*
ú-zwā̆ *â-tsùm*
3-mouth:3 3.AM:6-song
'mouth of songs'

b. *í-nùnú* (9/10) 'birds' < *í-nùnù-́*
í-kwā̆ *î-nùnù*
5-head:5 5.AM:10-bird
'head of birds'

Furthermore, the modifier nouns in most Tivoid languages lose their (mostly tonal) class marking suffixes. In Tiv, this type of suffix deletion is often accompanied by the addition of a noun phrase terminal enclitic[6] that agrees with the class of the head noun under certain conditions, e.g. when noun classes of head noun and modifier noun do not match (Angitso 2023), as exemplified in (3).

(3) Tiv: Noun class suffix deletion in terminal modifier nouns accompanied by insertion of noun class enclitic index of head nouns

a. *í-kɔ̄n-ŭɣ* (7/6a) 'chair'
ú-wē̆-ɣ *kú* *ì-kŏn*
15-hand-15 15.AM 7-chair:ENC
'arm of a chair'

b. *ḿ-ŋgērè-mī̄* (6a) 'water'
í-tɔ́ *í* *m̀-ŋgĕ̌*
5-buttock:5 5.AM 6a-water:ENC
'bottom of water'

5 The falling tone on the noun class prefix of the modifier noun (N2) results from two processes. First, the high tone of nouns in N2 position is generally replaced by a low tone. Second, this low tone is preceded by a high tone associative marker, forming a falling contour tone.

6 This enclitic consists of an invariant floating high tone (Angitso 2023) which is accompanied by segmental indexes for a restricted set of noun classes, i.e. 2, 6a, 7, 8, 14 and 15. All other noun classes remain without an agreement index. The invariant floating H tone enclitic is glossed as ENC in (3a–b). As soon as the enclitic also includes a noun class index, it is glossed by its noun class number as in (3c).

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c. *òː-̀* (1/2) ‘person’
ú-wê-ɣ *kú* *òːr=ŭɣ*
15-hand-15 15.AM 1.person=15.ENC
‘hand of a person’

Thus, the noun *í-kɔ̄n-ŭɣ* (7/6a) ‘chair’ loses its noun class suffix *-uɣ* in (3a), while a final high tone is attached as enclitic in agreement with class 15 of the head noun *ú-wê-ɣ* (15/6) ‘hand, arm’, as also shown in Angitso 2023. In (3b), the noun *ḿ-ŋgērè-mn̄* (6a) ‘water’ loses its noun class suffix *-m* (along with additional segments in the root), while an enclitic final high tone is attached in agreement with class 5 of the head noun *í-tʊ́* (5/6) ‘buttock’. The noun *òː(r)-̀* (1/2) ‘person’ (3c) loses its suffix *-̀*, while the head noun *ú-wê-ɣ* (15/6) ‘hand, arm’ triggers the addition of a noun phrase final enclitic of the form *=ŭɣ*.[7] In the Ugare examples in (2) above, the high tone suffixes in ‘songs’ and ‘birds’ are deleted when the nouns occur as final modifiers in associative constructions. In contrast to Tiv, no enclitics appear.

Both languages, Tiv and Ugare, also have concurrent numeral classifier systems, as demonstrated for Ugare in (4). When it comes to counting items such as mussels, for example, it is not enough to simply combine the noun *ù-gwándè* ‘mussel’ with the numeral *twám* ‘one’. Instead, it must be accompanied by a sortal classifier which has to be *ú-gbéndé* in this case (4a). Its absence in (4b) results in ungrammaticality.

(4) Ugare: sortal classifier *ú-gbéndé* (3/6) ‘muscle’ for items with bulging shape

a. *ú-gbéndé* *ù-gwándè* *ú-twăm*
3-CLF<MUSCLE:3 3.AM 3-mussel 3-one
‘one mussel’

b. **ú-gwándè* *ú-twăm*
3-mussel 3-one

7 The allomorph *òːr* of the lexical root *òː* is triggered by the presence of a vowel initial enclitic marker in (3c). The interpretation of the segment /r/ as part of the root rather than part of the enclitic is supported by the fact that an archaic form of the noun *òrò* is attested in early Tiv literature, e.g., Judd 1916. In (3a), the enclitic of class 15 *=ŭɣ* is reduced to *=́* by haplology, i.e. to avoid two identical morphemes in sequence in an underlying form **ì-kɔ̀n-úɣ=úɣ* that combines two homonymous markers, i.e. the adnominal suffix of class 7 *-úɣ* and the enclitic marker of class 15 *=úɣ*.

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Morphosyntactically, the Tivoid numeral classifier constructions originate in associative constructions in which the head noun undergoes incipient grammaticalisation as a classifier. Since the head noun generally precedes its modifiers, the resulting classifier system ends up with the constituent order of [CLF N] NUM, i.e. the classifier (CLF) comes first forming an immediate constituent with the enumerated noun (N) following directly, excluding the numeral (NUM) which comes last, as schematized in (5a) and exemplified for Ugare (5b) and Tiv (5c).

(5) Syntax of Tivoid classifier constructions

a. [CLF AM N] NUM < [N_1 AM_1 N_2] NUM

b. *é-gbéndé* *û-kpóró* *á-tâːnì*
6-CLF<MUSCLE:6 6.AM:1-dried.cassava 6-five
'five dried cassavas'

c. *á-sa̰ŋgē* *á-m̀-kě* *á-tâːn*
6-CLF<SEED:6 6.AM-6a-pepper:ENC 6-five
'five pepper fruits.'

It is not only the constituent order that the classifier construction inherits from the associative construction, but also all its morphological properties pertaining to noun class indexation. By virtue of their property as nouns, all classifiers are actually assigned to a noun class and, due to their syntactic status as heads, trigger noun class agreement in the final numeral and in the associative marker (AM) that links the enumerated noun to the preceding classifier. Thus, the Ugare classifier *é-gbéndé* (5/6) 'muscles' in (5b) above requires a floating high tone as associative marker of class 6 that is grounded in the low toned class 3 prefix of the enumerated noun *ùkpóró* (1) 'dried cassava' to form a falling tone here. In both (5b) and (5c), the numeral also shows concordial agreement with the noun class of the classifier, i.e. class 6, neither with class 1 nor with class 6a, i.e. the noun classes of the enumerated nouns.

Both numeral classifiers and evaluative quantifiers form a tighter morphosyntatic unit with the enumerated nouns, to the exclusion of the numeral, as promoted by their syntactic adjacency. This is directly reflected in morphophonological processes that link the classifier with the enumerated noun, as seen in (6) where the floating high tone associative marker for class 6 triggered by the Ugare classi-

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fier *í-ʧín* (5/6) ‘stem’ merges with the initial low tone of the enumerated noun *úlúgú* (3/10) ‘cassava’ to render a falling contour tone (6a).

(6) Tivoid classifier constructions: unit of classifier and enumerated noun

a. Ugare:

é-ʧín	*î-lúgù*	*ú-rùkpá*
6-CLF < STEM:6	6.AM:10-cassava	6-two

‘two cassava plants (with roots)’

b. Tiv:

á-tíné	*â꞉-lōgō*	*á-tâ꞉n*
6-CLF < STEM:6	6.AM:1-cassava:ENC	6-five

‘five cassava plants (with roots)’

In Tiv, there is even more evidence in support of the morphosyntactic unit formed by the classifier and the enumerated noun. First, just as in Ugare, fusion of the AM marker and the prefix of the enumerated noun occurs, only that in Tiv, the fusion is restricted to the special case of phonetic identity of both markers as in (6b) where the associative marker *á* and the noun class prefix *à-* of *à-lōgō* are segmentally identical, both merging in *â꞉-lōgō*. Furthermore, the enclitic triggered by the classifier marks the terminal boundary of the phrasal unit of classifier and enumerated noun to the exclusion of the numeral, as also seen in (6b) where the enclitic is a floating H tone which has the effect to raise the preceding low tones of *à-lògò* to become mid in *à-lōgō*.

In the following we briefly outline the semantic, morphosyntactic and etymological profile of both Tiv and Ugare numeral classifier systems, before we focus on a comparative overview.

3 Numeral classifier types

In contrast to prototypical numeral classifier languages such as Chinese, Japanese and other East and Southeast Asian languages (Bisang 1999) the Tivoid systems are restricted in that classifiers are only used for a subset of nouns. They do not cover the entire nominal lexicon. Furthermore, Tivoid classifiers are etymologically perfectly transparent, since most of them derive – in cognitively motivated ways – from coexistent nouns as in the case of the classifier *ú-gbéndé*

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for items with bulging shape which derives from the ordinary noun *ú-gbéndé* (3/6) ‘muscle’ as in (4).

Basically, two types of numeral classifiers could be distinguished for both Tiv and Ugare: sortal classifiers which apply to nouns of high countability[8], “dividing the inventory of count nouns into semantic classes, each of which is associated with a different classifier” (Gil 2013), and mensural classifiers which provide nouns of low countability with a unit of measure by means of which they may then be counted. In addition, there is a third category of evaluative quantifiers that express scantiness, eventually combined with the notion of contempt. While these are not strictly classifiers, they show considerable parallelism to the classifiers, morphosyntactically, and are thus included here.

3.1 Sortal classifiers

In Ugare, there is an opposition of the classifiers *ítʃín* and *úgbáː*, derived from nouns meaning ‘stem’ and ‘branch’, respectively. The classifier *ítʃín* (5/6) ‘stem’ is used in counting longish outgrowths from a phytho- or zoomorphic base such as *ùnòúrú* (3/10) ‘plantain’ (7a) or *úfò* (3) ‘hair’ (7b).

(7) Ugare: sortal classifier *ítʃín* (5/6) ‘stem’[9]

a. *í-tʃín* *û-nòúrú* *í-twăm*
5-CLF < STEM:5 5.AM:3-plantain 5-one
‘one plantain plant’

8 The distinction of count vs. mass nouns is not a binary one, but has rather been conceived in terms of scales of countability (Allan 1980) and degrees of individuation (Grimm 2018). Moreover, it is neither a purely grammatical issue (count vs. mass nouns) nor a purely ontological one (discrete entity vs. non-discrete substance), but rather requires “a balanced and thorough examination of the relation between grammatical number coding and entity types” (Grimm 2018: 570). While it is still a long way to go for working this out in Tivoid languages, the main parameter taken as an indicator of a higher degree of countability, for the time being, is the presence of a morphologically marked number distinction as enshrined in the Tivoid gender system, i.e. the contrast of nouns that come in singular-plural pairs vs. those that do not.

9 The falling tone on the prefix of the noun denoting the counted item results from two the same processes that affect the prefix of modifier nouns in associative constructions, as described in footnote 5 above.

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b. *é-ʧín* *û-fò* *ú-rùkpá*
6-CLF < STEM:6 6.AM:1-hair 6-two
'two (strands of) hair'

In direct contrast to *ítʃín* (5/6) 'stem', *úgbá:* (3/6) 'branch' applies to longish outgrowths that are separated from their base, as is the case for *èndérɨ́* (1/2) 'spinach' (8a) and *úfò* (3) 'hair' (8b) when trimmed off from their roots. In Tiv, *gbâ* (1/2) 'branch' is not a classifier.

(8) Ugare: sortal classifier *úgbá:* (3/6) 'branch'

a. *ú-gbá:* *ê-ndérɨ́* *ú-twăm*
3-CLF < BRANCH:3 3.AM:1-spinach 3-one
'one spinach (without root)'

b. *á-gbɨ̄:* *û-fò* *ú-rùkpá*
6-CLF < BRANCH:6 6.AM:1-hair 6-two
'two strands of hair (without roots)'

The Tiv noun *ítíné* (5/6) 'stem' is directly cognate to Ugare *ítʃín* (5/6) 'stem' and also shares its grammaticalisation as a sortal classifier used in counting longish outgrowths from a phytho- or zoomorphic base such as *àlŭm* (1/2) 'orange' and *í-ʧĕ:* (5) 'hair' in (9a, b). In contrast to Ugare, though, the Tiv cognate *gbâ* (1/6) 'branch' does not function as a numeral classifier. Instead, the semantic contrast of outgrowths connected to their base vs. outgrowths separated from their base is encoded via the use of the classifier *ú-kón* 'stick/tree' (3/10), as in (9c) which directly contrasts with (9a).

(9) Tiv: sortal classifier *í-tíné-ˊ* (5/6) 'stem'

a. *í-tíné* *í* *àlŭm* *í-mɔ̄m*
5-CLF < STEM:5 5.AM 1.orange:ENC 5-one
'one orange plant (in situ)'

b. *á-tíné* *á* *ì-ʧĕ:* *á-há:*
6-CLF < STEM:6 6.AM 5-hair:ENC 6-two
'two hairs (in situ)'

c. *ú-kón* *ú* *à-lŭm* *ú-mɔ̄m*
3-CLF < STICK:3 3.AM 1-orange:ENC 3-one
'one orange tree (detached from its root)'

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3.2 Mensural classifiers

Apart from sortal classifiers, Tivoid also has mensural classifiers for different types of aggregation (bunch, heap, bundle) or partition (broken half), as exemplified with the Ugare item *ú-túm* (3/10) 'bunch' used for palm fruits (10a) and plantains (10b), i.e. items that naturally come in such constellations, and with the Tiv item *tíhì* (1/6) 'unbanded pile' used for any items that can be assembled in such aggregation, e.g. pepper (9). This also includes items that are gathered in such constellations as illustrated with the Tiv item *tíhì* (1/6) 'unbanded pile' used for 'pepper' (11).

(10) Ugare: mensural classifier *ú-túm* (3/10) 'bunch'

a. *ú-túm* *î-vírè* *ú-twăm*
3-CLF<BUNCH:3 3.AM:10-palm.fruit 3-one
'one bunch of palm fruits'

b. *í-túm* *î-nòúrú* *í-tárén*
10-CLF<BUNCH:10 10.AM:10-plantain 10-three
'three bunches of plantains'

(11) Tiv: mensural classifier ∅-*tíhì* (1/6) 'unbanded pile'

a. ∅-*tíhì* *ù* *m̀-kě* *mŏm*
1-CLF<UNBANDED.PILE:1 1.AM 6a-pepper:ENC 1:one
'one pile of pepper'

b. *á-tīhī* *á* *m̀-kě* *á-há:*
6-CLF<UNBANDED.PILE:6 6.AM 6a-pepper:ENC 6-two
'two piles of pepper'

3.3 Evaluative quantifiers

In addition to sortal and mensural numeral classifiers, Tivoid languages still have another category with classifier potential, i.e. evaluative quantifiers, as demonstrated for Ugare in (12) and for Tiv in (13). Two quantifiers, i.e. Ugare *ú-gbéŋgérɨ́* (3/6) 'fishing hook' (12a–b) and *ú-gàrɨ́* (3/6) 'longish slender (semi-)flexible item'[10] (12c) and Tiv *ú-gbéŋgé* (3/6) 'single item' (13a–b) and *gwàr* (1/6) 'longish slender (semi-)flexible item' (13c), respectively, denote disappointingly low and scanty amounts and thus might be subsumed as "scantifiers".

10 The vowel alternation within the root reflects a fossilized morphophonological process that is not well understood so far.

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Both can apply to just any item, whereas the third one, i.e. Ugare *ú-fíám* (3/10) 'grain' in (12d) and Tiv *í-ʃám* (5/10) 'grain' in (13d), are rigidly restricted to people and items such as coins in their function as quantifiers for an incalculably vast number of single items.

(12) Ugare: Evaluative quantifier usage

a. *ú-gbéŋgérɨ̂* *û-nò* *ú-twăm*
3-EQ < FISHING.HOOK:3 3.AM:3-yam 3-one
'one wretched single yam'

b. *é-gbéŋgérɨ̂* *û-nò* *ú-rùkpá*
6-EQ < FISHING.HOOK:6 6.AM:3-yam 6-two
'two wretched single yams'

c. *á-gèrɨ̂* *ê-nèr* *á-tárên*
6-EQ < SLENDER.FLEXIBLE:6 6.AM:1-person 6-three
'just three people (when expecting more)'

d. *í-fíám* *ê-nèr*
10-EQ < GRAIN:10 10.AM:2-person
'multitude of people'

(13) Tiv: Evaluative quantifier usage

a. *ú-gbéŋgé* *ú* *ì-yǒ* *mɔ́m*
3-EQ < SINGLE:3 3.AM 7-yam:ENC 3:one
'one (wretched) single yam'

b. *á-gbéŋgé* *á* *ì-yǒ* *á-tá:*
6-EQ < SINGLE:6 6.AM 7-yam:ENC 6-three
'three (wretched) single yams'

c. *á-gár* *á* *ì-ǒ:* *á-tá:*
6-EQ < SLENDER.FLEXIBLE:6 6.AM 2-person:ENC 6-three
'just three people'

d. *í-sám* *í* *ì-ǒ:*
10-grain:10 6.AM 2-person:ENC
'multitude of people'

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4 Formal reflections of incipient functional split

Tivoid sortal and mensural numeral classifiers derive from nouns as is evident from the co-existence of a noun with a formally identical item that is used in a classifier construction. Apart from their different patterns of usage, the emergence of an independent taxonomic classifier category is commonly 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) noun class / gender cum number distinctions and (c) concordial agreement features (Kießling 2018).

Ugare classifiers seem to retain the full gamut of nominal properties. There is only one exception in which the functional split of the grammatical category from its original lexical source is reflected in a difference in gender affiliation, i.e., the evaluative quantifier *úgbéŋgérɨ́* ‘fishing hook’. In its basic lexical meaning, it is assigned to gender (3/10) as in (14a–b), whereas it shifts to gender (3/6) when used as an evaluative quantifier (15a–b). The difference is only seen in the formal contrast of the lexical plural in class 10, i.e., *ɨ́-gbéŋgérɨ́* (14b), vs. the quantifier plural in class 6, i.e. *é-gbéŋgérɨ́* (15b), while the singular neutralizes the opposition in the common form of class 3, i.e. *ú-gbéŋgérɨ́* (14a, 15a).

(14) Ugare: Lexical item *úgbéŋgérɨ́* (3/10) ‘fishing hook’

a. *ú-gbéŋgérɨ̂ ʤɔ̄n*
3-hook:3 3.AM:John
‘John’s fishing hook’

b. *ɨ́-gbéŋgérɨ̂ ʤɔ̄n*
10-fishing.hook:10 10.AM:John
‘John’s fishing hooks’

(15) Ugare: Evaluative quantifier *úgbéŋgérɨ́* (3/6) derived from lexical item *úgbéŋgérɨ́* (3/10) ‘fishing hook’

a. *ú-gbéŋgérɨ́ û-nò ú-twǎm*
3-EQ < FISHING.HOOK:3 3.AM:3-yam 3-one
‘one wretched single yam’

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b. *é-gbéŋgérɨ́* *û-nò* *ú-rùkpá*
6-EQ < FISHING.HOOK:6 6.AM:3-yam 6-two
'two wretched single yams'

The Tiv cognate of this item, i.e. *ú-gbéŋgé:* (3~9/6) 'single item', is retained only in its quantifier function, as illustrated in (16). However, its nominal origin is clearly reflected in the genuine nominal properties it displays, i.e. it bears an adnominal noun class prefix *u-* that alternates with *a-* in the plural and it triggers concordial agreement in the associative marker and the numeral. There is another detail still that betrays its prior nominal origin, namely the fact that this quantifier alternates for noun class assignment in the singular, according to semantic features in the enumerated noun. Thus, the singular form *ú-gbéŋgé:* of class 3 is required for counting items such as *íyòŭy* (7/6a) 'yam' in (16a–b), whereas the form *ì-gbèŋgé:* of class 9 is used for counting items such as *àbá:ʧá:* (6) 'letters (of alphabet)' in (16c–d). The plural neutralizes the opposition in the common form of class 6, i.e. *á-gbéŋgé:* (16b, d). It seems that the alternation of class 3 vs. class 9 retains some derivational contrast inherited from the prior nominal source items. Synchronically though, we have a quantifier that alternates according to the enumerated noun.

(16) Tiv: quantifier alternation *ú-gbéŋgé:* ~ *ì-gbèŋgé:/á-gbéŋgé:* (3~9/6) 'single item'

a. *ú-gbéŋgé:* *ú* *ì-yŏ* *mɔ́m*
3-EQ < SINGLE:3 3.AM 7-yam:ENC 3:one
'a single yam'

b. *á-gbéŋgé:* *á* *ì-yŏ* *á-há:*
6-EQ < SINGLE:6 6.AM 7-yam:ENC 6-two
'single yams'

c. *ì-gbèŋgé:* *ì* *àbá:ʧá:* *ì-mɔ̆m*
9-EQ < SINGLE:9 9.AM 6.letter:ENC 9-one
'a single letter'

d. *á-gbéŋgé:* *á* *àbá:ʧá:* *á-há:*
6-EQ < SINGLE:6 6.AM 6.letter:ENC 6-two
'single letters'

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5 Range of alternations in the application of classifiers

Tivoid sortal numeral classifiers display derivational properties, in that their alternation can be used to activate or highlight specific semantic aspects of the enumerated noun. In Tiv for example, the use of the classifier *ítíné* (5/6) 'stem' vs. *ítyáméɣ* (7/6) 'fruit' in application to the item *àtsākā* (1/2) 'potato' brings out the contrast of the potato plant (17a) vs. the potato tuber (17b).

(17) Tiv: contrast of classifiers *ítíné* (5/6) 'stem' vs. *ítáméɣ* (7/6) 'fruit'

a. *í-tíné* *í* *àtsākă* *í-mɔ̄m*
5-CLF < STEM:5 5.AM 1.potato:ENC 5-one
'one potato plant'

b. *í-tám-éɣ* *kì* *àtsākă-ɣ* *í-mɔ̄m*
7-CLF < FRUIT-7 7.AM 1.potato-7.ENC 5-one
'one potato tuber'

In Ugare, the application of the classifier *ítʃín* (5/6) 'stem' vs. *úgbá:* (3/6) 'branch' brings out a contrast of whether a longish phytho- or zoomorphic outgrowth such as *úfò* (3) 'hair' remains in situ in its natural context (18a) or whether it has been cut off and removed (18b).

(18) Ugare: contrast of classifiers *ítʃín* (5/6) 'stem' vs. *úgbá:* (3/6) 'branch'

a. *í-tʃín* *û-fò* *í-twăm*
5-CLF < STEM:5 5.AM:3-hair 5-one
'one stand of hair (with root)'

b. *ú-gbá:* *û-fò* *ú-twăm*
3-CLF < SEED:3 3.AM:3-hair 3-one
'one hair (without root)'

In Tiv, the classifier *ítíné* (5/6) 'stem' is used to count phytho- or zoomorphic outgrowths such as 'hair' (19a) and 'mango' (19d) that remain in situ in their natural contexts; as soon as they are detached from their bases or roots, they have to be counted by the classifier *úkón* (3/10) 'stick/tree' (Angitso 2020) instead as in (19b, e, f). When hair are found in food, though, they are counted with the evaluative quantifier *gwàr* (1/6) 'fibre' (19c) in which case the person uttering (19c) would have the expectation to find even more hair in his/her

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soup, in accordance with the characterisation of *gwàr* as "scantifier" denoting a disappointingly low and scanty amount of items.

(19) Tiv: contrast of classifiers *ítíné* (5/6) 'stem' vs. *úkón* (3/10) 'stick/tree' vs. *gwàr* (1/6) 'fibre'

a. *í-tíné* *í* *à-lŭm* *í-mɔ́m*
5-CLF<STEM:5 5.AM 1-orange:ENC 5-one
'one orange tree (in situ)'

b. *ú-kón* *ú* *à-lŭm* *ú-mɔ̄m*
3-CLF<STICK:3 3.AM 1-orange:ENC 3-one
'one orange tree (detached from its root)'

c. *g<w>àr* *ù* *ì-ʧě* *mŏm*
1.EQ<SLENDER.FLEXIBLE:1 1.AM 5-hair:ENC 1:one
'just one strand of hair'

d. *í-tíné* *í* *(ú-kón* *ú)* *māngŏ*
5-CLF<STEM:5 5.AM (3-stick:3 3.AM) 1.mango:ENC
ú-mɔ́m
3-one
'one mango tree (with root)'

e. *ú-kón* *ú* *māngŏ* *ú-mɔ̄m*
3-CLF<STICK:3 3.AM 1.mango:ENC 3-one
'one mango tree (without root)'

f. *ú-kón* *ú* *ì-ʃàsĕ* *ú-mɔ̄m*
3-CLF<STICK:3 3.AM 9-cashew:ENC 3-one
'one cashew tree (without root)'

6 A comparative perspective on Tivoid numeral classifiers

Having outlined basic typological properties of the Tivoid numeral classifier systems found in Tiv and Ugare, we zoom in on comparative aspects of sortal (6.1) and mensural (6.2) classifiers as well as on evaluative quantifiers (6.3).

6.1 Sortal numeral classifiers

Tiv and Ugare sortal classifiers reveal a considerable degree of congruence. It is not only categories that match, but also forms. Formal

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matches may be genuine cognates or they result from borrowing – which is difficult to tease apart at the present stage due to the absence of robust Tivoid reconstructions.[11]

Table (22) presents the sortal numeral classifiers of Tiv and Ugare arranged according to their semantics, i.e. their convergent range of application, as specified in the first slot. The second slot gives the meanings of their lexical source items, as they are attested in both Tiv and Ugare forms that follow in slots 3 and 4. The last slot presents a guess at the Proto-Tivoid predecessor forms.

11 For a proper application of the historical method, it would be necessary to draw on established sound correspondences within Tivoid, but no such thing seems to be available so far. So all we can do here is assemble look-alikes as potential cognates.

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(20) Cross-Tivoid comparison of sortal classifiers

Range of application: examples	source meaning	Ugare	Tiv	Proto-Tivoid guess
longish outgrowth from a base (root): plantain, hair […]	‘stem’	*í-ʧín* (5/6)	*í-tíné-˝* (5/6)	**í-tíné(-í)* (5/6)
longish outgrowth separated from its base: hair, branch, spinach […]	‘branch’	*ú-gbáː* (3/6)	[∅*-gbáː-ˋ* (1/6)]	[**ú-gbáː* (3/6)]
small globular objects: bean, nut, button, […]	‘seed’	*í-ʃǎɣ* (5/6)	*ì-sàŋgè* (9/6)	**á-sàŋgè(-á)* (??/6)
ovate botanical products and formations (esp. from dough and liquid): potato, buns [...]	‘fruit’	∅*-tàm* (9/6)	*í-tám-éɣ* (7/6)	**í-tám-ék* (7/6)
objects with curved or bulging outline: pod, mussel, kernel of nut types, tortoise shell […]	‘muscle’	*ú-gbéndé* (3/6)	*í-gbéndé-ɣ˝* (7/6)	**?-gbéndé-?* (??/6)
oblong rigid objects (esp. food items): cassava, cricket […]	‘stick’	*ú-téː* (3/10)	*ú-kón-˝* (3/10)	**ú-??* (3/10)
flat objects: paper, food wrapped in leaves […]	‘leaf’	*í-yán* (5/6)	*ú-ká-˝* (3/10)	**??* (??/??)
plants calyxes and pods: bombax, locust beans, ironwood […]	‘amulet’	*ì-kpāːrī* (1/6)	*ì-kpāːɣ* (9/6)	**ì-kpáː* (9/6)
seeds of stone fruits: mango, cashew, African pear, raffia palm nut […]	-	*kù-kwà* (9/10) ‘palm nut’	*ì-ké* (9/6) ‘testicle’	**??* (??/??)
convex items and fittings into them: mush-room, earring	-	*ú-tú* (3/2) ‘ear’	n.a.	-
small insects: black ant, bee […]	-	n.a.	∅*-òː* (1/2) ‘person’	-

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The following observations can be made on Table 16:

First, there is considerable overlap in category and form. Both Ugare and Tiv share a classifier for outgrowths linked to their trunk that is based on the same source model stem and even derived from cognate lexical items. Formal and functional parallels allow for reconstructing a Proto-Tivoid classifier **í-tíné(-í)* (5/6) 'stem' – under the assumption of regular Ugare palatalisation and spirantisation of t in high front vowel environment.[12] The final vowel in the Tiv reflex *í-tíné-́* (5/6) that contrasts with its absence in the Ugare cognate *í-ʧín* (5/6) could either reflect a general process of apocope, i.e. deletion of final segments, in Ugare,[13] or else a fossilized retention of an adnominal suffix for class 5, as is attested elsewhere in Tiv, e.g. by the class 7 suffix *-(e)ɣ* in the items for 'fruit' and 'muscle'.[14]

A similar convergence of classifier categories and their source in cognate nouns can be seen with the items SEED, FRUIT and MUSCLE for contrasting small globular objects vs. ovate botanical products vs. objects with curved or bulging outline. These would indeed be candidates for reconstruction at the Proto-Tivoid level.

The classifier contrast of oblong rigid objects vs. flat flexible objects is also shared by both Tiv and Ugare, and in both cases identical cognitive models apply, i.e. STICK vs. LEAF. However, the lexical items from which the classifiers are derived are not cognate. In order to form a historical hypothesis here, additional data from other Tivoid varieties are required.

More divergence still can be observed in the classifier for seeds of stone fruits such as mango. In this case, it is only the category that is shared by both languages. Neither the cognitive source model nor the lexical source item match. The Ugare exponent derives from the concept palm nut, while the Tiv item derives from the concept TESTICLE.

Further instances of divergence pertain to the range of nouns to which individual classifiers apply. For instance, Ugare *ù-gbèŋgérí*

12 This is confirmed by parallel correspondences of Tiv /t/ and Ugare /tʃ/ reflecting Ugare palatalization, e.g. Tiv *í-tʸúná* vs. Ugare *í-ʧón* 'bitterleaf'.

13 This assumption may be supported by other cases such as Tiv *súlè* 'coin' vs. Ugare *súr*, both borrowed from Hausa.

14 Apart from the floating final H tone in the Tiv form, there is no supportive evidence, so far, for segmental relics of a noun class 5 suffix. So the preliminary assumption of a high toned suffix **-í* in class 5 remains a hypothesis here.

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'calyx of west African Bombax' is counted by the classifier *í-kwáv* (5/6) 'skin' (not included in the discussion above due to its marginality). The Tiv cognate *gèŋgê:* is rather counted with the sortal classifier MUSCLE. Another instance of variation pertains to the Ugare classifier EAR which is absent in Tiv.

The palatalisation in Tiv *í-gbéndé-ɣ* 'muscle' is due to the influence of the adnominal prefix *í-* of noun class 7. So it disappears in plural contexts after the prefix *á-* of noun class 6 in *á-gbéndé*.

Some of the tonal differences seem to have been caused by morphotonological adaptations triggered by noun class re-assignment. Thus, the low tone in Ugare ∅*-tàm* (9/6) 'fruit', cognate to Tiv *í-tám-éɣ* (7/6), most probably results from spreading of the low tone of an erstwhile noun class 9 prefix in a Pre-Ugare form **ì-tám*, (9/6). The Tiv cognate *í-tám-éɣ* (7/6) points to an original affiliation of the noun to gender 7/6 which justifies a preliminary Proto-Tivoid reconstruction **í-tám-ék* (7/6). Along similar lines, the tonal differences in the reflexes of **á-sàŋgè-(á)* 'seeds' can be accounted for by differences in the application of tone spreading from adnominal noun class affixes. The final high tone component in Ugare *í-ʃǎɣ* (5/6) 'seed' seems to be the terminal trace of the erstwhile high tone noun class suffix in a predecessor form **í-ʃàɣ-́*, while the noun class prefix does not spread at all. This must have been different in Tiv, where high and low tone spreading from both noun class prefixes and suffixes must be invoked to account for the tonal contrast of singular *ì-sàŋgè* (9) 'seed' vs. *á-sáŋgé* (6) 'seeds'.

Reconstruction of classifiers for oblong rigid objects vs. flat objects, originating in the cognitive models STICK and LEAF, respectively, seems insecure for Proto-Tivoid at the present stage, since non-cognation of the source items in Tiv and Ugare rather suggests areal diffusion by calquing. Depending on the availability of further Tivoid evidence, however, reconstruction based on the Ugare or the Tiv form may be possible in future.

Even less secure is a reconstruction of a classifier for seeds of stone fruits. While the Ugare and Tiv categories match, their cognitive models are completely different. The corresponding lexical items in both languages, i.e. the Ugare noun *ífér* ~ *áférə́* 'testicle', semantically corresponding to the source noun of the Tiv classifier *ì-ké*, and the Tiv noun *íké* 'palm nut', semantically corresponding to the Ugare classifier *kùkwà* 'palm nut', are not used as classifiers at all.

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A conceptual distinction of outgrowths linked to their trunk vs. outgrowths separated from their trunk is restricted to Ugare with its contrast of classifier items based on the semantic source models STEM vs. BRANCH, while the Tiv cognate for branch, i.e. *∅-gbá:-ˋ* (1/6), does not function as classifier. In the same way, the classifier usage of EAR and PERSON is restricted to Ugare on the one side and Tiv on the other side. So at the present stage of knowledge and in absence of any other Tivoid attestation, none can be reconstructed to the Proto-Tivoid level.

Table (21) presents a condensed comparison of Tiv and Ugare sortal classifiers with respect to three matching criteria, i.e. classifier category, cognitive model and cognate lexical source item. For ease of reference, the classifier meanings are rendered by their lexical source meanings in the first column.

(21) Parametrical matching of sortal classifiers in Tiv and Ugare[15]

Range of application: examples	classifier category	cognitive model	cognate lexical source item
longish outgrowth from a base (root): STEM	+	+	+
small globular objects: SEED	+	+	?
ovate botanical products: FRUIT	+	+	+
objects with curved or bulging outline: MUSCLE	+	+	+
oblong rigid objects: STICK	+	+	-
flat flexible objects: LEAF	+	+	-
Plant calyxes and pods: AMULET	+	+	+
seeds of stone fruits	+	-	n.a.
longish outgrowth separated from its base: BRANCH	-	n.a.	n.a.
convex items	-	n.a	n.a.
small insects	-	n.a	n.a.

Classifiers derived from the lexical items STEM, FRUIT and MUSCLE (and possibly also SEED) match in all three respects, i.e. category (range of application), cognitive model and cognate source item. Classifiers derived from the lexical items STICK and LEAF match in

15 Legend: + indicates that Tiv and Ugare match with respect to the relevant parameter, - means mismatch, ? unclear state of affairs, n.a. not applicable.

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only two respects, i.e. the classifier category and the cognitive model, but do not originate in cognate lexical sources. Regarding the classifier for seeds of stone fruits, Ugare and Tiv only share the classifier category, but no aspect of its lexical source, and classifier categories for convex items, small insects and longish outgrowths separated from their base exist only in one of the two languages.

Table (22) presents the same facts as viewed from the perspective of source items. It shows that cognate lexical source items for the concepts STEM, FRUIT and MUSCLE (and possibly also seed) have grammaticalised to the same type of classifiers in both Tiv and Ugare. The items meaning STICK and LEAF originate in non-cognate lexical items that share the same lexical meaning and show a parallel semantic development as classifiers. Items originating in different concepts such as PALM NUT and TESTICLE converge on the same grammatical target as classifier. Items meaning EAR, PERSON and BRANCH show separate grammaticalisation.

(22) Parametrical matching types of sortal classifiers in Tiv and Ugare

Matching type	lexical source items
complete matching	STEM, FRUIT, MUSCLE, AMULET, [?SEED]
functional and semantic matching without cognate source	STICK, LEAF, [?SEED]
functional matching, diverging source model	PALM NUT / TESTICLE
none	EAR, PERSON, BRANCH

6.2 Mensural numeral classifiers

Mensural classifiers for aggregation and partition types diverge widely in Tiv-Ugare comparison, as seen in table (23).

(23) Cross-Tivoid comparison of mensural classifiers

Meaning	Ugare	Tiv	Proto-Tivoid
tied bundle	*ú-gǎn* (3/6) ‘bundle’	*ì-kà:* (9/6) ‘banded pile’	??
tied bundle of leaf-like items	*í-bámbérɨ́* (5/6) ‘item with a flat surface glued to another one’		??
unbanded pile	*ì-krù* (1/2)	*ì-tɨ̄hì* (9/6)	??

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Meaning	Ugare	Tiv	Proto-Tivoid
bunch	*ú-túm* (3/10)	*ú-súmé-ɣ* (15/6)	??
item broken in half	*ú-mbéɣ* (3/6) 'half'	∅*-bèmbêɣ* (1/6) 'half'	*?-mbéɣ-?* (??/6)

Obvious cognates have only been found for the concept of HALF OF AN ITEM BROKEN IN TWO which may reconstruct as **mbéɣ* or **mbég* of uncertain noun class affiliation (< Proto-Bantu **-bégú* 'seed'?). The Tiv reflex seems to have undergone some type of reduplication.[16] Categorical distinctions shared by both languages include concepts for NATURALLY OCCURRING BUNCH vs. HEAP or PILE vs. BUNDLE OF ITEMS TIED TOGETHER. Ugare stands out by a shape driven distinction for tied bundles according to whether the items involved are flat and leaf-like or otherwise – while Tiv makes no such distinction. In order to come to any historical hypotheses here, more data from other Tivoid varieties are needed.

6.3 Evaluative quantifiers

The system of evaluative quantifiers is remarkably homogeneous in Tiv and Ugare. There are three contrastive categories: two for concepts of deficient or scanty low numbers of items vs. an incalculably vast number. The two "scantifiers" differ with respect to an additional negative connotation in the first one. All of them seem to derive transparently from cognate nouns that allow for a preliminary reconstruction at Proto-Tivoid level, as indicated in the last column of table (24). The only semantic difference is that the neutral "scantifier" in Tiv retains the haptic notion of slenderness inherited from the meaning of its source item 'fiber', as reflected in its restriction to quantifying items such as hair, rope and broom sticks, whereas the Ugare cognate seems to have lost this restriction to slender items altogether. The quantifier for an incalculably vast number of single items is rigidly restricted to items such as people and coins and this restriction is shared by both Tiv and Ugare.

16 Neither Tiv nor Ugare differentiate partitional classifiers for the mode of separation, i.e. whether the part is cut off short or lengthwise or whether it is broken off, as in Ngəmba, a Ghomala' variety of Eastern Grassfields Bantu that has innovated a comparable system of numeral classifiers.

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(24) Cross-Tivoid comparison of evaluative quantifiers

Meaning	Ugare	Tiv	Proto-Tivoid
'disappointingly low amount of useless items'	*ú-gbéŋgérɨ́* (3/6) 'fishing hook'	*ú-gbéŋgé-ˊ* (3/10) 'single item'	**ú-gbéŋgérɨ́* (3/??) '??'
'just some few (slender) single items'	*ú-gàrɨ́* (3/6) 'longish slender (semi-)flexible item'	*∅-gàr* (1/6) 'longish slender (semi-) flexible item'	**ú-gàr(Ý)* (3/6) 'fiber'
incalculable vast quantity: fine grains, people, coins	*ú-fíám* (3/10) 'grain'	*í-sám* (5/10) 'grain'	**í-fám* (5/10) 'grain'

While lexical sources for two of the quantifiers correspond directly, i.e. LONGISH SLENDER (SEMI-)FLEXIBLE ITEM and GRAINS, the pejorative "scantifier" shows an unusual etymology in 'fishing hook' restricted to Ugare – which seems to have been generalised to 'single item' in Tiv already. More comparative data from other Tivoid languages is needed to support this etymology.

Formally, all items in table (26) seem to be cognate. Phonological variations are attributed to sound correspondences whose regular nature can preliminarily be assumed on the basis of their recurrence elsewhere. Thus, the formal difference in the evaluative quantifier for a 'disappointingly low amount of useless items' is probably due to an Ugare retention of the final syllable *rɨ* that was deleted in modern Tiv, as corroborated by a parallel correspondence of Ugare *ù-bérɨ́* vs. Tiv *ù-búé* 'pawpaw; pineapple'.

The Tiv reflex of the evaluative quantifier for 'just some few (slender) single items', probably derived from Proto-Tivoid **ú-gàr(Ý)* (3/6) 'fiber', seems to have undergone deletion of the final vowel which is retained in the Ugare reflex – a process frequently observed in other cases, e.g. Tiv *m̀-sén* 'prayer' vs. Ugare *m̀-sénɨ́*. Labialisation of the initial root consonant in Tiv gàr results from regular spread of the labial quality of the erstwhile prefix *ù-* of noun class 1.

The modern reflexes of the evaluative classifier for incalculable vast quantities can plausibly be retraced to a Proto-Tivoid source item **í-fám* (5/10) 'grain' which must have undergone palatalization of the initial root consonant under influence of the palatal vowel of class 5 prefix *í-* yielding **í-fyám* first. In transition to modern Ugare

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ú-fíám (3/10) ‘grain’, the noun got re-assigned to class 3 retaining the palatalised root consonant as trace of original assignment to class 5. In transition to modern Tiv, the palatalised initial root consonant *fy* was shifted to *ʃ*, as supported by other correspondences, e.g. Ugare *ú-fì-́* vs. Tiv *ì-ʃó:* ‘sorcery’.

7 Conclusion

Both Tiv and Ugare have a restricted numeral classifier system that operates in concurrency to a full-fledged noun class system of the Bantoid type. In most of its aspects it conforms with the profile of restricted numeral classifier systems found in related Bantoid languages such as Ejagham (Watters 1981), Ngiemboon (Vinogradov 2009) and Ngəmba (Mekamgoum & Kießling 2022, Mekamgoum & Kießling 2023). 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 and their arrangement or aggregation (heap vs. bunch vs. bundle). In this, the Tivoid systems clearly conform with universal semantic properties of classifiers (Allan 1977: 297; Craig 1994: 567; Aikhenvald 2000: 286–293).

Due to their early stage of development, Tivoid numeral classifier systems are largely transparent etymologically, retaining more “descriptive content” (Seifart 2018: 29) in their 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 Tivoid originate in nouns for concrete objects such as body parts (muscle), in basic level terms, most of which relate to the botanical domain (stem, branch, fruit, leaf, seed, stick), and in terms of aggregation and partition (bunch, bundle, heap, half).

On the morphological level, incipient grammaticalisation is commonly reflected in a gradual loss of nominal properties in classifier nouns, indexing the functional split of the newly emergent word class of numeral classifiers from their lexical sources. This type of nominal de-categorisation is attested to different degrees across Tivoid. While it seems marginal in Ugare, Tiv retains a number of hybrid classifier nouns that have lost their lexical source (Angitso 2020: 304–307), similar as in Ejagham (Watters 1981: 310–313).

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Syntactically, the Tivoid numeral classifier systems originate in associative constructions in which the head noun tends to undergo nominal de-categorisation and incipient grammaticalisation as a classifier. Since the head noun precedes its modifiers in Tivoid generally, the resulting classifier system ends up with the constituent order of [CLF N] NUM, i.e. the classifier (CLF) comes first forming an immediate constituent with the enumerated noun (N) following directly, excluding the numeral (NUM) which comes last. As observed with other Benue Congo numeral classifier languages (Kießling 2018), this type of construction is remarkable in that it violates two prominent generalizations that dominate the general typological debate on numeral classifier systems, i.e. the assumption of adjacency of numerals and classifiers (Aikhenvald 2000: 104–5, following Greenberg 1972 and Allen 1977) and the postulate of an immediate constituency of classifier and numeral in classifier constructions (Dixon 1986; Aikhenvald 2000: 105).

In addition to the sortal and mensural classifiers, Tivoid has a category of evaluative quantifiers that correspond to classifiers functionally by being involved in quantification, and etymologically by their origin in nouns.

Due to the high degree of categorical similarity, especially with regard to the sortal classifiers and the evaluative quantifiers, and their remarkable etymological parallels in Tiv and Ugare, it seems very likely that other Tivoid varieties share the same type of numeral classifier system. It remains to be explored to which extent commonalities across Tivoid classifier systems form part of the genetic inheritance from Proto-Tivoid or rather originate in areal diffusion. The claim that a classifier system is in its early stages of development in some contemporary Tivoid languages does not necessarily exclude the possibility of having a still earlier stage of development, i.e. a smaller set of common core classifier items, reconstructed for an earlier historical horizon that does not extend all too far into the past. Rather on the contrary, the existence of a common set of cognate forms that share common semantic extensions for classifier function in a range of contemporary Tivoid languages allows for the conclusion that these forms, along with their specific semantic extensions for classifier function, could have been established as early as Proto-Tivoid, following general principles of historical reconstruction on the basis of shared form-function units (Hock 1988, Anttila 1989,

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Campbell 1998). Rather than projecting the entirety of contemporary numeral classifier systems into the past, reconstruction is restricted precisely to that subset of all contemporary systems that forms their largest common denominator, i.e. those items that are cognate by form and convergent in their meaning. It is those items that can reasonably be assumed to reflect a common core system at an earlier historical stage, e.g. Proto-Tivoid, that has been retained in the majority of contemporary Tivoid languages, while all modern systems must have expanded and enriched this common core by individual innovations at later stages of development. Admittedly, this account of the Tivoid classifier situation is slanted towards geneticist interpretations. With respect to the general sociolinguistic situation in the Tivoid speaking zone, it goes without saying that the possibility of contact-induced innovation by areal diffusion can definitely not be ruled out as an alternative explanation of shared similarities in contemporary Tivoid classifier systems. But in order to accurately sort out the share of genetic inheritance, i.e. retention from a shared past, vs. the impact of areal diffusion, i.e. innovation inspired by contact among genetically closely related languages, a much higher degree of descriptive coverage will still be needed for all contemporary Tivoid classifier systems as well as the establishment of regular sound correspondences among Tivoid varieties.

Abbreviations

ABR associative bracket, AM associative marker, CLF classifier, ENC enclitic, EQ evaluative quantifier, H high tone, N noun, N1 head noun in associative constructions, N2 modifying noun in associative constructions, NPx adnominal noun class prefix, NSx adnominal noun class suffix, NUM numeral

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Book reviews

Balbiani, Florian. 2023. Mission – Kolonialismus – Nationalsozialismus. Ernst Dammann und die Hamburger Afrikanistik, 1930 – 1937. (Hamburger postkoloniale Studien 8). München: Allitera.

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> „Die Auseinandersetzung mit dem kolonialen Erbe erfasst weite Teile der Gesellschaften des Globalen Nordens. Neben politischen und wirtschaftlichen Beziehungen geraten dabei auch zunehmend Universitäten in den Fokus von zivilgesellschaftlichen Bewegungen, die diese als Orte der Produktion und Kanonisierung von Wissen aus einer postkolonialen Perspektive hinterfragen. Eine Disziplin, deren koloniales Erbe auf der Hand liegt, ist die Afrikanistik." (Balbiani 2023: 8)

Mit diesen einleitenden Worten aus seiner als Masterabschlussarbeit eingereichten Monographie *Mission – Kolonialismus – Nationalsozialismus. Ernst Dammann und die Hamburger Afrikanistik, 1930–1937* liefert Florian Balbiani gerade in einer sich zusehends postkolonial ausrichtenden Geschichtswissenschaft eine stichhaltige Begründung für sein Thema: die Erforschung der Geschichte der Afrikanistik nach dem Ende der Kolonialherrschaft. Auch Ziel und Absicht seines Forschungsvorhabens, durch Nachzeichnung ihrer historischen Genese und der Tätigkeit ihrer bedeutendsten Vertreter Carl Meinhof, dem weltweit ersten Lehrstuhlinhaber für Afrikanistik (S. 27), und dessen Schüler Ernst Dammann den „politischen und ideologischen Einflüssen [nachzuspüren], die die Disziplin in der Zwischenkriegszeit prägten, und [zu fragen], wie sich deren Vertreter:innen unter den veränderten Rahmenbedingungen positionierten" (S. 9), können erhellende Einblicke in ein im deutschsprachigen Raum bisher wenig erforschtes Fach geben, etwa durch Sichtbarmachung argumentativer und damit weltanschaulicher Kontinuitäten über fünf Jahrzehnte hinweg. Beispielhaft für die enge Verzahnung und Interaktion der Hamburger Afrikanistik mit kolonialen, missionarischen, nationalistischen und nationalsozialistischen Vorstellungen, Interessen und Netzwerken stehe Leben und Wirken des Meinhof-Schülers, Missionspfarrers und späteren NSDAP-Mitglieds Ernst Dammann (1904–2003) in Hamburg, dem

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britischen Mandatsgebiet Tanganyika und Kenya in den Jahren 1930 bis 1937.

Der Überblick über die historische Genese der Afrikanistik und ihren Bedeutungswandel seit dem frühen 19. Jahrhundert fällt angenehm knapp aus. Seien europäische Missionare – deutsche sowie britische – zunächst an den gesprochenen Sprachen in den Kolonien interessiert gewesen, so habe sich diese philologische Ausrichtung mehr und mehr in ein „praktisches Betätigungsfeld" für einen missionarischen, protestantisch fundierten Zivilisierungspaternalismus mit biologistisch-rassistischen Vorstellungen verwandelt. Im „Hochimperialismus" des späten 19. Jahrhunderts habe man die Afrikanistik in größerem Ausmaß als zuvor zum Instrument kolonialpolitischer und ökonomischer Interessen gemacht. Auch der Hinweis auf das seitens des Seminars für Orientalische Sprachen in Berlin und der Hamburger Universität bestehende Interesse, die mit dem Beginn der Zwischenkriegszeit nunmehr akademisch etablierte Afrikanistik trotz ihres Bedeutungsverlustes aus „kolonialrevisionistischen Motiven" (S. 29) beizubehalten, gibt Aufschluss über die tiefgreifende ideologische Funktion des Faches.

All dies böte einen soliden Unterbau für eine viel mehr auf Selbstzeugnisse, Briefe, Tagebucheinträge und vor allem Übersetzungen Meinhofs und Dammanns ausgerichtete Quellenauswertung, um aufzuzeigen, wie tief rassistische Vorstellungen selbst bei der international renommiertesten Nomenklatur der Afrikanistik tatsächlich verwurzelt waren. Vereinzelt zitiert Balbiani aus den sprachwissenschaftlichen Werken der beiden Afrikanisten, in denen sie aus ihrem rasseanthropologischen Überlegenheitsgestus keinen Hehl machen. So etwa wenn Meinhof schreibt, er hoffe, dass die Lektüre seines Buches *Die Dichtung der Afrikaner* aus dem Jahr 1911, den Leser:innen dazu verhelfe, sich so „in diese uns so fremde Welt" zu „vertiefen", dass „die dunkle Rasse uns menschlich näher treten" könne (Meinhof 1911: 5, Balbiani 2023: 35) oder wenn er in seinem Werk *Die Sprache der Hamiten* von 1912 an die sogenannte „Hamitentheorie" anknüpft, derzufolge kulturell fortschrittliche Phänomene im subsaharischen Afrika nicht durch endogene Prozesse oder wechselseitigen Kulturaustausch zu erklären seien, sondern durch die Einwanderung hellhäutiger „Hamiten", die aus dem Norden Afrikas, dem Kaukasus oder dem Nahen Osten überlegene Wirtschaftstechniken und Sprachen mitgebracht hätten (S. 32). Für

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Dammann ist die in Zusammenarbeit mit seinem Missionskollegen entstandene

> „Suahelibibel ein Zeichen dafür, daß unser Interesse an Afrika nicht nachlässt. Wenn man sich auch noch immer sträubt, uns Anteil an der Herrschaft über Afrika zu geben, von der Mitarbeit auf geistigem und geistlichem Gebiet hat und wird man uns nicht ausschließen können“ (Dammann 1937/38: 276, Balbiani 2023: 58).

Ausführlich berichtet Balbiani von Dammanns Lebensstationen, Wirkungsstätten, akademischen Beziehungen und seiner praktischen Forschungsarbeit. Fraglich ist hingegen, ob Passagen wie diese seinem Vorhaben dienlich sind, politischen und ideologischen Einflüssen nachzuspüren, sind sie in der Beschreibung akademischer Alltagspraxis doch wenig aussagekräftig:

> „Über die Drucklegung der Bibelübersetzung tauschte sich Dammann bereits in Tanganyika mit Meinhof aus. So ‚ärgerte es [ihn] immer wieder, dass die Landkarten im Röhlschen Neuen Testament englische Bezeichnungen haben‘ und der fragte Meinhof, ob man nicht eine Karte des alten Palästina und des Vorderen Orients mit Swahilibeschriftung anfertigen könne. Nach seiner Rückkehr übernahm Dammann von der Sekretärin des Hamburger Seminars Emmi Meyer die Korrekturen für Roehls Bibelübersetzung. Meyer, die sich während Dammanns Rückfahrt für ihre eigenen Forschungen auf den Weg nach Kamerun machte, hatte neben der Swahili-Lehre auch diese Aufgabe übernommen. Es schien selbstverständlich, dass Meinhof die Arbeitskraft seiner Mitarbeiterinnen diesem Projekt zur Verfügung stellte. So sah nun Dammann regelmäßig Roehls Manuskripte durch und machte Korrekturen und Verbesserungsvorschläge. Außerdem entwarf und korrigierte er Texte für ein ‚Bibel-Plakat‘ und regte eine Werbebroschüre für die Bibelübersetzung unter dem Titel ‚Lisikilizeni Neno la Mungu‘ (‚Hört das Wort Gottes‘) an. Auch diskutierten Roehl und Dammann Ideen für ein ‚Biblisches Bilderbuch‘. Andersherum stand Roehl Damman für Auskünfte zur Bedeutung einzelner Wörter in Swahili zur Verfügung und überprüfte dessen Übersetzung“ (Balbiani 2023: 56).

Obwohl Balbiani immer wieder einschlägige, kolonialrassistische Passagen aus den Werken Meinhofs und Dammanns wiedergibt, hat seine Studie eher den Charakter eines Literaturreferates. In Kapitel 4 informiert Balbiani die Leser:innen zwar darüber, dass „die praktische Mission im dichten Briefwechsel mit Meinhof keine Rolle mehr gespielt“ und Dammanns Fokus stattdessen einerseits auf der afri-

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kanistischen Sprachforschung und andererseits auf seinem Dienst am kolonialen „Deutschtum in Tanganyika“ gelegen habe (S. 59). All dies ist aber nur die Wiedergabe dessen, was andere, zu nennen wären hier Sara Pugach (2012), Felix Brahm (2010, 2014, 2017) und H. Ekkehard Wolff (2013, 2019), bereits vor ihm herausgefunden haben. Auf diese Weise trägt Balbianis Studie eher Züge eines Literaturreferates. Ein reichhaltigeres, selbstständiges Quellenstudium mit der Zitation entsprechender Passagen aus Briefen, aus denen diese Fokusverschiebung hervorgeht, wären hier wünschenswert gewesen.

Balbianis Zitate und ihre ideologische und zeithistorische Einordnung beschränken sich vielfach auf Forschungsparaphrasen. Seine detaillierte Darstellung des Lebens und Wirkens Ernst Dammanns wirkt wie eine Addition biographischer Daten und akademischer Begegnungen. Weltanschauliche Traditionslinien werden so nur unzureichend gezeichnet, argumentativen Kontinuitäten von den Anfängen der Forschung Meinhofs Ende des 19. Jahrhunderts bis hin zum Wirken Dammanns in den 1930er Jahren des 20. Jahrhunderts fehlt die Kontur, sie werden allenfalls fragmentarisch präsentiert und bleiben darum blass. Statt die Leser:innen darüber in Kenntnis zu setzen, dass das Honorar für die Übersetzung der „Vai-Erzählungen“ 45 Reichsmark betrug, welche Dammann sich mit seinen beiden Übersetzerkolleg:innen zu gleichen Teilen aufgeteilt habe (S. 44), hätte man sich Zitate und Auszüge aus ebendiesen Übersetzungen gewünscht, da auch diese von einem eurozentristisch-kolonialistischen Blick sicherlich nicht gänzlich frei gewesen sein dürften. Bis zuletzt vertrat Dammann eine rassistische Weltanschauung, was ihn sich in seiner 1999 erschienen Autobiographie *70 Jahre erlebte Afrikanistik* (Dammann 1999, Balbiani 2023: 16), die er, wie der Untertitel nahelegt, ausdrücklich als „Beitrag zur Wissenschaftsgeschichte“ (Dammann 1999, Balbiani 2023: 16) verstanden wissen wollte, sogar zu einer Apologie der südafrikanischen Apartheidpolitik versteigen ließ, da eine „Rassenmischung“, d.h. Ehen zwischen schwarzen und weißen Menschen, wegen der „Verschiedenheit der Rassen“ zu einer „Degeneration“ führe. Eine Trennung von „Gruppen von Menschen unterschiedlicher Rassen sei darum notwendig – nicht aus rassistischen Gründen, wie er selbst meint, sondern aus Sorge um „Identität, Zugehörigkeitsgefühl und Heimatlosigkeit“ der aus einer Ehe zwischen Schwarzen und Weißen

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hervorgehenden Kinder (S. 105). Dass Balbiani solcherlei entlarvende Selbstzeugnisse zitiert, ist zweifellos verdienstvoll, jedoch hätte man sich über den gesamten Umfang seiner Studie mehr davon gewünscht. Seinem Vorhaben, Dammanns 1999 erschienene Autobiographie in „Korrespondenz mit den überlieferten Quellen auszuwerten" (S. 16), wird Balbiani so nur teilweise gerecht.

Balbiani versäumt es, seine Studie mit einer Kritik am Wissenschaftsbegriff zu verbinden, d.h. über die rein deskriptive, fachbezogene Ebene deutlich zu machen, dass internationales wissenschaftliches Renommee und eine menschenverachtende Ideologie einander keineswegs ausschließen. Die bloße Berufung auf „die Wissenschaft" darf sich nicht für den Beweis ihres eigenen Geltungsanspruchs halten und sich so selbst legitimieren. Es ist die metathematische Verpflichtung der „Wissenschaft" einer jeden Zeit, ihre eigene ideologische Überformung zum integralen Bestandteil ihrer Überlegungen zu machen und stets nach den Bedingungen zu fragen, unter denen sie entsteht. Und es ist die Aufgabe einer jeden historischen Studie, sich über das arithmetische Aufsummieren von Fakten und Literaturzitaten hinauszuwagen. Nur wenn sich die Geschichtswissenschaft dieser wissenschaftsethischen Verpflichtung bewusst ist, kann sie die Entwicklung einer die Ideologiekritik zusehends ausklammernden, die herkömmliche Forschung nur erfassenden, positivistischen Ausrichtung der Wissenschaft konterkarieren, wie sie gerade bei einem solchen Thema besonders gefährlich ist.

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Dass Heinrich Barth (1821–1865) zugleich der bedeutendste und am wenigsten bekannte Afrika-Forscher des 19. Jahrhunderts ist, zieht sich seit langer Zeit wie ein roter Faden durch die Literatur zur Wissenschaftsgeschichte Afrikas. Dass Barth dabei in einen Topf mit Großwildjägern, Abenteurern, Kolonialisten und Rassisten aller Couleur geworfen wird, ist ebenso wenig zu übersehen. Die vorliegende Biographie des renommierten Afrika-Historikers Christoph Marx entwirft deshalb ein eindrucksvolles Gegenbild, das die Einzigartigkeit Barths unter seinen Afrika bereisenden Zeitgenossen herausarbeitet. Das Alleinstellungmerkmal Barths besteht darin, dass er Afrikanern und ihren Kulturen mit Respekt gegenübertrat, und – meiner Meinung nach nicht zuletzt – mit ihnen direkt kommunizieren konnte. Barth sprach fließend Arabisch, Hausa, Kanuri, Fulfulde, dazu Songhay und das auch nicht gerade einfache Tuareg/Berberisch (s. dazu Gerhardt 2004). Ohne solche Sprachkompetenz hätte er mit muslimischen Gelehrten keine theologischen Probleme diskutieren können. Wie er sich diese Kompetenz bei den damals nicht vorhandenen Beschreibungen dieser höchst komplizierten Sprachen erwerben konnte, ist mir schleierhaft. Das Buch gewinnt dadurch an Bedeutung, dass Marx der inzwischen digitalisierte, umfangreiche Briefwechsel Barths als Quelle zur Verfügung stand. So konnte er viele – auch über die große Afrika-Reise hinaus interessante – Details aus Barths Leben in seine Biographie integrieren, und über die bisher bekannten, auch eher privaten Aspekte hinaus, Einiges an Barthschen Charakterzügen rekonstruieren. So zeigt er, dass Barth nicht, wie immer wieder behauptet, schroff, unzugänglich, abweisend etc. gewesen ist, sondern durchaus gewinnende Züge besaß, die es ihm leicht machten, Bekanntschaften, ja Freundschaften, zu schließen.

Das Buch folgt im Wesentlichen der Chronologie des Barthschen Lebens. Den meisten Kapitelüberschriften sind die Jahreszahlen hinzugefügt, auf die sie sich beziehen. Es sind jedoch einzelne Kapitel allgemeinen Charakters, eingeschoben, z. B. „Die Kunst des Reisens“ als Kap 4, oder „Barth als Wissenschaftsorganisator“ als Kap. 8.

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In der Einleitung charakterisiert Marx verschiedene Perioden in der Geschichte der Erforschung Afrikas: Nach seiner chronologischen Typisierung gehört Barth in das zweite Entdeckungszeitalter. Das erste war weitgehend wirtschaftlich charakterisiert, die wichtigsten Personen waren Columbus und seine Zeitgenossen. Vom ersten unterschied sich das zweite durch wissenschaftliche Interessen und humanistischen Impetus. Ein erster wichtiger Vertreter war James Cook. Diese Periode kulminierte in den Reisen Alexander von Humboldts und Barths und endete etwa 1865 mit dessen Tod. Aus diesen zeitlichen Daten wird deutlich, dass Barth kein Vorbote des deutschen Kolonialismus sein konnte – sowohl Deutschland wie auch deutsche Kolonialinteressen gab es zu seinen Lebzeiten nicht. Aus diesem und auch aus anderen Gründen, die in dem Buch näher ausgeführt werden, passt die gegenwärtige Kolonialismuskritik nicht auf ihn. Damit ist der Grundakkord für die Biographie angeschlagen, für den im Laufe des Buches viele Belege angeführt werden.

Im ersten Kapitel wird die Herkunft, Jugend und Studienzeit Barths behandelt. Barth wurde 1821 in Hamburg geboren. In der nachnapoleonischen Zeit wandelte und modernisierte sich die Stadt gewaltig. Barths aus Thüringen stammender Vater war in Hamburg zu nicht unbeträchtlichem Wohlstand gekommen und hatte sich zum geachteten Import-Export-Kaufmann hochgearbeitet. Die Hoffnungen auf sozialen Aufstieg projizierte er vor allem auf seinen äußerst begabten zweitältesten Sohn Heinrich, dem er ein Geographie-Studium ermöglichte und nach dessen Abschluss eine mehrjährige Reise um das Mittelmeer, die in der Nachschau als Vorbereitung für seine große Afrika-Expedition gesehen werden kann. Einen Teil der wissenschaftlichen Ergebnisse dieser Reise veröffentlichte Barth als Habilitationsschrift. Dieser Mittelmeerreise ist das 2. Kapitel gewidmet.

Die große, fünfeinhalbjähriger Afrika-Reise (1849–1855) wird im 3. und 5. Kapitel beschrieben. Barth unternahm sie in englischen Diensten, zunächst unter der Leitung des britischen Reisenden und Missionars Richardson. Nach Durchquerung der Sahara trennte sich Barth im Januar 1851 von den europäischen Begleitern und bereiste von da an völlig auf sich allein und seine Fähigkeit gestellt, mit Menschen einer fremden Kultur klarzukommen ein Gebiet, das große Teile der heutigen Staaten Nigeria, Tschad, Kamerun, Niger und Burkina Faso umfasst.

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Während der gesamten Reise hat er auch unter ungünstigsten – auch gesundheitlichen – Verhältnissen penibel seine wissenschaftlichen Beobachtungen aufgezeichnet. Diese umfassten die Gebiete Geographie, Ethnographie, Botanik, Geschichte und Linguistik. Wie zuverlässig diese Daten waren geht aus einem Bericht der Zeitschrift GEO hervor, in dem in den 80er Jahren des vergangenen Jahrhunderts versuchte wurde, die Reise Barths nachzuvollziehen, und der auf Grund von Vegetationsdaten Barths zeigen konnte, wie weit sich der Südrand der Sahara seit Barths Zeit verschoben hat. Ähnliches gilt für seine linguistischen Arbeiten, sie waren bis in die Mitte des 20. Jahrhunderts die einzigen zuverlässigen Angaben zu vielen Sprachen des mittleren Sudansgürtels.

Nach seiner Rückkehr hat er sich sofort an die Ausarbeitung seines Reiseberichtes – parallel in englischer und deutscher Sprache gemacht – englisch, weil dies die Sprache seiner Auftragsgeber war, deutsch, weil er in Deutschland eine Professur zu erhalten hoffte. Dieser Bericht hatte nicht die erhoffte Wirkung, was auf verschiedene Ursachen zurückzuführen war. Eine davon war mit Sicherheit Barth's Stil: "[the] manner in which he presented to the public the results of his travels contributed in no small measure to the continued obscurity of his name. […] In truth they make dull reading for anyone who has no particular interest in the countries they describe, and are rendered tedious by an entire lack of those flashes of humour which so lighten the task of the reader." (Bovill 1926: 319). Zum Anderen hatte sich das Interesse der Öffentlichkeit von Zentral- und Westafrika hin zu anderen Regionen (z.B. den Schneebergen Ostafrikas) verlagert, und schließlich war in einem sich immer stärker in Richtung Imperialismus und Rassismus hin entwickelnden Europa für Barths empathische und kulturrelativistische Sicht der Verhältnisse in Afrika kein Raum mehr.

Nach der Rückkehr von seiner großen Afrika-Reise versuchte Barth, sich im akademischen Leben Berlins zu etablieren. Das gelang ihm nur teilweise – er bekam in Berlin ein Extraordinariat, das ersehnte Ordinariat, die Nachfolge seines Lehrers und Mentors Ritter, blieb ihm versagt. Er war aber weiter aktiv in der Akademie der Wissenschaften, deren Vorsitz er zeitweise innehatte. Durch die Gründung einer Stiftung, für die er lebhaftes Fundraising betrieb, setzte er sich für die Förderung des wissenschaftlichen Nachwuchses ein

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Seine Gesundheit, die ihm schon in Afrika häufig zu schaffen gemacht hatte, bereitete ihm auch nach seiner Rückkehr immer wieder Schwierigkeiten, sodass er sich gezwungen sah, eine Kur in Süddeutschland anzutreten, die ihm auch Besserung brachte. Unmittelbar nach deren Ende begab er sich wieder auf Reisen, die letzte führte ihn auf den Balkan und in das Osmanische Reich, mit deren wissenschaftlichen Ergebnissen er sehr zufrieden war. Kurz nach dem Abschluss dieser Reise erkrankte Barth und starb nach kurzer Krankheit im November 1865.

Dem Versuch, Barth aus seiner unverdienten Unbeachtung herauszuholen, ist jeder Erfolg zu wünschen. Im Gegensatz zu den Texten Barths ist das Buch gut zu lesen, reich mit relevanten Abbildungen ausgestattet. Eine fast vollständige Bibliographie der wissenschaftlichen Arbeiten Barths, die auch die nicht-afrikanistischen Arbeiten enthält, ist durchaus willkommen. – Kurz: ein Muss für jeden an der Wissenschaftsgeschichte Afrikas und an einem Forscher Interessierten, dessen sich auch die heutigen antinationalistischen, antikolonialistischen deutschen Wissenschaftler nicht zu schämen brauchen.

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Breyer, Francis. 2022. Schrift und Sprache in Nubien. Studien zum Napatanischen Meroitischen und Altnubischen. (Meroitica 29). Wiesbaden: Harrassowitz Verlag.

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Das vorliegende Buch von Francis Breyer verknüpft auf gelungene Weise ausgewählte Studien zum Meroitischen und Napatanischen mit ägyptischem und lateinischem Lehngut mit der Frage, welche Sprachen im Mittleren Niltal über die Jahrhunderte hinweg gesprochen wurden. In insgesamt 21 in sich abgeschlossenen Beiträgen (z.B. Kap. 2 Jenseits von Jam: Die Harchuf-Inschrift zwischen soziolinguistischer und paläoökologischer Forschung, S. 35–60; Kap. 16 *Ebur, ivory, ivoire*: ein meroitisches Lehnwort in europäischen Sprachen, S. 275–278) nimmt er uns mit auf einen Streifzug durch die antike Sprachenvielfalt Nubiens.

Die ersten vier Kapitel behandeln mögliche linguistische Substrate (berberische, kuschitische, nilo-saharanische) und archäologische Hinweise vor der Herausbildung der Schriftsprachen im Mittleren Niltal. Insbesondere Anthroponyme und Toponyme werden genauer unter die Lupe genommen.

Kapitel 5–7 beschäftigen sich mit dem Napatanischen. Neben Ausführungen zu Besonderheiten der Schreibweise einzelner Wörter (S. 121–127) wird versucht zu klären, ob es sich beim Napatanischen um einen altägyptischen Dialekt, eine Art Demotisch oder um eine Kreolsprache handeln könnte bzw. ob es überhaupt gesprochen und nicht nur (als eine Art Kunstsprache) geschrieben wurde.

Lediglich drei längere Textinschriften sind uns überliefert, die im Buch auch auszugsweise transkribiert und übersetzt sind, der Rest besteht aus einzelnen Wörtern in napatanischer Orthographie (S. 96). Rilly (2007: 26) sieht im Napataischen etwa ein „égyptien ‚méroïtisé'", keine eigene Sprache. Breyer hält das Napatanische für eine „ägyptisch-basierte Kreolsprache mit nilo-saharanischem Substrat" (S. 9). Als Substratsprache kommt für ihn sowohl Nubisch als auch Meroitisch in Frage und er vermutet gerade wegen dieses Substrats eine nilo-saharanische Sprachumgebung zu jener Zeit (S. 95–102). Seine Datierung des Napatanischen fällt auf die Zeit der ersten Kurru-Könige (S. 99). Aufgrund der folgenden drei Fakten sieht er in ihm nicht nur eine Schrift-, sondern auch eine gesprochene, eventuell

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auch eine Plansprache (S. 85ff.), keine geschriebene Kunstsprache: (1) Besonderheiten in der Phonologie, so bei den Sibilanten sowie bei Dentalen im *status pronominalis*, (2) der Gebrauch von Ideophonen und (3) die Umwandlung von einem Tempus- in ein Aspektsystem, so wie es von Peust (1999: 305) ausführlich dargelegt worden ist. Breyer stellt jedoch auch die Möglichkeit eines Herrscher-Spleens in den Raum.

Kapitel 8 und 9 untersuchen Besonderheiten der meroitischen Orthographie. In Kap. 8 erklärt Breyer nachvollziehbar seine Ansicht, dass sich bereits seit Beginn der Kuschitenzeit zwei Schreibtraditionen etabliert hätten, von denen eine die ägyptische war, die andere über das Napatanische ins Meroitische gemündet ist. Diese letztere fasst er unter dem Begriff „kuschitische" Orthographie zusammen. Desweiteren vermutet er in der meroitischen Schriftsprache nicht nur Phonogramme, sondern auch Logogramme, die er in Kap. 9 als Ägyptogramme subsummiert und mit Beispielen belegt. Die Auffassung Carsten Preusts, dass das Meroitische ein direkter Vorläufer des Altnubischen sei, teilt Breyer nicht vorbehaltlos (S. 101).

Kapitel 10 hat Entlehnungen altägyptischer Theonyme ins Meroitische zum Thema. Eingehend studiert werden die Götternamen *Amni* ‚Amun', die selten bezeugte *Mt* ‚Mut', *Ḫs* ‚Chons', *Ar* ‚Horus', die sehr unsicheren *Pte* ‚Ptah', *Sbk* ‚Sobek", *Atri* ‚Hathor' und zu guter Letzt *Wos* ‚Isis', *(A)sori* ‚Osiris' und *Apedemak* samt ihren Hypostasen, wobei Breyer diese mit transkribierten Schreibvariationen untermauert und mit REM-Belegnummern ausweist. So werden etwa die unterschiedlichen Schreibweisen von Amun <*Amni*>, <*Mn*>, <*Mne*>, <*Mni*> aufgeführt sowie die Hypostasen Amuns <*Amnute*>, <*Amnp*>, <*Amnpte*>, <*Amnbse*> und <*Amnḫe*> etymologisch durchleuchtet. Dass das meroitische <*Mt*> tatsächlich die ägyptische Göttin Mut ist, ist laut Breyer noch immer ebenso unsicher wie das *hapax legomenon* <*Ḫs*> für ihren Sohn Chons (S. 188f.). Sollte es sich tatsächlich um diese Götter handeln, wäre die Vokalisation archaisch. Bei der Analyse des Theonyms *Wos* ‚Isis' erwähnt Breyer nebenher, eine archaische Graphie <*As*> zeige, dass ein initiales a /a/ auch für /u/ stehen könne und er spricht davon, dass „der Name der Isis eine der Kronzeugen für diese Regel sei" (S. 196). Unwidersprochen ist diese Behauptung jedoch nicht (z.B. Hallof 2022, 1: XIV). Weiterhin

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vermutet er in der geschriebenen Vokativform *Wos-i* einen Diphtong *Wusa-i*.[1]

Vor allem aufgrund ihrer unterschiedlichen Vokalisationen kommt Breyer zu dem Schluss, dass die jeweiligen Theonyme zu unterschiedlichen Zeiten aus dem Ägyptischen entlehnt worden sein mussten. So deuten die meroitischen Schreibweisen von ‚Amun', ‚Horus' und ‚Hathor' auf eine mittelägyptische Vokalisation hin, die sich auch mit archäologischen Funden deckt. ‚Isis' und ‚Osiris' hingegen scheinen erst viel später und in dialektaler Form entlehnt worden zu sein.

Kapitel 11 analysiert meroitische Titel, die neben Götternamen zu einem guten Teil Entlehnungen aus dem Altägyptischen sind und eine Übersetzung aus diesem Grund oft als gesichert gelten kann. Dabei listet Breyer meroitische Titel in Transkription auf, mit ihren ägyptischen bzw. demotischen Pendants und unterteilt in gesicherte und weniger gesicherte Entlehnungen. Abschließend fasst er verschiedene kontaktlinguistische Schichten zusammen, u.a. Entlehnungen mit archaischer Vokalisation aus dem Mittleren Reich (z.B. *ant* ‚Priester'), Lehnwörter aus dem Kreis der Streitwagentechnologie und deshalb aus dem Neuen Reich (z.B. *snn*) „Streitwagenkämpfer" (?) und Entlehnungen mit dem neuägyptischen Artikel (z.B. *perite* ‚Agent', *pelmos* ‚Stratege', *peseto* ‚Vizekönig').

Kapitel 12 listet ins Meroitische übernommene altägyptische Toponyme wie *Pilaqe* ‚Philae', das Kultzentrum der Isis, *Pedeme*, das (nicht ganz gesicherte) heutige ‚Qasr Ibrim' und damit eines der wichtigsten Fundorte Nubiens, *Atiye* ‚Sedeinga', und weitere. Dabei geht Breyer auf mögliche Etymologien und Lautverschiebungen ein.

Kapitel 13 beschäftigt sich mit weiteren meroitischen Lexemen, so *nbr* ‚Gold', *yad* ‚Silber', *qlile* ‚Collier', *tewisti* ‚Anbetung', *atepoke* ‚Opfer', *wte* ‚Schutz', *adb* ‚Provinz', *hr* ‚Norden' und geht auf ihre (nicht in allen Fällen gesicherte) ägyptischen Etymologien ein.

Kapitel 14 geht schließlich den umgekehrten Weg und versucht, anhand meroitischer Belege die altägyptische Vokalisation zu untermauern. Danach folgen drei Kapitel, die sich mit der Herkunft von Lehnwörtern im Ägyptischen, aber auch im Meroitischen beschäftigen; so das aus der Ptolomäerzeit belegte ägyptische *ṯnhr* ‚Elefant' (Kap. 15) und die rekonstruierte meroitische Form **ambur* ‚Elefant', die für Breyer über das Lateinische *ebur* Elfenbein' bis ins Englische (*ivory*) vorgedrungen sein soll (Kap. 16); sowie die lateinischen

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Lexeme[2] für ‚Rom' (meroitisch *Arome*), ‚Caesar' (meroitisch *kisari*) und ‚Maximinus' (meroitisch *Mkesemene*) im Meroitischen (Kap. 17). Das meroitische Lexem für ‚Rom' *Arome* ist als solches jedoch nicht gesichert, da es immer mit einer Determinante *li* erscheint, die bei anderen Toponymen fehlt. Breyer rechtfertigt seine Sichtweise mit dem Lexem *Qes* ‚Kusch', das auch mit Determinante verwendet wird, das aber ebenso wie *Arome* nicht von allen Meroitisten als Toponym interpretiert wird (z.B. Hofmann 1981). Schließlich fasst er Lehngut aus folgenden Wortfeldern zusammen: 1. Eigennamen, 2. Ortsnamen, 3. Titel, 4. Handelsgüter und 5. Exotika (S. 281f.).

Kap. 18 geht näher auf die Bedeutung der beiden meroitischen Titel *katak* ‚Kandake' und *qore* ‚König' ein. Breyer geht bei *qore* von einer Entlehnung in kuschitische Sprachen aus und nicht, wie Bechhaus-Gerst (1989) vermutet hatte, von einem Beleg, das Meroitische könnte Kuschitisch sein (S. 290). Desweiteren zitiert er einige Ortsbezeichnungen in Darfur, die mit einem Lexem *qore* ‚König' in Verbindung stehen könnten, so z.B. *el-Kurru* (S. 291).

Kapitel 20 beschäftigt sich mit der Etymologie des altnubischen *OYPOY* ‚König' und einer möglichen Entlehnung aus dem Koptischen, dem Meroitischen oder der Auslegung als nilo-saharahanische Wurzel. Davor ist ein Kapitel eingeschoben, dass sich mit der Frage nach der Herkunft von Sprechern nubischer Sprachen im Niltal beschäftigt. Bisher ging man davon aus, dass diese ins Niltal eingewandert waren. Indizien dafür waren Lehnwörter im Bereich Wasser- (z.B. ‚Fluss') und Landwirtschaft (z.B. ‚Dattelpalme'), wohingegen Wörter rund um ‚Rind', ‚Kleinvieh' und ‚Getreide' zum nubischen Grundwortschatz gehören und die Nubier somit als sesshafte, auch Feldbau betreibende, Viehhirten gesehen wurden, die ab etwa 1200 v. Chr. ins Niltal eingewandert wären. Breyer fasst die bisherigen Lehrmeinungen in übersichtlicher Weise zusammen und sammelt Pros und Contras zu einer nubischen Autochthonie im Niltal. Schließlich präsentiert er Lexeme, die auf meroitische Sprecher bereits vor der Kuschitenzeit hindeuten.

Darüber hinaus bezieht Breyer auch Stellung zu Rillys (2010) These, Meroitisch sei Mitglied eines nord-ostsudanischen Zweiges des Nilo-Saharanischen. Obwohl er Rillys methodische Vorgehensweise zur Beweisführung eines nilo-saharanischen Meroitisch anerkennt, hegt er, so wie schon in seinen früheren Studien (z.B. Breyer 2014: 118), Zweifel daran und sieht Rillys Schlussfolgerung kritisch. Den

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Abschluss des Werks bildet eine kurze Zusammenfassung der antiken Sprachgruppen in Nordostafrika. Breyer schließt sein Werk mit dem Fazit, äthio-semitische Sprachen würden schon seit Jahrtausenden am Horn und möglicherweise auch in Punt gesprochen werden.

Aufgrund der in sich abgeschlossenen Kapitel liest sich das Buch wie eine Fachzeitschrift, ist unterhaltsam und anregend geschrieben (z.B. Wissenswertes zum Wort *ivory*). Von Vorteil, aber kein Muss ist es, wenn man als Leser in die Transkription des Ägyptischen eingearbeitet ist. Obwohl es nach außen wie eine Monographie wirkt, beschäftigt sich jeder einzelne Abschnitt mit einem eigenen Thema, wobei der Gesamtblick, die Sprachen- und Schriftgeschichte im antiken Sudan, stets beibehalten wird. Besonders hervorzuheben ist, dass jedes Kapitel mit einer individuellen Bibliographie abgerundet wird, weiterführende Lektüre kann also bei Bedarf mühelos herausgefiltert werden.

Ein Schwerpunkt, der sich wie ein roter Faden durch das gesamte Werk zieht, sind sicherlich Sprachvergleiche und Etymologien einzelner Lexeme aus phonologischer Perspektive, vornehmlich aus dem Ägyptischen, Meroitischen und einzelner nilo-saharanischer Sprachen. Ein großer Teil wird dem Meroitischen, hier vor allem seinem Lehngut, gewidmet (Kap. 9–13, 16–18), das Altnubische wird nur gestreift (Kap. 20). Kenntnisse der einzelnen Zeichen und Schriftsysteme werden vorausgesetzt, es kann aber auch ohne diese ein Nutzen aus den Studien gewonnen werden.

Insgesamt ist das Buch eine hervorragende Zusammenfassung des linguistischen Status Quo dieser Region zur Zeit der Antike. Gängige Lehrmeinungen werden ausführlich diskutiert. Breyer versucht nicht, die Leser mit seiner Sichtweise zu manipulieren, nur selten formuliert er explizit seine eigene Haltung. Er liefert dadurch ein unverfälschtes Bild und lässt die Leser selbst Schlüsse ziehen. Vor allem für die Afrikanistik, die es einerseits meist mit schriftlosen, andererseits mit modernen Sprachen zu tun hat, sind die von Breyer untersuchten Schriftdokumente eine enorme Bereicherung und in ihrer Zeittiefe, die im gesamten Kontinent ihresgleichen suchen, bedeutsam. Insbesondere für Kenner des Nilo-Saharanischen sind die in diesem Werk sublimierten Studien ein Gewinn, gehört diese Sprachgruppe doch mit zu den am streitbarsten in der Afrikanistik. Wünschenswert wäre, dass Breyer mit seinem Werk die Motivation dazu liefert, sich von afrikanistischer Seite her mit diesem linguistischen Areal und vor

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allem mit dieser Periode, die in Afrika sonst so kaum zu untersuchen ist, zu nähern.

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Zu Ehren des neapolitanischen Afrikanisten Sergio Baldi, der sich besonders um die Erforschung des Hausa und Swahili sowie des arabischen Einflusses auf die Sprachen Afrikas verdient gemacht hat, haben zumeist bekannte Wissenschaftler in 13 Artikeln aus ihrer afrikanistischen Arbeit berichtet.

Um mit den drei weitgesteckten Beiträgen zum Afroasiatischen von Herrmann Jungraithmayr, Anna Belova und Olga Stolbova zu beginnen, so stellt Jungraithmayr („Seven precious findings in Chadic after 60 years of research: Eine Blütenlese“) kurz verschiedene wichtige Entdeckungen vor, die in seinem eigenen weitgefächerten Œuvre seit über einem halben Jahrhundert verschiedentlich behandelt wurden. Es handelt sich dabei vorwiegend um Entdeckungen, die den afroasiatischen Charakter der tschadischen Verbalmorphologie belegen.

1. Im Tangale wird das Passiv durch einen finalen Glottalverschluß (und Hebung des Tons in der ersten Silbe) ausgedrückt, z.B. *sàa* ‚essen‘ : *sáaˀ* ‚gegessen werden‘. Man kann in dem Glottal einen Reflex des afroasiatischen passivisch-reflexiven *t*-Morphems sehen, z.B. Oromo *fudhuu (fuɗ-)* ‚nehmen‘ : *fudhachuu (fuɗ-at-)* ‚für sich nehmen, erhalten‘.
2. Die imperfektische Konsonantenlängung im Migama (*ápìré* : *ápárrá* ‚wählen‘) erinnert an akk.[1] *iprus* : *iparras* ‚(ab)trennen, entscheiden‘, altäth. *yəfrəs* : *yəfärrəs* ‚zerstört, beschädigt werden‘, berb. (kabyl.) *əfrəs* : *əfərrəs* ‚säubern, reinigen‘.
3. Der Subjunktiv endet im Mokilko auf *-u*, was seine Entsprechungen in kuschitischen und semitischen Sprachen hat; letzteres, wenn man annimmt, dass das westsemitische Imperfekt *yaprusu* ursprünglich eine Relativform war.
4. Der imperfektische *a*-Vokal hat sich in einigen Formen erhalten, wie Hausa *shàà* ‚trinken‘ gegenüber Mubi *sîi*, aber Sokoro *tà* ‚essen‘ gegenüber Hausa *cîi*.
5. Dass das Imperfektiv im Sarwa als feminin aufgefasst wird, harrt noch einer, vielleicht auch afroasiatischen, Erklärung.

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Anna Belova („Lexique culturel en Afrique nord-orientale (termes de «l'or» et ses espèces)") untersucht und vergleicht die Wörter für ‚Gold' in allen Zweigen des Phylums, angefangen von ägyptisch *nbw*, koptisch ⲏⲟⲩⲃ (vgl. das homonyme sem. **nūb-* ‚Biene') über sem. **warq* (akk. *warāqum* ‚gelb/grün sein', sab., äth. *warq* ‚Gold'), das seine regelmäßige Entsprechung in ägypt. *wꜣḏ* ‚grün sein', kopt. ⲟⲩⲱⲧ hat, bis zu sem. *ḏahab*, das als „l'isoglosse la plus «nouvelle»" bezeichnet wird. Zum Glück wird die von Marcel Cohen vorgeschlagene Vergleichung mit ägypt. *ḏʿm* nicht erst erwogen.

Ausgehend von Tiernamen mit einer reichen Dokumentation in tschadischen Sprachen zieht Olga Stolbova („More links between Chadic, Cushitic, and Omotic (animal names)") 23 verwandte Etyma in kuschitischen, omotischen, semitischen und berberischen Sprachen heran. Das weitverbreitete Etymon für ‚Kuh' hat als ersten Konsonanten einen Lateral (Glavda *łà*, Tera *ɮa*) oder Sibilanten (Hausa *sâ*, pl. *shānū* ‚Ochse, Bulle'); rekonstruiert wird **łaay*. In kuschitischen Sprachen gibt es neben der sibilantischen Vertretung (Bedscha *šaʾ*, Saho *saʿa*) im Südkuschitischen auch eine laterale Vertretung (Iraqw *slee* [*łeː*]). Es ist schwierig, die kuschitische Form **śVʿ* mit der prototschadischen unter einen Hut zu bringen. Außerdem gibt es noch ein westtschadisches Etymon für ‚Fleisch' (Tangale *lɔ*), das Entsprechungen im (kuschitischen) Somali *loʾ* und im (semitischen) Hebräisch *leʾåʰ* ‚Kuh' hat. Trotz der lautlichen Nähe liegen wohl getrennte Wurzeln vor, die teilweise beide in einer Sprache auftreten, s. Oromo *saʾa* ‚Kuh' : *looni* ‚Vieh'. Auffällig ist der Pharyngal in Ge'ez *bäggəʿ* ‚Schaf', der nur hier und nicht in verwandten tschadischen und kuschitischen Wörtern auftaucht. Ist er füglich für das Proto-Afroasiatische zu rekonstruieren?

Nur ein Beitrag ist dem Swahili gewidmet, nämlich der erste in der Festschrift, von Flavia Aiello und Maddalena Toscano („On some ICT terms"), der zeigt, wie weit die Sprache im Bereich der Informations- und Kommunikationstechnologie eigene sprachliche Begriffe entwickelt hat. Ursprünglich kamen viele Ausdrücke aus dem Arabischen oder Englischen. Nun bemüht man sich um eine eigene Bantu-Ausdrucksweise, wie bei *nywila* ‚Passwort', das eine Verkürzung aus *nywinywila* darstellt, ein historischer Ausdruck, der im Maji-Maji-Aufstand in Deutsch-Ostafrika (1905–1907) verwendet wurde. Umständlicher heißt es *neno la siri* ‚Wort des Geheimnisses (arab. *sirr*)'. Für die Etymologie von *tovuti* ‚(web)site' wird arabisch *tābūt*

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‚Kasten, Lade' vorgeschlagen. Daneben gibt es *wavu* ‚Netz' (z. B. *wavu wa Intaneti*) und *wavuti*, das um die letzte Silbe von *tovuti* erweitert wurde. Die äthiopische Form aus Guidi (1953) ist *tabot* (nicht *taboti*) ‚Arche Noah', zur Etymologie siehe Leslau (1987). Vom Äthiopischen führt kein Weg zum Swahili, weil die Arche Noah im Neuen Testament (*Agano Jipya*) *safina* (< arab.) heißt.

Bantusprachen kommen auch in dem Beitrag von Rainer Vossen („Origin and development of bird names in Kxoe (Kalahari Khoe): Some preliminary thoughts") vor, in dem Vogelnamen in den verwandten Sprachen Khwe, ||Ani und Buga untersucht werden. Obwohl einige für die Ursprache rekonstruiert werden können, sind die meisten Onomatopoetika, Entlehnungen aus dem Bantu oder deskriptive Namen. Es überrascht nicht, dass etliche Namen noch nicht erklärt werden konnten.

Mit dem Hausa befassen sich die meisten Beiträge. Gian Claudio Batic („Of direction, will, and intention: An analysis of Hausa *nufa*") untersucht anhand von Kontextbeispielen die semantische Entwicklung von *nùfaa* ‚zusteuern auf' zu ‚wollen'. Leider werden weder die Vokallänge noch die Töne angegeben. Man läse besser, wenn der Autor der Konvention in Newman (2007) folgen würde: *nùfā*.

Eine unvollständige Umschrift des Hausa findet sich auch in dem Beitrag von Nina Pawlak („Measuring the content of happiness: Semantic notions coded in the Hausa word *lafiya*"), wobei nur bei direkt behandelten Ausdrücken wie dadi [*dādī*] ‚Glück' und *lafiya* [*lāfiyà*] ‚Gesundheit' die vollständig tonierte und nach Vokalquantitäten spezifizierte Form in Klammern angegeben wird. Das Wort *lāfiyà* < arab. *al-ʿāfiyah* ist übrigens nicht von dem arabischen Verb *ʿāfa* abgeleitet, das sich nicht in Wehr & Kropfitsch (2020) findet, und das auch nicht ‚to treat, to release', sondern ‚darüberschweben' (de Biberstein Kazimirski 1860) bedeutet. Gemeint ist das Verb *ʿafā* ‚getilgt werden, auslöschen, nachlassen', von dem *ʿāfiyah* das feminine aktive Partizip des I. Stammes darstellt. Der III. Stamm (Perfekt) *ʿāfā* bedeutet ‚gesund machen, heilen' im femininen aktiven Partizip *muʿāfiya*. Sinnvollerweise werden viele Kontextbeispiele geboten, um andere Wörter ähnlicher Bedeutung wie *murnà* und auch Wörter für ‚Mitgefühl', ‚Hoffnung', ‚Liebe' u.a. in Beispielsätzen zu präsentieren. In all diesen Beispielsätzen werden weder Vokallänge, noch Töne markiert, z.B. *yana da* für *yánā dà* ‚er ist mit'.

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Nicht mit Sprache, sondern Musik und den orientalischen und indischen Einflüssen auf die Musik der Hausasprecher befaßt sich Mariusz Kraśniewski („The revolution in Hausa music: Hip-hop, the *arewa* chapter“) - gemeint ist *arèwa* ‚Norden‘. Andere erwähnte Fachausdrücke sind *aure* (*aurē*) ‚Hochzeit‘, *lugude* (*lùgùdē*), *kuntigi* (*kùntigī*). In dem Titel eines Musikalbums *Taka* ‚step on it‘ dürfte *tàkā*, der Imperativ von *tākà*, vorliegen. Andere Ausdrücke wie *nanaye* (*nānàyē*) und *charapke* (es ist wohl *carabkē* gemeint) sind nicht in Newman (2007) nachweisbar. Von Hausaisten ist eine Tonierung von Wörtern zu erwarten. Der Einwand, die Hausasprecher schrieben gerade so, kann nicht gelten, weil man ein arabisches Wort, das in Texten natürlich unvokalisiert erscheint, mit Vokalen umschreibt.

Dem jetzt durch Hausa-Einfluss bedrohten Kupto, das zur Bole-Tangale-Gruppe gehört, widmet sich Rudolf Leger („Superstitious beliefs among the Kupto“) mit einer vorbildlich umschriebenen Sammlung von Sprichwörtern.

Einen typischen Hausa-Einfluss zeigen Sprecher des Ebira, einer zur Kwa-Gruppe des Niger-Kongo gehörigen Sprache, wie Aliyu Mu’azu („The interference of first language over second language: A case of some phonological process among Ebira speakers of Hausa“) berichtet.

Mit dem bekannten Hausa-Dichter Alhaji Umar beschäftigt sich Stanisław Piłaszewicz („The mission of Mahdi Musa: An analysis of a poem by Alhaji Umaru“). Ein 88 Zeilen umfassendes Gedicht über den messianischen Mahdi Musa, der vor über 100 Jahren an der Goldküste predigte, wird in englischer Übersetzung geboten. Den beigefügten zwei Musterseiten des Manuskripts aus Accra ist zu entnehmen, dass der Text auf Arabisch verfasst ist. Eine Umschrift sowie der arabische Originaltext fehlen. Die zwei Abbildungen der Originalhandschrift enthalten lediglich 21 Zeilen des Gedichts. Nicht erwähnt und nicht in die Übersetzung einbezogen wurde übrigens die erste Zeile:

> *Bi-smi l-Lāhi r-raḥmāni r-raḥīm Ṣallā l-Lāhu ʿalā n-nabīyi wa-ʾālihi*
> ‚Im Namen Gottes, des gnädigen und barmherzigen! Gott segne den Propheten und seine Sippe!‘

Ebenfalls das Hausa behandelt der Beitrag von Georg Ziegelmeyer („On the idiomaticity of Kanuri *bu* ‘eat’ and *ya* ‘drink’: A case of calquing from Hausa?“). Es geht um idiomatische Ausdrücke mit ‚essen‘ und ‚trinken‘ im Hausa und Kanuri, wobei diese Verben in

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beiden Sprachen sowohl ähnlich lauten als auch idiomatisch ähnlich verwendet werden. Vom Hausa war bereits bekannt (siehe Jaggar & Buba 2009), dass in metaphorischer Weise ‚essen' für ÜBERWINDEN [+ KONTROLLE] (z.B. *ci jaɾ̃ɾàbâwā* ‚Prüfung (essen) bestehen') und ‚trinken' für SICH UNTERZIEHEN [- KONTROLLE] (z.B. *shā rānā* ‚(Sonne trinken) unter der Sonne leiden') steht. Im Kanuri gibt es ganz ähnliche Ausdrücke, auch für die Verwendung des Verbs für ‚trinken' in positivem Sinne, z.B. *bulà sanà*, vgl. Hausa *shā bulà̃* ‚(Kleidung) (Waschblau trinken) gut aussehen', was den großen Einfluss des Hausa zeigt.

Mit Erzählungen im Ful von Diamaré (Nordkamerun) befassen sich Henry Tourneux und Hadidja Konaï („Les formules d'ouverture et de clôture des contes peuls du Diamaré (Cameroun)"). Sie vergleichen Eröffnungs- und Schlussformeln in diesem östlichsten Fuldialekt mit denen im Westen Afrikas (Guinea) - in über dreitausend Kilometern Entfernung - gesprochenen Dialekten.

Alles in allem eine anregende Lektüre!

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