Chapter 9

Predicate structure and argument indexing in early Bantu

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Meeussen's (1967: 108–111) Proto-Bantu reconstruction involves a morphologically compact predicate with bound cross-reference on the verb for core arguments, which indeed characterises the majority of modern languages in the Bantu spread zone. In the north-west, however, numerous Bantu languages possess a split predicate structure with free pronouns or person-inflected portmanteau morphemes that also encode tense, aspect, modality, and polarity. This feature is also found in many languages of the Macro-Sudan Belt, a large convergence area neighbouring the Bantu spread zone and hosting its homeland and Bantu's closest relatives in Benue-Kwa (Güldemann 2008; 2018). Moreover, several Proto-Bantu subject and object prefixes reconstructed by Meeussen (1967) and other researchers deviate considerably from pronoun forms that can be assumed for early Benue-Kwa and Niger-Congo in general (Güldemann 2017). Against this background, the present chapter proposes a revised conceptualisation of pronominal participant marking in early Bantu that can reconcile the modern empirical data in this group with the typological profile of the area where Proto-Bantu originates. It implies that Meeussen's verbal argument cross-reference reconstructions are themselves valid, both in terms of morphosyntactic status and segmental form, but should not be projected back to the proto-stage that gave rise to the entire Narrow Bantu family as traditionally defined. Since these reconstructions differ from argument cross-reference in predicates elsewhere in Benue-Kwa, they should be seen as innovations in later ancestral stages of Bantu.

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1 Introduction

Meeussen (1967: 108–111) reconstructs for Proto-Bantu[1] a morphologically compact predicate with bound argument cross-reference on the verb. A schematic representation of the segmental template of his reconstructed Bantu verb structure is provided in Table 1 based on Güldemann's (2003: 184) simplified adaptation of Meeussen's original schema. The second and third lines respectively give the positions and terms for the eight morpheme slots, which are joined in the first line into two major morpheme clusters. The lower part of the schema gives an approximate semantic profile of each slot. A language-specific illustration is given in (1) from Nande JD42, in which seven of the eight slots are filled and two of them multiply.

Table 1: Morphological template of Bantu finite verbs adapted from Meeussen (1967)

Prefix aka pre-stem cluster				Stem cluster			
-4	-3	-2	-1	0	1	2	3
(pre-initial)	initial	(post-initial)$^{+}$	(pre-radical)	radical	(pre-final)$^{+}$	final	(post-final)
	subject		object	verb	derivation		participant
TAMP		TAMP			TAMP	TAMP	P
clause type		clause type					clause type

Notes: (…) optional, $^{+}$ possibly more than one, T = tense, A = aspect, M = mood, P = polarity

(1) Nande JD42 (Nurse & Philippson 2003: 9)

tu	*-né-mu-ndi-syá-tá-sya-ya*	*-ba*	*-king*	*-ul-ir-an-is-i*	*-á*	*=kyô*
1PL	-TAMP.COMPLEX	-2	-close	-DERIVATION.COMPLEX	-FV	=7
-3 -2		-1	0	1	2	3

'We will make it possible one more time for them to open it for each other.'

[1]Being fully aware of the persisting uncertainty regarding the delimitation of Bantu, the family is understood here in the traditional sense of Narrow Bantu as defined by Guthrie (1948; 1967–71) and other scholars, and Proto-Bantu as the ancestor of these languages.

The diversity of predicate structures in modern Bantu is far greater, however, than the template in Table 1 would suggest. In the north-west, one finds many languages with verb structures such as the one in (2) from Ewondo A72a.

(2) Ewondo A72a (Redden 1979: 56)
a-kad mə soób bī-yé
3SG-HAB 1SG wash 8-cloth
'He washes clothes for me.'

Similar patterns are also widespread in the closest relatives of Narrow Bantu in the Macro-Sudan Belt, as illustrated in (3) with an example from Aghem.

(3) Aghem [Grassfields Bantu, Bantoid, Benue-Kwa, Niger-Congo] (Hyman 2010: 101–102)
ò mɔ́ zɨ̀ kɨ́-bɛ́ ˈnɛ́
3SG PROX.PST eat 7-fufu today
'He ate fufu today.'

The examples in (2) and (3) show that both Narrow Bantu languages from the north-west and their closest relatives outside of Narrow Bantu feature independent subject and object pronouns and/or so-called STAMP morphemes (see Anderson 2011; 2012; 2015; 2016), combining Subject cross-reference with the marking of Tense, Aspect, Modality and/or Polarity, such as *a-kad* (3SG-HAB) in (2).

There is an important caveat to make. On this scale of observation, the assessment of elements referring pronominally to subject and object as more independent from the verb lexeme has to rely to a large extent on the orthographic conventions applied in the hundreds of languages concerned. It has been claimed that in West African languages argument cross-reference on the verb is largely prefixal/bound (cf. e.g. Creissels 2000: 235). Unfortunately, this claim has not yet been supported by conclusive evidence. Until proven otherwise, I cannot help identifying a consistent areal pattern in the fact that clausal argument indexation in the north-west of the Bantu spread zone and in the adjacent Macro-Sudan Belt is so often written separately from the verb lexeme, as opposed to the consistent conjunctive writing in most languages of the core Bantu area. Doing otherwise would imply that large parts of all previous assessment of languages in Africa and beyond regarding their morphological typology are spurious.

The modern and geographically structured diversity sketched above begs the question of what Meeussen's reconstructed template in Table 1 represents. Nurse (2008: §6) provides a thorough discussion of issues revolving around the reconstruction of Bantu verb structure, which is viewed to involve the lexical verb,

verbal argument cross-reference for subject and object, and various types of predicate operators expressed by auxiliaries, particles, and affixes of variable position and host. While a complete treatment needs to account for tone (e.g. Kisseberth & Odden 2003: 61–62; Downing 2011; Marlo 2013; Odden & Bickmore 2014), I focus here on the segmental aspects of Bantu predicates.

So far, there is no consensus on the historical interpretation of the diversity illustrated with (1), (2) and (3) above. Three major proposals have been made to derive the different verbal structures in modern languages from an early Bantu predicate structure. These are given in (4). Capital letters stand for individual morphemes as meaning-bearing units with C representing the verb root, the lexical core of the predicate.

(4) Different proposals for an early Bantu predicate structure

a. I [A] [B] [C] [D] [E] [F] e.g. Meinhof (1938)

b. II [A-B-C-D-E-F] e.g. Meeussen (1967: §2, §6–7)

c. III [A-B] [C] [D-E-F] [A-B] [C-[D-E-F]] + other patterns
e.g. Güldemann (2003)

Meinhof's proposal I in (4a), which derives all agglutinative structures in Bantu from the isolating language type found recurrently in West and Central Africa, is not dealt with further here, as I consider it completely discarded today by African linguists. The pattern II in (4b), which I label the "compact predicate hypothesis", represents the general consensus since Meeussen's (1967) work. It derives the present-day structures in (2) and (3) by means of erosion (cf. e.g. Schadeberg 2003: 156) or erosion and partial dismantling (Hyman 2007; 2011) of the assumed inherited agglutinative structure. Profile III in (4c), which is intermediate between the extremes of I and II and involves various patterns, is referred to here as the "split predicate hypothesis", where multi-word predicates separating subject marking and verb stem were typical despite the existence of a certain amount of bound morphology. This pattern has been proposed more recently, notably by Güldemann (2003; 2007; 2011b,a; 2013), Good & Güldemann (2006), and Nurse (2007; 2008: 62–72). It considers the highly agglutinative predicates characteristic of many modern-day Bantu languages as a later innovation through phonological fusion of the verb stem domain with preceding material.

Recent macro-areal research (cf. Güldemann 2010; 2011a; 2018) argues that the Bantu family forms its own large spread zone and differs strongly from the typological profile of the Macro-Sudan Belt from where Bantu originally spread out. One of the most striking differences is the degree of morphological synthesis in the verb. Against this background, at least two opposite scenarios can account

for the emergence of the modern geographical gradient between split predicates in the north(west) and increasingly compact predicates in the south(east). These are schematised in Figure 1. The panel on the left side of the figure represents the traditional "compact predicate hypothesis" (see II in (4) above), while that on the right side illustrates the 'split predicate hypothesis' (see III in (4) above). The upper and lower boxes in each panel represent the two geographical areas Macro-Sudan Belt and Bantu spread zone, respectively. The arrows symbolise the major typological shift from Proto-Bantu to the modern situation, as implied by each scenario, i.e. from more to less agglutinative in scenario II (left panel) and from less to more agglutinative in scenario III (right panel). According to the last hypothesis, Meeussen's (1967) reconstruction in Table 1 would be a later stage in Bantu. The situation in divergent north-western Bantu languages is not ascribed to erosion let alone morphological dismantling, as is assumed in commonly held positions. Rather, it reflects an earlier stage out of which compact predicates developed during the southward expansion of Bantu.

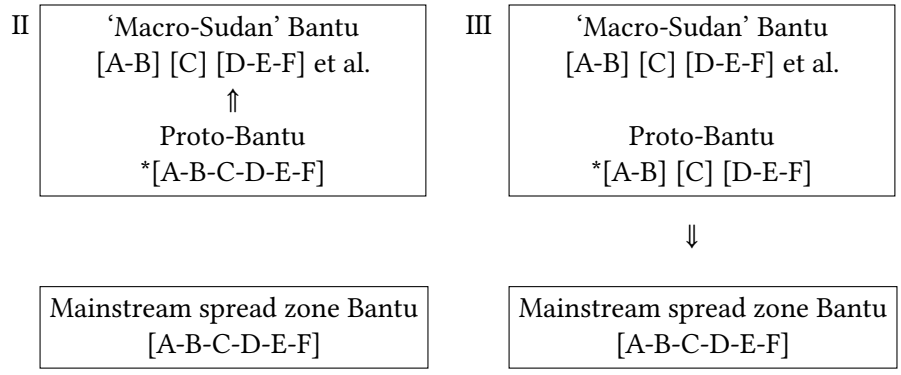

Figure 1: Two areal-historical models for the modern verb-synthesis Bantu profile

Güldemann (2011a: 126) writes on this stage:

> Pre- or even Proto-Bantu possessed a split predicate distributed over more than one phonological word. Its basic constituents would have been the preverbal complex of predicate markers for the subject and predication operators, and secondly the verb stem involving (possibly multiple) extension suffixes but with some degree of size restriction. Non-subject pronouns occurred alternatively before or after the verb stem. If preceding it, object pronouns could enter with the verb into a tighter prosodic constituent known in Bantu linguistics as the 'macrostem'. It should also be considered that subject pronouns or other class-indexing markers that immediately preceded

a verb stem (like in some simple verb forms or verbal nouns) also entered the macrostem domain and thus fused here earlier than in more complex predicate types.

As partly sketched in (5a) for simplex and (5b) for complex predicates, my envisaged profile allows for a diverse range of morphological patterns of predicates and narrow verb forms. The proposal even involves cases of simple phonological words with pronominal marking prefixed to a verb stem or auxiliary. The interpretation that my hypothesis implies that "Proto-Bantu and Proto-Niger-Congo had no inflectional verb prefixes" – cf. Bostoen (2019: 324); similarly Hyman (2011: 3, 5, 31) – is thus inadequate. It does imply, however, that Proto-Bantu did not have the morphologically complex compact predicate structure in Table 1.

(5) Range of morphological patterns of predicates and narrow verb forms

a. i. [SBJ-STEM]
ii. [OBJ-STEM]
iii. [INF-STEM]

b. i. [SBJ-AUX] [ø STEM]
ii. [SBJ-AUX] [SBJ- STEM]
iii. [SBJ-AUX] [OBJ- STEM]
iv. [SBJ-AUX] [INF- STEM]

Some amount of the diverse structural profile implied by hypothesis III, notably split patterns as in (5b), still exists widely in the Bantu spread zone where the compact predicate of Table 1 clearly predominates today. The patterns not only persist there but can also be observed to transform to the standard compact type. Example (6) from Shona illustrates the origin of a compact predicate from the split pattern in (5b-iv), and (7) from Zulu shows a case of a compact predicate emerging from a structure close to that in (5b-ii).

(6) Shona S10 (Fortune 1955: 271)
ndi-ri ku-tora > ndi-riku-tora
1SG-COP 15INF-take 1SG-PROG-take
'I am taking.'

(7) Zulu S42 (Doke 1927: 169)
ngi-be ngi-thanda > bengi-thanda
1SG-be:PST 1SG-love PROX.PST.IPFV:1SG-love
'I was loving.'

In the following, I try to substantiate scenario III by looking at the cross-Bantu diversity regarding the form of speech-act participant cross-reference (1SG/PL and 2SG/PL) before the verb stem and comparing it with the relevant earlier language states of the larger family. I start with outlining my recent findings about the pronoun system of early Niger-Congo in §2.1 and contrast them with the current state of reconstruction within Bantu in §2.2. In §2.3, I re-examine the available Proto-Bantu reconstructions regarding two central aspects of pronominal indexation of clausal arguments, namely their fusion with the lexical verb in §2.3.1 and their segmental forms in §2.3.2. In §3, I summarise the results.

While I give further details in §2.3 on the scope and methodology of my investigation, it should be clear already that I do not intend here to provide a full-scale reconstruction of pronominal argument indexation in Proto-Bantu. In view of the scale of such a task, this would be a major project in its own right. This contribution is primarily an arguably viable exercise in diachronic (and partly areal) typology, which I think is needed in the current state of Bantu historical linguistics, including a plea for rethinking the general historical approach to the emergence of modern Bantu diversity.

2 Syntax and form of preverbal participant cross-reference

In the main body of §2, I assess central diachronic issues of pronominal forms in Bantu and its ancestors. I first look at historical stages prior to Bantu, namely Niger-Congo and Benue-Kwa (§2.1). I then discuss Proto-Bantu as currently reconstructed but differing considerably from the former (§2.2). Finally, I undertake an evaluation of the full array of argument cross-reference in modern Bantu languages regarding morphological status as independent or bound (§2.3.1) and segmental form (§2.3.2) in order to compare it with that in earlier states with a view to reconstruction.

2.1 Pronouns in early Niger-Congo

It may appear strange to try to approach the reconstruction of pronominal marking in a relatively young and still tightly knit family like Bantu from the perspective of Niger-Congo as it is old and highly diverse. Nevertheless, the historical assessment of its pronouns has both general and specific advantages in the present context. Pronouns are historically relatively stable and form paradigms that are not only historically more diagnostic but also quite restricted, as opposed, for instance, to the multiplicity of TAMP operators as attested in certain Niger-Congo

Table 2: Pronoun paradigms in Early Niger-Congo and some conservative subgroups (Güldemann 2017: 114)

Genealogical pool	Lineage+	1SG	2SG	1PL	2PL
Early Niger-Congo		$*mV^{front}$	$*mV^{back}$	$*TV^{close}$	$*NV^{close}$
Ubangi	Gbayaic	*mí	*mɛ	*-ɭɛ́	*-nɛ́
Adamawa	Mumuyic	*mE/ *N	*mo	*rO	*noO
Adamawa	Kwa~Baa	ĨyÕ	-mù	-(t)	-n
Adamawa	Fali	(-)mì	*mu	*-to	*-no
Gur	Central: Oti-Volta	*mV	*bV/(f)V	*ʈV	*(n)yV
Atlantic	Mel: Temnic	*mi	*mO	*sV	*nV
Atlantic	Sua	meN-	mɔɔ	nrə	nɔɔ
Early Benue-Kwa		$*mV^{front}$	$*(B)V^{back}$	$*TV^{close}$	$*NV^{close}$
Benue-Kwa	Oko	-mẹ	-wọ	-tọ	-nọ
Benue-Kwa	Lagoon: Abé	mə	fə	-lə	-ɲə

lineages, notably Bantu (cf. Nurse & Philippson 2006; Nurse 2008; Nurse et al. 2016). Accordingly, one can observe considerable recent advances in pronoun reconstruction of Niger-Congo and Benue-Kwa.[2]

In Güldemann (2017), I propose an approximate proto-paradigm for speech-act participant pronouns given in the second line of Table 2.[3] While these are not proto-forms in the canonical sense of the Comparative Method, as explained in the article and marked accordingly by subscript *, the paradigms of selected Niger-Congo cases in Table 2 represent evidence for their plausibility (close cognates are left-aligned). Given the amount of data involved, the hypothetical exponents, i.e. the phonological expressions of the relevant morphosyntactic categories, are necessarily abstract. However, they are still concrete enough for an informative comparison with forms attested across modern Bantu.

[2]Benue-Kwa is a major Niger-Congo branch, also known as East Volta-Congo, and includes Kwa and Benue-Congo (cf. Williamson & Blench 2000: 18). Bantu is one of its lower-level offshoots.

[3]The reconstruction does not necessarily represent Proto-Niger-Congo but may well reflect a later stage. For example, the eastern Ubangi lineages do not give evidence for the full pronoun set and could well be outside the clade whose ancestor possessed the proto-paradigm in Table 2.

A couple of other points need to be made in the present context. First, the paradigms from outside Bantu hardly ever involve cross-reference that is bound to the verb stem. Subject pronouns are either independent or enter so-called STAMP morphemes within the above-mentioned split predicate structure. The latter is an areal feature of the Macro-Sudan Belt (Güldemann 2011a; 2013; 2018) and is even reconstructed by Anderson (2011; 2012; 2015; 2016) for various lineages of this area, including some of Niger-Congo. In other words, argument indexation bound to the verb neither appears to be deeply entrenched in Niger-Congo nor is it a trait that characterises the areal context of the Bantu homeland. Finally, in Güldemann (2017), I discuss evidence for the narrower context of Benue-Kwa (and independently in a few other cases) that the denasalised 2SG form $*(B)V^{back}$ is a later innovation, which is particularly relevant for its possible reflex in Proto-Bantu at issue here.

2.2 Pronouns and bound verbal argument cross-reference in Bantu

Previous reconstructions of Proto-Bantu bound argument cross-reference on the verb show considerable agreement, not only in assuming all markers to be affixes but also regarding their specific forms. This is apparent from the various proto-paradigms in Table 3, even if the later ones may well build to some extent on Meeussen's (1967) first reconstruction.

Table 3: Various versions of the Proto-Bantu bound verbal cross-reference paradigm

Reconstruction	Subject				Object			
	1SG	2SG	1PL	2PL	1SG	2SG	1PL	2PL
Meeussen (1967)	**n-/ɲ-*	**u-*	**tu-*	**mu-*	**n-*	**ku-*	**tu-*	**mu-*
Guthrie (1971: 10)	**NI-/NY-*	**Ọ-*	**TỌ-*	**MỌ-*	–	**KỌ-*	**TỌ-*	**MỌ-*
Schadeberg (2003: 151)	**N-*	**ʊ-*	**tʊ-*	**mʊ-*	**-N-*	**kʊ-*	**tʊ-*	**mʊ-*
Nurse (2007: 250)	**n-*	**ʊ-*	**tʊ-*	**mʊ-*	–	–	–	–
Babaev (2008: 148)	**ɲi-*	**ʊ̀-*	**tʊ̀-*	**mʊ̀-*	–	**kʊ-*	–	–

Note: <ʊ> renders the vowel commonly represented as <ʊ> in Bantu historical studies

When comparing the Bantu reconstructions in Table 3 with those for higher genealogical levels, one can observe a considerable amount of cognacy. Table 4 provides a comparison between the three historical stages of Benue-Kwa (cf. Güldemann 2017, Table 2 above), Bantoid (and, as will be shown, parts of northwestern Bantu; cf. Babaev 2008), and Narrow Bantu. Importantly, the similarity

Table 4: The reconstruction of pronominal marking in Bantu and beyond

Reconstructions	1SG	2SG	1PL	2PL	3SG. HUMAN	3PL. HUMAN
Benue-Kwa	$*mV^{front}$	$*(B)V^{back}$	$*TV^{close}$	$*NV^{close}$	$(*V^{back})$	$(*ba)$
Bantoid	*mi, *N-	*ʊ	*tʊ~tɪ	*nʊ~nɪ	*(j)ʊ, *a	*ba
Bantu^{+}						
Non-verbal$^{\circ}$	*-mi-	*-w-	*-cu-	*-nu-	*-w-, *-j-	*-ba-
Verbal subject	*ɲi-	*ʊ-	*tʊ-	*mʊ-	*ʊ́-, *a-	*ba-
Verbal object	*ɲi-	*kʊ-	*tʊ-	*mʊ-	*mʊ-	*ba-

Notes: after Schadeberg (2003: 149, 51), Kamba Muzenga (2003), Babaev (2008); hyphens do not indicate the status as infixes but that morphemes can be prefixed and/or suffixed to these pronominal roots

exists between largely *free* forms in the first two units and *bound* forms in currently conceived Proto-Bantu, particularly the exponents in the line "non-verbal" of Table 4 for non-verbal morphosyntactic contexts like independent and possessive pronouns (cf. Stappers 1986; Kamba Muzenga 2003). This picture already suggests that cognate forms are unlikely to have been involved in the early past in a compact predicate with participant cross-reference. With the enormous time depth assumed for Benue-Kwa (or Niger-Congo), any bound exponents of such early stages would be expected today to show signs of erosion in this context rather than being largely identical to their free counterparts.

The differences in Table 4 are equally revealing. First, Benue-Kwa and Bantoid pronouns do not give systematic evidence for the functional differentiation in Bantu in the form of distinct paradigms. Second, the Proto-Bantu bound argument cross-reference on the verb deviates significantly from the Benue-Kwa and Bantoid pronoun canon in four person-number positions.[4] These are 1SG subject and object *Ni vs. $*mV^{front}$, 2SG object *kU vs. $*(B)V^{back}$ (from earlier $*mV^{back}$), 2PL subject and object *mU vs. $*NV^{close}$, and 3SG human object (= noun class 1) *mU vs. $*V^{back}$.

The received Bantu reconstructions as such are not assumed to be invalid, as they are supported by extensive empirical evidence within this group. The

[4]Certain details in the different available reconstructions vary and thus remain indeterminate but at the same time are largely irrelevant for the present topic. While the morphological status and the consonants of the markers are important, the exact quality and tone of the vowel part are secondary. Hence, the latter are represented from now on by means of abstract capitalised segments. In a similar vein, capital *N* in 1SG forms stands for a non-bilabial nasal, which is non-committal to the exact place of articulation.

question is whether they really pertain to Proto-Bantu in terms of Guthrie's (1948; 1971) delimitation of the family or whether they are innovations in lower clades of the phylogeny (cf. Henrici 1973; Stewart 1976: 4, for a similar approach to certain lexical reconstructions).

2.3 Present methodology and data survey

Since Bantu is comprised of several hundred languages, any attempt at reconstructing a Proto-Bantu feature is an enormous task. This is even more relevant for the complex domain of pronoun paradigms as they are central to Bantu morphosyntax and thus tend to enter in construction with lexemes and other form paradigms, making them highly prone to change and variation within diverse and complex morphological environments. Given that I do not intend a full-scale reconstruction, I limit myself to two points: a) the morphosyntax of argument cross-reference in the predicate, and b) the basic segmental shape of the exponents. The hypothesis I advance here is that the geographical cline from the Bantu homeland in the north-west is a proxy for the incremental changes that occurred from earlier to younger clades of the Bantu genealogy as determined, for example, in the recent lexicon-based phylogeny of Grollemund et al. (2015).

Since the expectation is relatively simple, I deem a sample size capable of reflecting such areal trends to be already sufficient. Concretely, forms I assume to be inherited from early Benue-Kwa should still occur detached from the lexical verb close to the Bantu homeland in the north-west, particularly in zones A and B. Further away from the homeland, the retention or loss of more conservative forms is harder to predict, as this depends on the phylogenetic status of an individual language, but if retained, they are likely to then turn up as bound argument cross-reference on the verb. Conversely, presumably innovative forms divergent from those in early Benue-Kwa should be rare or even absent in the north-west but regular as bound verbal cross-reference further away from the homeland. It is important to reiterate that this logic merely expects a rough geographical cline between Bantu homeland and spread zone rather than a clear-cut boundary of the two types of forms, and it does not require an account of language-specific occurrences.

I thus pursue here a methodological shortcut. I undertake an analysis of the data on pronominal argument cross-reference in about 150 Bantu varieties assembled in the appendix of Babaev (2008: 162–179) rather than of a new large dataset with a systematic modern sampling basis, for example, according to the phylogeny in Grollemund et al. (2015). I am fully aware that my dataset underrepresents the Bantu languages in the north-west where the genealogical diversity is

expected to be highest. Furthermore, I restrict myself here to the set of four exponents for speech-act participants, as 3SG/PL forms pertain to the partly separate morphological paradigm of noun classes. My analysis of the language-specific items in Babaev's dataset is twofold. On the one hand, I classify them according to whether the source lists them as either free morphemes or bound morphemes, i.e. affixes, reflecting the status of person marking vis-à-vis the lexical verb. On the other hand, I undertake a rough cognate judgement in assigning a language-specific form, or a relevant component thereof, to either of two classes: (a) inherited Benue-Kwa form, or (b) other, including the Bantu reconstructions I assume to be widespread innovations. Clearly, this is a rather crude approach from a traditional historical-comparative perspective. However, my investigation does not aim at a genuine reconstruction, but rather at a privative assignment of modern items to two distinct types as prefigured in the assumed reconstructions of Table 4 above, namely early Benue-Kwa (as derived from Proto-Niger-Congo) as opposed primarily to the received Proto-Bantu reconstruction.

Table 5 gives Babaev's (2008) language coverage separated according to the well-known reference zones, including zone J (cf. Guthrie 1971; Maho 2009).[5] A number in a cell indicates the number of languages providing data on a given pronominal form in each zone. As can be seen from Table 5, the numbers for languages within an individual zone are not always the same across all person-number features due to possible blanks in Babaev's data; at the same time, for one language, more than one form may be given there.

Table 5: Bantu languages covered in Babaev's (2008) cross-reference data

Zone	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	**Total**
1SG	17	13	12	9	13	7	12	9	6	11	9	3	5	7	4	7	**144**
2SG	16	13	14	9	14	7	11	7	5	10	9	9	5	7	4	7	**147**
1PL	14	13	15	9	14	5	15	8	6	10	9	8	6	5	4	7	**148**
2PL	18	10	15	9	14	6	12	9	6	9	9	9	5	7	4	7	**149**

In the analysis of a specific person-number form, I sort the language-specific forms for each Bantu zone according to my binary opposition of inherited Benue-Kwa form vs. other innovated form. This serves the purpose of identifying possible areal trends of increase or decrease of the two opposed types. In my two-pronged approach assessing the reconstruction from "top" (= Benue-Kwa) and

[5]Babaev (2008) recognises zone J but fails to reassign Nande JD42 from earlier D to current J, which I correct here. In general, what is labelled D and E in Table 5 is not part of zone J.

"bottom" (= Bantu) simultaneously, a rough geographical picture is already sufficient. Hence, Babaev's dataset is argued to give a representative picture in spite of his presumably opportunistic language sampling, erratic coverage of paradigmatic items, and incomplete information about them.

2.3.1 Morphosyntactic profile

The first analysis concerns the morphosyntactic status of the cross-reference forms vis-à-vis the lexical verb, for which Table 6 gives the results according to the Bantu zones as long as there is any variation; there is no variation in the south and east so that these zones are no longer distinguished and are lumped under "rest". Tokens of free forms appear before the slash and those of bound forms after it. It should be borne in mind that my counts reflect the data collation in Babaev (2008), which may well deviate from the full language-specific situation. For example, there could be more diversity within a language, a form given as free may be a more complex STAMP morpheme and thus actually represent an affix rather than an independent pronoun, etc.

Table 6: Free/prefixed predicate cross-reference forms across Babaev's (2008) data

Zone	1SG		2SG		1PL		2PL		Total
	Subj.	Obj.	Subj.	Obj.	Subj.	Obj.	Subj.	Obj.	
A	15/6	6/2	12/6	5/2	10/3	3/1	11/7	5/2	67/29
B	8/5	0/2	6/7	0/3	2/12	0/2	0/10	0/3	19/49
C	0/13	2/4	1/14	3/5	1/14	2/3	1/18	4/5	14/76
D	0/9	0/5	1/8	1/4	0/9	2/4	0/9	1/3	5/51
H	0/15	1/2	0/8	0/3	0/8	0/3	0/10	0/3	1/52
Rest	0/102	0/40	0/108	0/59	0/102	0/26	0/97	0/48	0/582
Total	23/140	9/50	19/143	9/69	13/140	7/36	12/141	10/61	102/780

Note: Rest = zones E-G, J-S

As expected by my proposed scenario, virtually all variation occurs in north-(west)ern zones that are closer to the Macro-Sudan Belt while argument cross-reference in the zones E-G and J-S is conveyed exclusively by prefixes on the lexical verb. In Table 6, I try to capture the different behaviour of Bantu groups by means of a three-way distinction: the dark shading of a cell means that free forms are more or as frequent as bound markers; light shading symbolises the reverse; and no shading shows that free forms do not exist in the data. The gradual decline

of free forms with greater distance from the Bantu homeland is also observed in numerical terms in the last column for totals. In zone A, free forms predominate; in zones B and C, free forms are still recurrent albeit already in the minority; in zones D and H, free forms are very rare; and in the rest of Bantu, free forms are absent. This is opposed to the picture in the last line for totals across the different pronominal forms where all cells have light shading. The figures here would, according to the problematic "majority rule", invariably but, I argue, inadequately point towards the veracity of the Bantu reconstruction (cf. also the polar opposite picture in zone A closest to the Bantu homeland).

This overall result does not imply that the assumed fusion between preverbal cross-reference pronouns (or STAMP morphemes) and the stem was a single unitary event, nor that every free form necessarily reflects the original state. There may well be some cases of secondary free forms and, more importantly, person-number markers bound to the verb may have arisen several times independently, obviating the expectation of a single event of innovation. This is because morphological fusion between phonological words is a recurrent natural process in grammaticalisation. Moreover, this process can occur very quickly, as even dialects of a language can differ in this feature. This is reported, for example, for the Pama-Nyungan language Mari in Australia: while its Margany dialect has the conservative state with free forms, as in (8a), the Gunya dialect has verb suffixes, as in (8b).

(8) Mari [Pama-Nyungan, Australian] (Breen 1981: 317, 327)

a. Margany dialect
ŋaya binda-ːlku
1SG sit-PROX:PURP
'I'll stop at home.'

b. Gunya dialect
binda-ngi-ya
sit-PURP-1SG
'I'm going to sit down.'

There are also straightforward morphosyntactic indications that the verbal template reconstructed by Meeussen (1967) has arisen from earlier more analytical clause structures. As I argue in Güldemann (2011a), a particularly striking piece of evidence is the variable position of object marking. While pre-stem marking in slot -1 of Table 1 is indeed very frequent and thus recognised in the Proto-Bantu reconstruction, some languages have additional or even exclusive

postverbal cross-reference in slot 3 of Table 1. The modern morphotactic variation alone indicates earlier syntactic flexibility in line with Givón's (1971) idea that current morphology reflects past syntax. Since Bantu is overall head-initial and thus more likely to develop postverbal object marking, the prefix slot for objects is quirky in typological terms. However, it can be shown to have arisen from a clausal word-order variant in early Bantu that licensed grammatically conditioned preverbal objects. This kind of word-order variability is not only an areal trait of the Macro-Sudan Belt, rather it is also widely attested in Bantu's closest relatives within Benue-Kwa and thus represents a robust reconstruction for Proto-Bantu before the emergence of a compact predicate (cf. Güldemann 2007; 2008; 2011a). Example (2) above from Ewondo A72a, showing preverbal object pronouns, is therefore a likely syntactic retention.

Again, this syntactic variation need not be tied to a single distinct language stage of early Bantu. It can also exist as a language-internal alternation. A case in point is the Central Sudanic language Ma'di where the Lokai dialect has preverbal objects, as in (9a), but the 'Burulo dialect shows postverbal objects, as in (9b).

(9) Ma'di [Moru-Madi, Central Sudanic] (Blackings & Fabb 2003: 176)

a. Lokai dialect
àmá èɓī̀ ɲā
1PL.E fish NPST:eat

b. 'Burulo dialect
àmà ɲá ìɓī
1PL.E eat fish
'We (excluding you) (are) eat(ing) fish.'

There are also phenomena in north-western Bantu languages indicating that subject indexation was not morphologically induced by an obligatory pre-stem slot of a compact predicate. For Kwakum A91, for example, Njantcho Kouagang (2018: 101–116, 273–274) reports that pronominal elements encoding the S/A argument are bound, but they are nevertheless true pronouns replacing full subject noun phrases rather than agreeing with them. The two types of S/A expression, i.e. the ones in (10a) and (10b), are in complementary distribution if the referent is singular. The co-occurrence of a singular noun phrase and a pronoun, as in (10c), is only grammatical if the former is an extra-clausal topic.

(10) Kwakum A91 (Njantcho Kouagang 2018: 273–274)

a. *pʰàámm̀ H-n-ʃèH*
1.man PRS-PRS-come
'The man is coming.'

b. *H-**à**-n-ʃèH*
PRS-3SG-PRS-come
'He is coming.'

c. *pʰàámˀ H-**à**-n-ʃèH*
1.man PRS-3SG-PRS-come
'[As for] the man, he is coming.'

The obligatory complementariness does not hold for plural S/A arguments because an additional pronoun is optional here, which could be one context from which regular co-occurrence of noun and pronoun, and eventually obligatory bound argument cross-reference on the verb, emerged. This picture can be integrated into Givón's (1976) cross-linguistically relevant historical scenario for the emergence of argument agreement on verbs. That is, languages like Kwakum represent a typologically natural, intermediate stage in the shift from a predicate without obligatory pronominal subject cross-reference to one with full-blown subject agreement in a morphologically compact predicate. If subject pronouns are not obligatory clausal ingredients in the first place, a morphologically prescribed subject slot in the finite verb is hard to entertain.

A relatively late fusion of most of the modern verb prefixes with the lexical verb is also in line with phonological findings about fully agglutinative verb forms. That is, finite verbs are known to involve a word-internal bipartition. Their semantic core is the stem, itself comprising the lexical root with its suffixes, or alternatively the macrostem, which additionally incorporates the pre-stem object marker (cf. Polak 1986: 404–405). Various types of phonological processes with scope over the morphotactic slots from 0/-1 to 2 of Table 1 hold this unit together (cf. e.g. Hyman 2008). To the extent that such phonological processes do not operate further to the left they separate the (macro)stem from the initial prefix complex comprising subject cross-reference and auxiliary-like elements — effectively what Anderson calls a STAMP morpheme in a split predicate structure.

The phonologically-based bipartition of agglutinative verb forms is also reflected by another, admittedly impressionistic observation from my own discourse data on Bantu languages. In natural speech, morphologically unitary verbs can be interrupted by intonation breaks, for example, due to speaker hesitation. The location of such word-internal rupture is regularly at the juncture between the pre-stem and the stem or macrostem. In (11) from Shona S10, "#" marks intonation pauses occurring within verb forms, whereby the pre-stem cluster can, but need not be, repeated. This phenomenon not only supports the verbal bipartition but is also evidence for the internal coherence of the initial STAMP morpheme.

(11) Shona S10 (Tom Güldemann, field notes)

a. *va-no- # va-no-zvi-pira ku-batsira va-mwe*
2SBJ-PRS- 2SBJ-PRS-REFL-offer INF-help 2-other
'They are prepared (lit.: offer themselves) to help others.'

b. *va-mwe va-nhu va-nga-mu- # batsire*
2-other 2-person 2SBJ-POT-1OBJ- help:IRR
'Other people could/would help him.'

c. *ndi-no-da ku-zo- # shanda*
1SG-PRS-want INF-then- work
'I want to work then.'

2.3.2 Segmental form

In the following, I deal with the concrete forms for subject and object cross-reference in the predicate for the eight relevant exponents of speech-act participants, i.e. 1SG/PL and 2SG/PL subject and object indexes. Since there are no appreciable differences between Bantu and Benue-Kwa in the case of the 2SG subject and 1PL subject and object forms (cf. Table 4 above), these do not figure much in the following discussion.

The overall results of my analysis of Babaev's (2008) data for the remaining relevant forms are given in Table 7. Forms arguably inherited from Benue-Kwa appear before the slash and Bantu-internal innovations occur after it, whereby the heading of Table 7 repeats the competing reconstructions from Table 3 or any other form. The figures after the slash record more generally any forms that differ from Benue-Kwa-like ones. Since they do not only contain likely reflexes of the conventional Bantu reconstructions of Table 3 but also forms that are restricted to individual languages and subgroups, the incidence of Benue-Kwa-like forms vis-à-vis the received Bantu reconstructions is in fact higher. The special case of the 2PL form (and the meaning of "|") is explained in more detail below.

The picture in Table 7 is overall similar to that in Table 6 in that it is best interpreted in terms of an incremental replacement of Benue-Kwa cognates by Bantu innovations, including those believed to be Proto-Bantu forms, according to the expected geographical pattern. I have again marked the different behaviour of Bantu groups by means of a three-way distinction: the dark shading of a table cell means that old Benue-Kwa forms are more or as frequent as Bantu innovations; light shading symbolises that innovations predominate over old forms; finally, no shading marks that old Benue-Kwa forms no longer exist.

Across the family as a whole, new Bantu forms predominate by a wide margin (see the last line for totals). However, as soon as the data are assessed in geo-

Table 7: Benue-Kwa/Bantu-specific predicate cross-reference forms across Babaev's (2008) data

Zone	1SG *mi/*Ni+other		1SG *U/*KU +other	2PL *NU/*MU+other		Total
	Subject	Object	Object	Subject	Object	
A	12/9	5/2	5/2	8/2|7	2/0|5	32/15
B	6/7	1/1	0/3	6/0|4	2/0|1	15/11
C	0/9	2/3	2/4	1/0|13	2/1|3	7/17
D	2/6	0/4	0/3	2/4|3	2/2|0	6/19
E	0/12	0/2	2/11	0/14|-	0/6|-	2/45
H	3/8	1/1	0/3	6/0|6	0/0|3	10/12
K	0/11	0/7	0/5	1/6|1	0/5|0	1/34
L	0/9	0/2	0/1	3/5|1	1/0|0	4/17
R	1/3	0/4	0/4	1/2|1	1/2|1	3/15
S	0/7	0/5	3/5	1/4|2	2/2|2	6/23
Rest	0/50	0/18	0/26	0/49|-	0/15|-	0/158
Total	24/131	9/49	12/67	29/86	12/33	86/366

Note: Rest = zones F, G, J, M, N, P

graphical terms, the picture changes significantly. The Bantu zones A, B, C, D, and H in the north(west) of the family frequently possess forms that are argued here to be retentions from the older Benue-Kwa heritage. It can be expected that this area close to the Bantu homeland harbours languages that are more often conservative than the rest of the family in the colonised area. In the following, I discuss the forms according to the four person categories separately.

I start with the historically most complex case of the 1SG because bound forms with a palatal~alveolar nasal and a close front vowel similar to the received Bantu reconstruction are already recurrent in Benue-Kwa outside Bantu, which led to the reconstruction of such a form for chronolects significantly older than Proto-Bantu. So, it should be clear from the outset that my argument regarding the 1SG form is first of all about the persistence of an original **mi* rather than the absence of **N(i)*.[6]

[6]For the record, there are yet other 1SG forms in Bantu, which complicate the overall picture: see, for example, Bastin (2006) on a form *ị-* and Güldemann (2011b) for a fuller list and some discussion. However, most forms are likely to be related to **mi* and/or **Ni* and can thus be argued to derive ultimately from **mi*, which does not alter the general scenario proposed here.

In a survey dedicated to 1SG (Güldemann 2011b), I show that the higher a language (group) is in the conventionally assumed phylogenetic structure of Benue-Kwa the more *m*-forms exist or even predominate, including in Bantu groups in the north-west. While Babaev (2008: 143) concludes "that **me** is a separate subject pronoun not related genetically to ***n(i)-**", I have presented evidence that **Ni* in fact emerges from (and gradually replaces) inherited **mi*, particularly in the context of bound cross-reference. I even propose that the change of the 1SG exponent from the form **mi* to the form **Ni* may well have occurred multiple times independently across Benue-Kwa and beyond. While this may not seem to be the most economical solution, there are a number of reasons in support of this hypothesis.

A first major factor is that different pronominal categories are not unlikely to fuse with a host in different ways, which mitigates the emergence of a fully symmetrical paradigm of bound pronouns. This has to do with their unequal tendency to occur in verbal constructions and then fuse with other elements as unstressed forms. Mithun (1991: 102) writes from a cross-linguistic perspective (cf. also Givón 1976):

> […] pronominal paradigms do not necessarily become morphologically bound all at once. They may be grammaticalized in predictable stages. Person markers may appear before number markers. Among persons, *first and second person pronouns often become bound before third.* Indefinite third person pronouns may become bound before definite pronouns, and *subjects* or ergatives *before objects* or absolutives. Number may be distinguished initially for first person, then for second, and only later for third, if at all. (emphasis mine)

Regarding bound argument cross-reference on the predicate in Bantu, this means that the reconstruction of a 1SG prefix does not imply the past existence of a full bound person paradigm. There is indeed ample evidence in Benue-Kwa as a whole not only for the relevant effect of the nominal hierarchy (cf. already Schadeberg 1978 for an extensive discussion concerning Bantu), but also for the greatest likelihood of precisely the 1SG exponent to become bound to its predicate host. That is, the available data suggest that if there is differential argument cross-reference it always includes this paradigmatic item. For example, Green & Igwe (1963: 32) report for Igbo that the 1SG form *mụ/mị* partakes in both the incomplete preverbal and postverbal set of partly assimilated subject pronouns and is truncated there to *m*. The Edoid language Engenni (Thomas 1969: 226–228) is a non-Bantu case for the 1SG object form attaching more closely or freely to the

verb stem. In Bantu, this phenomenon is reported for Makaa A83 (Heath 2003: 342, 345), Nzadi B865 (Crane et al. 2011: 158), Rimi F32 (Woolford 2000: 113–115), and across Narrow Bantu in imperative forms (Meeussen 1967: 112; Devos & Van Olmen 2013: 20–21).

In addition to the preference of the 1SG marker to become a bound element before others, it often undergoes sound change, particularly as a proclitic or prefix. For **mi*, this involves in particular the change of the place of articulation in the initial nasal from bilabial *m* to alveolar *n* or palatal *ɲ*, triggered by the quality of the following vowel of the pronoun itself and/or (after vowel loss) by the initial consonant or vowel of the verb stem. Babaev (2008) himself provides evidence that **mV* changes in Benue-Kwa to a bound verb marker and that at least some modern non-bilabial forms are derived from this process, as shown in Table 8 (see also Miehe 2004: 101 for such a hypothesis in genealogically distant Gur). Some Bantu languages even display both forms in the same morphosyntactic context, as shown in (12) for Mbuun B87, where the *mé-* and *N-* 1SG object indexes are interchangeable.

(12) Mbuun B87 (Bostoen & Mundeke 2011: 77)
a-mpúlúús ba-á-mé/N-leŋ
2-police 2-PRS-1SG-search
'The police(men) search for me.'

Güldemann (2017: 118–122) shows that the change of a pronoun shape from *mi* to *N(i)* in fact occurred outside Niger-Congo, notably with the 2SG pronoun **mi* in

Table 8: Plausible change from independent 1SG *mV to bound subject markers

Language	Subgroup	Independent pronoun		Subject proclitic/prefix
Idoma	Idomoid	**mi*	>	homorganic *N=*
Igbo	Igboid	*m(ụ/ị)*	>	*m=*
Izere	Platoid	*mì*	>	*mì(-)*
Akoose A15C	Narrow Bantu	*mè*	>	*mè-* #_V/syllabic *N* and *Ǹ-* elsewhere
Nen A44	Narrow Bantu	*mɛ̀*	>	*mɛ̀(-)*
Kpa A53	Narrow Bantu	*mʌ̀*	>	*m-* #_V and *ǹ-* #_C
Bira D32	Narrow Bantu	**mI*	>	*mi-* initially and *-m-* #V_C

several branches of Central Sudanic. This is significant because these instances are unrelated to those in Benue-Kwa and Bantu in geographical, genealogical, and semantic terms and thus characterise the change as largely phonetically motivated.

There is another, more abstract, argument why *n* from *m* is not an unlikely language change in pronominal forms. Nichols & Peterson (1996: 351) conclude on the basis of a cross-linguistic survey that:

> [...] the distribution of *n* is a matter of universal preferences, while that of *m* [...] is less strongly linked to universals and more strongly linked to historical contingencies than that of *n*. *m* is therefore the better potential marker of historical connections.

In a similar vein, Blasi et al. (2016) diagnose a globally observable phonosemantic bias of 1SG pronouns towards the palatal nasal *ɲ*. While forms with exactly this shape are recurrent in Bantu and have been posited as a Proto-Bantu reconstruction (see Table 3 and 4 above), the cross-linguistic findings widen the perspective on the historical evaluation of alveolar and palatal nasals in the Benue-Kwa and Bantu pronoun at issue.

There is also a significant bias in Bantu of largely bound **Ni-* vs. independent **mi* regarding their morphosyntactic contexts. Babaev (2008: 143) observes in this respect:

> Statistically, the number of ***ɲi**-forms throughout the [Bantu] family is extremely high in the subject markers, lower in the object, even lower in the possessive markers, and quite rare in the independent stressed pronouns. The share of ***me** grows respectively.

While this author wants to reconstruct such a distributional cline to Proto-Bantu and even higher genealogical levels, it can be interpreted inversely. That is, the shift from independent **mi* to bound **Ni-* reflects the expected hierarchy of the innovative fusion of a pronoun with its host as steered by such factors as likely topicality and accompanying de-accentuation and eventual sound change. Insofar as the four grammatical contexts differ with respect to the information status of pronouns and hence their tendency towards fusion, the distribution observed by Babaev arguably reflects where bound **Ni-* would have started its existence and where it encroached upon last (or, as a reviewer observes, its possible successive extension as a bound form to new paradigms).

In general, the potential early existence of a 1SG **Ni-* that was bound to the verb alongside an independent pronominal form **mi* is not evidence for a full-fledged

bound verbal argument cross-reference paradigm. Rather, this coexistence is a reflex of various universal tendencies that converge in recurrently producing **Ni-* from **mi*. The free 1SG pronoun **mi* is thus a robust Proto-Bantu reconstruction as well.

The historical assessment of 2PL exponents is also complex in that there are several problems for a superficial cognate identification for both the assumed common Benue-Kwa form in $*nV^{close}$ and the received Proto-Bantu form in **mU*. For one thing, there are modern Bantu forms that could be cases of denasalisation~fortition of $*nV^{close}$ to $*lV^{close}/dV^{close}$ and **mU* to **BU*. Forms with an initial bilabial voiced plosive could reflect the human 3PL marker **ba* of class 2 as a polite form or its incorporation as a (human) plural marker. All such ambiguous forms, whether candidate reflexes of **nU* or **mU*, are found after the vertical bar in the values of Table 7.

It is worth having a closer look at the situation in the zones where forms in arguably inherited *n* are attested. In Table 9, I repeat the values for 2PL from Table 7 but sub-classify them based on whether the initial consonant of the actual forms is *n* or *l/d*, which I consider as possibly related to **nU*, or in *m*, which are likely to derive from **mU*. There are also forms with voiced labial plosives (represented by abstract *B*, see discussion below). Cells are shaded whenever *n/l/d*-forms outnumber *m/B*-forms. I disregard a few other forms, notably plain vowels. The overall picture after this methodological step does not seem to differ much from that of Table 7. I venture, however, that it is in fact more likely that *l-* and *d*-forms

Table 9: 2PL forms according to initial consonants across Babaev's (2008) data

Zone	Subject					Total	Object					Total
	n	*l/d*	*m*	*B*	*other*	*n+l +d/m+B*	*n*	*l/d*	*m*	*B*	*other*	*n+l +d/m+B*
A	8	2	2	4	1x *e*	10/6	2	1	0	4	–	3/4
B	6	3	0	1	–	9/1	2	0	0	1	–	2/1
C	1	5	0	6	2x *o*	6/6	2	1	1	1	1x *o*	3/2
D	2	0	4	3	–	2/7	2	0	2	0	–	2/2
H	6	6	0	0	–	12/0	0	3	0	0	–	3/0
K	1	1	6	0	–	2/6	0	0	5	0	–	0/5
L	3	0	5	0	1x *u*	3/5	1	0	0	0	–	1/0
R	1	0	2	1	–	1/3	1	0	2	0	1x *ku*	1/2
S	1	2	4	0	–	3/4	2	2	2	0	–	4/2

are real reflexes of **nU*, while there are other sources for *B*-forms besides the theoretically possible denasalisation of **mU*.

First, the potential cognates of **nU* do not only correspond arguably in the consonant but also in the vowel quality, while this is less often the case for the would-be counterparts of **mU*. Moreover, there is evidence that the initial plosive in at least some of the *B*-forms reflect the historical **b* of a (human) plural marker **bV* that fused with both plural pronouns and that such complex forms further contracted. The development of 2PL forms involving this marker **bV* can be schematised as: **nU* > **bV-nU~*bV-nV~*bV-nU-V* > *bV-n* > *bV*, with parallels in the 1PL. Such changes occur in Bantoid languages outside Narrow Bantu, as exemplified by Güldemann (2017: 110) for Mambiloid. Looking at the data in Babaev (2008: 175–177) and elsewhere, it can also be reconstructed in Bantu. The plain **nU* aside, there is widely distributed evidence far beyond north-western Bantu for the complex form, for example, *bíní* in Mboshi C25, *biŋwé* in Lega D25, *ßénú* in Bira D32, *ßiŋwé* in Sukuma F21, and *bènò* in Vili H12L (cf. appendix in Babaev 2008). Moreover, suggestive data for the later stages with a lost postnasal vowel or even without the thematic consonant *n* exist in zone A with such forms as *bın* in Koonzime A842 and *bí* in Makaa A83. Importantly, there is no evidence for the same scenario with reconstructed **mU*, which would be expected in view of the old age of *bV*-prefixation if **mU* were as old as **nU*. Considering all these observations, the preponderance of 2PL **nU* can be consolidated in the north-western region of Bantu, which is shown in Table 10, based on Table 9.

Table 10: 2PL forms in north-western Bantu across Babaev's (2008) data

Zone	Subject	Object
	**NU/*MU*	**NU/*MU*
A	10/2	3/0
B	9/0	2/0
C	6/0	3/1
H	12/0	3/0

Accordingly, I also venture that 2PL forms with initial *n* and *l* encountered in the zones D, K, L, R, and S are just as likely to involve reflexes of my assumed old form **nU*, partly having undergone consonant fortition. The overall picture for 2PL forms is then that **nU* predominates in the north-west as well as in zone

H, is gradually replaced by *m*-forms further south and east, but still occurs there sporadically.[7]

It remains to be investigated what was behind the concrete shift from **nU* to **mU*. One obvious factor could be the vowel quality in that the innovative bilabial *m* is closer to the following rounded vowel. In this sense, the shift would be parallel but inverse to that from **mi* to **Ni* in the 1SG. It is, of course, also possible that other factors contributed to the shift in shape, for example, contact interference from unrelated languages with 2(PL) forms in initial *m* (cf. Güldemann 2017) or paradigm-internal pressure (see below).

There is another Bantu-internal piece of evidence that its 2PL forms in *n* reflect the proto-state. The proto-language can be assumed to have possessed another 2PL form that is semantically and formally related to a marker **nU* for subject and object, namely the post-final verb suffix **-(n)ị* encoding plural addressee (cf. Meeussen 1967: 111; Schadeberg 1978). This form is another likely cognate of the old Benue-Kwa pronoun **nV*^{close}. Post-final **-(n)ị* may in fact be much older in Bantu as a bound affix than pre-stem **nU-*, as there are various non-Bantu reflexes of the former attested in the same environments as in Narrow Bantu, as shown in (13) for Tikar and in (14) for Ekpeye.

(13) Tikar [Bantoid, Benue-Kwa, Niger-Congo] (Stanley 1991: 58, 60)

a. *wu-ê-nì*
kill-IRR-PL.AD
'Kill (him)!'

b. *ɓwi' wu-è-nì*
1PL kill-IRR-PL.AD
'Let us kill (him)!'

(14) Ekpeye [Igboid, Benue-Kwa, Niger-Congo] (Clark 1972: 103)

a. i. *à-kà*
1PL-say
'We (excl.) said …'

ii. *à-kà-nị̀*
1PL-say-PL.AD
'We (incl.) [= we+you] said …'

[7] It is significant that the original form is recurrently found in languages that are commonly classified with eastern Bantu languages (see Grollemund et al. 2015) as this may be a linguistic reflex of the previous presence of western Bantu in areas that are genealogically eastern today.

b. i. *ị́-kà*
2SG-say
'You said …'
ii. *ị́-kà-nị̀*
2SG-say-PL.AD
'You people said …'

I turn now to the less problematic picture for the 2SG marking. The subject forms do not require much discussion, as they are cognate with the old Benue-Kwa form. Hence, only arguably deviant object markers with an initial posterior consonant need to be considered. Object forms in Babaev's data where the securely inherited back vowel segment is preceded by a consonant, namely a voiced velar fricative, first turn up sporadically in zone B. The voiceless velar plosive as reconstructed for Proto-Bantu **kU* only starts to unambiguously occur in languages of zone C. It is possible to view the overall variation as reflecting a sound change **k* > *ɣ* > *Ø* (cf. Pacchiarotti & Bostoen 2020 for this diachronic sound shift in West-Coastal Bantu). Nonetheless, I think that at this stage it is still open season to test the relevance of a presumably earlier, reverse fortition scenario of **Ø* > *ɣ* > *k* (see below for a possible motivation). Given that the form without an initial consonant is the older form in the higher-order groups, I propose to explain the Bantu form in *k* also as a Bantu-internal innovation. For the record, 2SG subject prefixes in *k-* are unlikely to be related to the innovative object prefix. In particular, the recurrent *ku*-form in zones E and G (but also in other areas) derives from the fusion of a pre-initial *ka*-prefix with the inherited subject prefix **U* (cf. Güldemann 1996: §4.5.3 for some discussion).

I conclude the discussion with a short evaluation of the 1PL markers. Forms with an inherited *t-* (or its other reflexes with such initial consonants as *r*, *l*, *d*, *s*, *z*, *c*, *h*) clearly predominate over all other forms, for subjects 128 vs. 25 and for objects 31 vs. 12 attestations. Since the more frequent vowel quality is back rather than front (for subjects 90 vs. 38 and for objects 25 vs. 6), the most likely Proto-Bantu form is indeed **tU*, as previously proposed (see Table 3).

3 Towards a revised reconstruction

I have assembled empirical comparative evidence and cross-linguistic arguments that the received Proto-Bantu reconstruction of a full-fledged and universal paradigm of bound argument cross-reference on verbs is not supported by the available data from in- and outside the family. My revised proposal for speech-act

participants involves two principal differences to the traditional approach. First, there is only sufficient evidence for a *bound* prefix in the 1SG, which was presumably restricted to specific contexts, while the principal marking of predicate arguments was by means of more independent forms that are directly related to those of the general pronoun paradigm (see Bantu non-verbal in Table 4). Second, three of the eight traditional Bantu reconstructions, namely 2SG object **kU* and 2PL subject and object **mU*, are not necessarily wrong as such but should not be ascribed to the proto-language of traditionally conceived Narrow Bantu, which was still characterised largely by clausal argument cross-reference of the Benue-Kwa type.

My partly new hypothetical proto-forms are summarised in Table 11, occurring before the arrows. As pointed out above, forms close to my reconstructions are not only found in Benue-Kwa but also in languages conventionally subsumed under Bantu. In Babaev's (2008) survey, they are reported in zone A in 10 out of 17 languages for the 1SG subject, 5 out of 7 for the 1SG object, in 9 out of 16 for the 2SG subject, 2 out of 6 for the 2SG object, 7 out of 14 for the 1PL subject, and 6 out of 18 for the 2PL subject. In zone B, the forms I reconstruct for the 1SG and 2SG subject turn up in 4 and 5 of 13 languages, respectively.

Table 11: Revised reconstruction of argument indexing in Proto-Bantu predicates

Person	Singular			Plural			Role
1st	**mi*/**Ni*-	>	**N(i)*-	**tU*	>	**tU*-	Subject
			**N(i)*-			**tU*-	Object
2nd	**(B)U*	>	**U*-	**nU*	>	***mU***-	Subject
			kU-			***mU***-	Object

The three bolded items in Table 11 after the arrows are innovative forms of Bantu in spite of their frequency across the family today. I specifically propose that they emerged in tandem with the development of bound cross-reference marking in a morphologically compact predicate. This is supported by plausible motivations for the concrete shape of the two new forms. The 2SG object form **kU*- phonologically enhances the pre-radical object slot as part of the macrostem. That is, compared to the inherited weak form starting in a vowel (or glide), the stronger onset of a velar plosive seals, so-to-speak, this morphological domain off from the emerging pre-stem prefix complex. For the record, this idea also applies to the equally innovative consonant-initial object form **mU*- for 3SG human (see

Table 4 above). The other new form in Table 11, 2PL **mU-* replacing inherited **nU*, can be argued to strengthen the paradigm-internal contrast to the already fused 1SG **(-)Ni-*, whose consonant is similar and whose distinctive vowel is recurrently lost.

I assume that pronouns referring to verb arguments were still largely independent morphemes, as in (15a), but in certain contexts may have been proclitic to certain hosts like predicate operators within STAMP morphemes, as in (15b) and (15c), or even to verb stems in the simplest form without preceding predicate operators, as in (15d). These patterns may have occurred in combination, as in (15e). While this must be investigated in more detail, Proto-Bantu possibly also possessed predicate patterns where morphemes for object cross-reference and nominalisation attached to the verb, as in (15f) and (15g). All configurations in (15) are, however, split predicates and thus exclude the previously proposed Proto-Bantu reconstruction of the compact highly agglutinative type in Table 1 above.

(15) Major morphosyntactic patterns of predicates in Proto-Bantu

a. * SBJ OBJ STEM
b. * [SBJ=TAMP] STEM
c. * [SBJ=TAMP] OBJ STEM
d. * [SBJ=STEM]
e. * [SBJ=TAMP] [SBJ=STEM]
f. * [SBJ=TAMP] [OBJ=STEM]
g. * [SBJ=TAMP] [INF-STEM]

My alternative reconstruction brings the profile of Proto-Bantu not only in line with common patterns found in Benue-Kwa (cf. also the discussion in Güldemann 2011a; 2013), but also with the overall pronoun system in Bantu itself. Proto-Bantu would have possessed a paradigm still involving relatively homogeneous pronoun forms in subject, object, possessor, and independent~emphatic contexts. This can be seen from a comparison with the available pronominal reconstructions in Table 4 for forms other than for subject and object cross-reference: they are effectively the same as those in Table 11.

The finding that the forms I consider as innovations occur already in Bantu languages of the north-west is not necessarily evidence for their existence in Proto-Bantu. The genealogical classification of the languages as well as contact-induced changes in this highly diverse area has not been determined conclusively, which

restricts the precise historical assessment of such language-specific forms. According to a reviewer, one could view the coexistence of multiple forms, those inherited from Benue-Kwa and those unique to Bantu, as a reflex of archaic heterogeneity in Proto-Bantu that was simplified later in most of the family. However, this begs the question when/where this variation emerged before the Proto-Bantu stage. As far as I can tell, the heterogeneity of forms at issue here exists *inside* Narrow Bantu rather than in a higher-order group like Bantoid and thus is better explained Bantu-internally.

I think that the present proposal advances the historical reconstruction of Bantu, not because it presents a set of conclusive, fully specified proto-forms assigned to specific positions in a phylogenetic family history, but rather because it contributes to what Bostoen (2019: 325) refers to as "new visions on what is archaic and innovative, especially in Bantu grammar, [that] may also lead to new ideas on internal Bantu classification." The challenges of a thorough historical-comparative evaluation of the prominent pre-stem verb morphology of Bantu only start to emerge with my alternative hypothesis. If the traditional Bantu reconstruction of a compact predicate involving bound argument marking is, as I argue, a family-internal innovation, the central problems are now where, when, and how it took shape, and related to this, to what extent the individual markers differing according to such features as person, number, and semantic role arose in a package or separately.

It is safe to conclude that, vis-à-vis the original forms, a separate prefix or proclitic for the verbal indexation of a 1SG argument has quite a long history, even preceding the Proto-Bantu stage. In view of this, as well as some general cross-linguistic findings, there is no strong case for assuming that all original pronouns in Table 11 changed their morphosyntactic status and shape simultaneously, or in other words, that the full cross-reference paradigm as reconstructed traditionally is the result of a single event of language change. Morphological fusion can be fast under appropriate conditions and can occur several times independently. It is also unlikely that such a full paradigm was relevant from the beginning in all possible predicate contexts. Rather, the morphosyntactic diversity of predicate types entertained under (4c), (5), and (15) persisted, if to a lesser extent, throughout Bantu history, and certain sub-types are constantly re-emerging even today. In line with Anderson (2011; 2012; 2016) and as shown in (6) and (7) above, simple concatenations of a subject marker and an auxiliary in STAMP morphemes in particular have always been an important intermediate step to the morphologically complex verb forms heretofore thought to be as old as Proto-Bantu.

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Abbreviations

AD	addressee	PL	plural
AUX	auxiliary	POT	potential
COP	copulative	PROG	progressive
E	exclusive	PROX	proximal
FV	default final vowel	PRS	present
H	human	PST	past
HAB	habitual	PURP	purposive
INF	infinitive	REFL	reflexive
IPFV	imperfective	SBJ	subject
IRR	irrealis	SG	singular
NEG	negative	SIM	simultaneous
NPST	non-past		
OBJ	object		

Arabic number	numbers not followed by SG/PL indicate noun classes
S/A	subject/agent (as semantic role)
(S)TAM(P)	(subject)/tense/aspect/modality/(polarity)

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