

Morphological fusion in Niger Congo and Bantu: addressing a historical-comparative problem

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1 Background

1.1 Niger-Congo as a genealogical language group

- + recognized in Westermann's pioneering work, canonized since Greenberg (1949a, 1963)
- > major evidence (although without robust Proto-Niger-Congo forms):
 - quirky type of noun classification (Westermann 1927, 1935, Greenberg 1977)
 - verb derivation suffixes (Voeltz 1977, Schadeberg 2003a, Hyman 2007a)
 - lexicon (Westermann 1927, Mukarovsky 1976/7)
- + membership of some groups still unclear (mostly due to lack of individual-identifying features); notably Kordofanian, Mande, Dogon, Ijoid (cf. Appendix)
- + internal classification of Niger-Congo core also unclear, particularly because of several "genealogical pools" (= group of languages which (a) cluster geographically, (b) are presumed to be genealogically related to each other and to languages in other areas, and (c) have not been shown to form a coherent sub-branch within the higher-order lineage)
- > applies on different classificatory levels: upper - Kordofanian, Atlantic, Adamawa, Ubangi etc., lower - Bantu (cf. Nurse and Philippson 2003: 3-5, Grollemund 2011)
- > as opposed to "Transeurasian", the genealogical relationship between most languages subsumed under Niger-Congo in the sense of Greenberg (1963) is not at issue!!!

1.2 The problem

- + great diversity in terms of morphological complexity and clause organization across Niger-Congo (in both its wide and narrow sense):
 - extremely isolating vs. extremely fusional (agglutination + inflection)

1.2.1 Clausal predicate structure

- (1) Nupe (Nupoid, West Benue-Congo)
- a. *Musa zú tsùkù*
PN break stick
Musa broke the stick
- b. *Musa á tsùkù zú*
PN PERF stick break
Musa got the stick broken/ has broken the stick (George 1971: 90, 93)

- (2) Kulango (Gur) "split predicate"
hà téé-ká-ga = yéí
3S:NEG show-IMPOSITIVE-3S = NEG
he hasn't shown it (Elders 2007: 198)
- (3) Kana (Cross River, East Benue-Congo) "split predicate"
a. *wèè mē-tēērā pī*
3S:PST 1S-run meet
he ran to me
b. *wèè tēērā pí n̄dā*
3S:PST run meet 1S.EMPH
he ran to ME (Ikoro 1996: 212)
- (4) Nande (DJ42, Bantu, Bantoid, East Benue-Congo) "compact predicate"
tu- né-mu-ndi-syá-tá-sya-ya- ba- king-ul-ir-an-is-i- á- kyô
1P- TAMP- 2- close-EXTENSIONS-FV- 7
we will make it possible one more time for them [class 2] to open it [class 7] for each other (Nurse and Philippson 2003: 9)

1.2.2 Verb stem structure

- (5) Ewe (Gbe, Kwa)
gblɔ dzu-dzɔ fa-nyã
say DUPL-wait knead-knead
say cease knead (Hyman 2004: 70)
- (6) Tikar (Bantoid, East Benue-Congo)
wu-ka' swɔ-si swɔ-li
kill-PLUR gather-CAUS gather-REFL
kill many amasser se réunir (Stanley 1991: 360, 374)
- (7) Kulango (Gur)
dɪ-tw da-ga-tw ta-ga-su-tw
eat-PLUR cut-PLUR-PLUR shake-PLUR-TENTIVE-PLUR
eat (plur.) cut (plur.) shake (plur.) (Elders 2007: 189)
- (8) Ful (North, Atlantic)
-mab6-it-id-an-ii
-shut-REVERSIVE-COMPREHENSIVE-DAT-PST.ACT
opened all for (Hyman 2004: 70)
- (9) Yao (Bantu, Bantoid, East Benue-Congo)
-taam-uk-ul-igw-aasy-an-il-a
-sit-IMPOSITIVE-REVERSIVE-PASS-CAUS-RCPR-APPL-FV
cause each other to be unseated for/at (Hyman 2004: 70)

2 Some theoretical considerations

2.1 The cross-linguistic diachrony of templatic morphology

2.1.1 Emergence

- + preserves possible syntactic anomalies and variation (see (1), (3) and discussion below)
- + the development of “compact predicates” with pronominal cross-reference can be rapid

There is good evidence that the degree of synthesis characteristic of a language can change radically over a very short period of time. Selayarese, the Austronesian language cited ..., is polysynthetic, but few Austronesianists would reconstruct a polysynthetic parent language. Many Austronesian languages are still relatively analytic, and in the more synthetic languages, the recent origins of affixes are often transparent. Those languages with more complex morphologies often do not show parallel morphological structures, suggesting that their affixes are the result of independent developments. (Mithun 1990: 38)

> variation between related languages, as in (14)/(15), or even dialects, as in (16):

(14) Yapese (Austronesian)

raa gu marweel ni faan ngoom
 FUT 1S work for purpose to:2S

(15) Selayarese (Austronesian)

la-ku-pa-ŋ-jamá-’aŋ-ko
 FUT-1S.ERG-BEN-ITR-work-BEN-2S.ABS
 I will work for you (Mithun 1990: 39)

(16) Margany vs. Gunya dialect of Mari (Pama-Nyungan, Australian)

a. *ŋaya binda-lku*

1S sit-PROX:PURP
 I’ll stop at home

b. *binda-ŋgi-ya*

sit-PURP-1S

I’m going to sit down (Breen 1981: 317, 327)

- + concatenation need not target an entire set of elements, and can proceed in stages:

... 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 absolutes. Number may be distinguished initially for first person, then for second, and only later for third, if at all. (Mithun 1991: 102)

- > mitigates against full and symmetrical paradigms, e.g. “complete” set of bound pronouns
- > creates internal structure and historical layering within a template

2.1.2 Stability

- + once a template is there, possible long endurance, e.g. attested long-term stability of morphologically complex verb forms:

(17) Reconstructed complex verb templates

- | | | |
|----|--|------------------|
| a. | Algic (?ca. 5000 years) | (Rhodes 2012) |
| | *Preverb ⁿ -INITIAL-MEDIAL-Concrete.final-Abstract.final-Object-Subject | |
| b. | Na-Dene (?ca. 4000 years) | (Rice 2012) |
| | *Object-Qualifier-Conjugation-Subject-Classifier-ROOT-TM | |
| c. | Yeniseian (at least 2000 years) | (Vajda 2012) |
| | *Incorporate-Object-Theme.conson.-Subject-Conjugation + TM-Subject-STEM-Subject | |
| d. | Munda (?age) | (Anderson 2012a) |
| | *Subject = Voice-ROOT-Incorporate-TAM-(In)transitive-Object | |

When inflection and derivation are intertwined, the resulting stem formation patterns can persist as [sic] least as long, if not longer, than core vocabulary retained in quantities sufficient to permit reconstruction. (Vajda and Nichols 2012)

- + innovation in terms of categories or positions possible but within limits
- + repair/renewal of elements in certain templatic positions that are threatened by erosion:
 - “lost wax” in verbal cross-reference of Non-Pama-Nyungan Australian (Heath 1997)
 - “hermit crab” in verb extensions of Cupan Uto-Aztecan (Heath 1998)

The major developments in richly inflected languages are driven not by the preprogrammed evolutionary trajectory of individual morphemes, rather by the ‘engineering’ needs of the synchronic system. (Heath 1997: 227)

- + reasons for interpreting a template as genealogically inherited:
 - a) goes back to the latest common ancestor before its split-up into daughter groups
 - b) has features that are “quirky” (Gensler 2003) ~ “individual-identifying” (Nichols 1996)
 - cross-linguistically rare morphotactics and functions
 - abstract positions with functionless material
 - lexicalized patterns
 - portmanteaus of earlier separate affix slots

2.1.3 Decay

- + erosion of linguistic material widely attested and well-studied, notably relic retention:
 - truncated/remnant paradigms
 - fossilized morphology in lexical items - “phonogenesis” (Hopper 1994)
- + “degramma(ticaliza)tion” (Norde 2009) more frequent than expected, nevertheless marked and rarer compared to both erosion and “morphologization” (cf. also Joseph 2003)

2.2 Areal typology

- + typological profile of a language (group) can differ in line with different areal contexts
- several well-described cases: e.g., Semitic on the Arabian peninsula as opposed to Ethiosemitic which moved away from its relatives into the Horn of Africa and there was subject to intense contact, particularly with Cushitic
- > at least two responsible factors which are in principle independent - assuming migration:
 - a) loss of language contact which steers the language to maintain its old features
 - b) possibly new language contact which favors change towards new features

3 Niger-Congo and Bantu

3.1 Comparative typological profile of Niger-Congo groups

- + most Niger-Congo languages located in the large linguistic area “Macro-Sudan belt” (Güldemann 2008); only Bantu and Kordofanian are at its periphery or fully outside it
- > Macro-Sudan (including relevant Niger-Congo groups) diverse in terms of morphological fusion, 3 broad patterns partly distributed randomly over distinct families

Pattern	Predicate	Verb suffixes	Distribution	Historical hypothesis
II	split	moderate	frequent	old macro-areal canon
I	largely isolating		restricted but compact	derives partly from II - contact in “Gulf-of-Guinea coast belt”
III	compact	elaborate	rare, sporadic	derives from II - ?areal ‘mayfly’

Table 1: Patterns of morphological fusion in the Macro-Sudan belt

- + majority of Niger-Congo sub-groups lack compact predicate canon and elaborate verb stem of the canonical Bantu type (cf. Nurse 2007: 242-5, 2008: 63-5)
- > very low genealogical position of canonical Bantu (cf. Appendix) forbids any premature inference for the morphological structure of Proto-Niger-Congo

Pattern	Niger-Congo group
II	<i>Atlantic, Kru, Senufo, Gur, Adamawa, Ubangi, East Benue-Congo including Non-canonical Bantu</i>
I	<i>Kwa, West Benue-Congo</i>
III	Canonical Bantu

Note: *Italic* = genealogical pool

Table 2: Rough fusion profile of more secure member groups of Niger-Congo

- + proposal by Anderson (2012b) to reconstruct for earlier Niger-Congo stages so-called “S/TAM/P (portmanteau subject/TAM/polarity) morphs” - identical to my “subject-auxiliary portmanteaus” within proposed proto-pattern II (cf. (12) above)

- + caveat by Creissels et al. (2008: 93) for “split” vs. “compact” predicate analysis:

Many descriptions of African languages do not identify pronominal markers appropriately, treating them as independent words. The reason is that stage-I pronominal markers, i.e. pronominal markers minimally different from free pronouns, are particularly frequent in African languages. But once pronominal markers are recognized correctly, it appears that an overwhelming majority of African languages do have pronominal markers, and that the vast majority of them have both subject markers and object markers.

3.2 Complex templates across Niger-Congo

- + given a sufficiently long time span from Proto-Niger-Congo to modern language (group)s, real possibility of enormous “cyclic restructuring” (Hyman 2011)
- > Do other known cases of complex templates and concatenative morphology in Niger-Congo allow one to deduce an ancient proto-structure similar/identical to the Bantu type?

3.2.1 Compact predicate structure

- + selected complex verb templates (simplified) in individual Niger-Kordofanian languages compared to canonical Bantu

(18)

- a. Proto-Bantu (Bantoid, East Benue-Congo) (Meeussen 1967)
*Preinitial-**Subject-TAMPⁿ**-Objectⁿ-**ROOT-Extensionⁿ**-TAMP.Final-Postfinal-Object
- b. Bantu sub-type (Bantoid, East Benue-Congo) (Meeussen 1967)
Preinitial-**Subject-TAMPⁿ**-**ROOT-Extensionⁿ**-TAMP.Final-Postfinal-Object
- c. Cicipu (West Kainji, East Benue-Congo) (McGill 2009: 208-10)
Subject-TA-ROOT-Extension1ⁿ-Final-Extension2ⁿ = Object
- d. Oko (?Isolated, West Benue-Congo) (Atoyebi 2008: 87-97)
Subject-TAMPⁿ-**ROOT**-Object
- e. Bijago (North, Atlantic) (Seeger 2002: 269-70)
Negation-Focus-**Subject-TAMⁿ**-Object-**ROOT-Extensionⁿ**-TA-Relative
- f. Ebang (Heiban, Kordofanian) (Schadeberg and Kossmann 2010)
(I) **Concord** [‘Tmesis’] **ROOT**-Pronoun-Plural.participant-Discourse.marker
(II) **Concord-TAM**-Pronoun-Plural.participant-Discourse.marker [‘Tmesis’] **ROOT**¹

- + case for an ancient individual-identifying template of Proto-Niger-Congo is weak:

- a) modern templates are largely segmentally transparent and look young
- b) common denominators across different structures not quirky but explained by universal (cf., e.g., Bybee 1985; in line with Hyman 2011: 40) and/or areal trends (see below)

¹ Neither of the slots for ‘Concord’, ‘Pronoun’, and ‘Plural participant’ coincides with a fixed grammatical relation like subject, object, etc. or semantic role like agent, patient, etc.

- abstract template (except Ebang), including alternating position of object cross-reference:

(19) Subject-TAMP = {Object}-[ROOT-Extension] = {Object}

> compatible with independent parallel innovation (cf. §2.1.1 above) from:

a) frequent clause patterns in Niger-Congo and other language groups in the Macro-Sudan:
major: [Subject (Auxiliary) Verb Object]

minor: [Subject (Auxiliary) Object Verb] (Gensler and Güldemann 2003, Güldemann 2007)

b) intermediate fusion patterns like [Subject.auxiliary.portmanteau Macrostem] (see (12))

3.2.2 Verb stem structure

+ selected verb stem structures (simplified) in individual Niger-Congo language (group)s
(20)

- a. “CARP” in Early Bantu (Bantoid, East Benue-Congo) (Hyman 2003)
***ROOT-CAUS-APPL-RCPR-PASS-FINAL**
- b. Cicipu (West Kainji, East Benue-Congo) (McGill 2009: 209, 221-32)
ROOT-PLUR-CAUS-FINAL-ANTICAUS-APPL-PFV-VENTIVE (at least 6 of 9)
- c. Igbo (Igboid, West Benue-Congo) (Ọnụkwa 1999)
ROOT-EXT1a-EXT1b-EXT2a-EXT2b-EXT2c-EXT2d-EXT2e (max. 6 of >31)
- d. Degema (Edoid, West Benue-Congo) (Kari 1995: 164-6)
ROOT-RCPR/REFL/BEN/PLUR-CAUS-REFL-PLUR/HAB (max. 3 of 4)
- e. Kulango (Gur) (Elders 2007)
ROOT-EXT1-EXT2-EXT3 (max. 3 of >15)
- f. Bijago (North, Atlantic) (Segerer 2002: 225)

	1	2	3	4	(max. 3 of 7)
ROOT	-ɔk MIDDLE, -ak RESULT	-at INSTR	-an ASS ~RCPR ~BEN	-a CPET, -am CFUG, -i CAUS	

+ restrictions on number of suffixes are common, despite larger suffix inventories

+ considerable differences between the language-specific patterns, including to “CARP” in canonical Bantu, e.g., later causative outside Benue-Congo - cf. also Moore (Gur):

... the causative suffix -s occurs late (followed only by -g) as opposed to its early positioning in the following Bantu “CARP” template from Hyman (2003a) ... (Hyman 2011: 24)

+ little correlation between suffix inventory, suffix number, and/or age of system (cf. Igbo)

+ difficult historical-comparative evaluation of language-specific suffixes (cf. Tables 3-5)

> suggestive cognates with Proto-Bantu forms but also more recent vintage of

- entire systems, e.g., Igbo ?from root serialization and compounding
- sub-parts, e.g., Cicipu postfinal complex as compared to Bantu prefinal core
- individual markers (in Bijago conflicting with Bantu cognate hypothesis)

Proto-Bantu*	Degema	Source in Degema”
*-ici- causative	-VsV causative	
*-an- associative (reciprocal)	-Vn reciprocal in -VɲVnV	
*-ag- repetitive	-Vɲ pluractional in -VɲVnV	
	-ke benefactive	kije ‘give’

Note: based on * Schadeberg (2003a: 72-9), ” Kari (1995: 150)

Table 3: Extension suffixes in Proto-Bantu and Degema

Proto-Bantu	Kulango	Source in Kulango
*-ud- separative (tr)	-tu separative	
*-ud- separative (tr)	-ru separative	
*-ik- impositive, Meinhof: *-eka	-ka, -ika? impositive	
*-ag- repetitive	-ga pluractional	
*-uk- separative (intr)	-gu separative	
*-ik- neuter, Meinhof: *-ika	-st stative	
*-at- tentative	-su tentative	
*-am- positional	-mu positional	
*-il- applicative/ dative	-li iterative-expertive	
	-pa repetitive	pá ‘again’

Table 4: Extension suffixes in Proto-Bantu and Kulango (Elders 2007: 192)

Proto-Bantu*	Bijago	Source in Bijago”
*-i- causative	-i causative	i ‘at’
*-an- associative (reciprocal)	-an associative-reciprocal-benefactive	an ‘to’
*-ik- neuter	-ɔk middle	-ok ‘be at’
	-at instrumental	-at ‘attain’
	-a centripetal	a ‘on, above’
	-am centrifugal	am ‘(in)to’

Note: based on * Schadeberg (2003a: 72-9), ” Segerer (2007: 226)

Table 5: Extension suffixes in Proto-Bantu and Bijago

3.3 The macro-areal setting of Bantu

+ major migration history of Bantu uncontroversial since Greenberg (1949b, 1972):

- low-level offshoot of a genealogical pool of closely related Niger-Congo languages in Nigeria and Cameroon (cf. Appendix) - homeland area belongs to “Macro-Sudan belt”
- + canonical Bantu forms its own “Bantu spread zone”, differing in striking ways from Macro-Sudan languages (Güldemann 2010), including in terms of morphological fusion

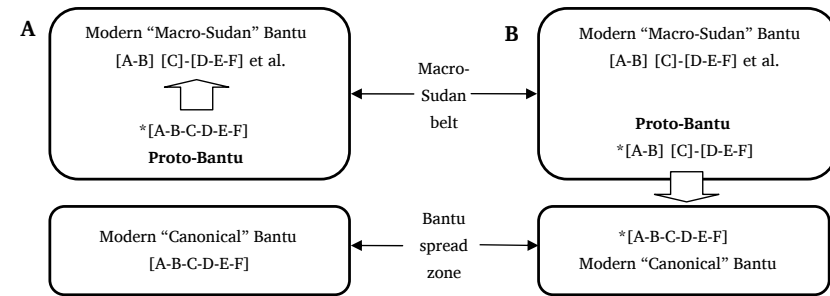


Figure 1: Two areal-historical models for the modern fusion profile of Bantu

+ Güldemann (2011) combines family-internal with areal-typological considerations about Macro-Sudan belt vs. Bantu spread zone in addressing the historical problem at issue

> Model B

- complex morphology in spread zone of canonical Bantu aligns with pattern III in Table 1
 - innovative vis-à-vis pattern II found in closest relatives and neighbors in the Macro-Sudan
 - model conforms with attested historical trajectory of Bantu as a Macro-Sudan **emigrant**: innovation of * [A-B-C-D-E-F] facilitated by loss of areal alignment ?and possibly contact interference (languages, however, unknown)

3.4 Diachronic aspects of the canonical Bantu template

3.4.1 Canonical Bantu morphology as a mature and recreated template

+ reconstructable split predicate retained throughout history
 > constantly feeds (and partly extends) the established concatenative template

(21) Shona (Bantu S10)

a. *ndi-ri mu-biki*

1S-COP 1HUMAN-cook

I am a cook (Fortune 1955: 327)

b. *ndi-ri ku-tora > ndi-riku-tora*

1S-COP 15INF-take 1S-PROG-take = Subject-TA-Stem

I am taking (Fortune 1955: 271)

- old biclausal complex as additional alternative to finite + non-finite complex (cf. (13))

(22) Efik (Cross River, East Benue-Congo)

á-má á-kã

3S-PST 3S-go

he/she went (Mensah 2008)

(23) Zulu (Bantu S42)

a. *nga-ngi-thanda* < *nga-be* *ngi-thanda*
 1S:REM.PST.IPFV-1S-love 1S:REM-be:PST 1S:SIM-love

I was loving (Doke 1927: §425)

b. *bengi-nga-thandi* < *ngi-be* *ngi-nga-thandi*
 PROX.PST.IPFV:1S-NEG-love:NEG 1S-be:PST 1S-SIM.NEG-love:NEG

I was not loving

c. *ubu-nga-thandi* < *u-be* *u-nga-thandi*
 PROX.PST.IPFV:2S-NEG-love:NEG 2S-be:PST 2S-SIM.NEG-love:NEG

you were not loving (Doke 1927: §424)

+ lexicalized fossilization of earlier affixes

(24) Rwanda (Bantu J61)

a. *-ribón-* < * du-bon

être calomnié 11-see

b. *-kàbàmb-* < * ka-bamb

devenir fou 12-fix.with.bolt (Polak 1986: 405)

+ paradigmatic innovation in various template positions akin to Heath's "hermit-crab" and "lost wax" processes

(25) Kae (Bantu G43c)

m-me-koswa

1S-PERF-annoy:PASS

je me suis fâché (Racine-Issa 2002: 120)

- Kae *-me-* (~ *meku #_V*) borrowed from prestigious Unguja (G42d)~Standard Swahili: *me(ku)* < *Subject-mele ku-STEM < * Subject-mal-ide ku-STEM 'finish to VERB' only in North Swahili (cf. Miede 1979: 186, 225-8), Kae lacks *ide which caused *mal-ide > *me*

3.4.2 Reconstructed cross-reference as a Post-Proto-Bantu innovation

+ stark contrast between synchronic empirical data and current Proto-Bantu reconstruction

Pattern	Group
II/?I	<i>most Non-Bantu Bantoid</i> Northwestern Bantu = all/?most Mbam/Bubi and North-West, parts of Lebonya/Boan and (Central-)West
III	<i>Proto-Bantu</i> Canonical Bantu = all (South-)East, parts of Lebonya/Boan and (Central-)West

Table 6: Rough fusion profile across Narrow Bantu and Bantoid

> compact predicate including the reconstructed pre-stem cross-reference marking possibly predominant in numerical terms but not obviously prior in phylogenetic terms: cf. Figure 2

I	-	II	Mbam/Bubi (A31/A40-60)
A	North-West	=	NW North-West (A/B10/B30/?B20)
B	Lebonya/Boan	=	-
	West (C+D+E)	=	CW Central-West
C	Inner Congo Basin		
D	West-Coastal		
E	South-West		
F	East	=	SE South-East

Figure 2: Narrow Bantu subgroups (Pakendorf, Bostoen and Filippo 2011 = I; Bastin and Piron 1999 = II; see maps)

> the reconstruction currently thought to reflect Proto-Bantu possibly represents an innovation of a Narrow-Bantu subgroup lower in the family tree
 + pre-stem object slot in canonical Bantu as reflex of word-order alternation in Pre-Proto-Bantu (as in northwestern Bantu and other Benue-Congo, cf. Güldemann 2007), possibly as a dialectal difference as attested in other cases:

(26) Lokai vs. 'Burulo dialect of Ma'di (Moru-Madi, Central Sudanic)

a. *àmá èbī ñā*
 1P.E fish NPST:eat

b. *àmà ñá ìbī*
 1P.E eat fish

we (excluding you) (are) eat(ing) fish (Blackings and Fabb 2003: 176)

+ Proto-Bantu verbal cross-reference prefixes largely but not completely related to free pronouns widely found in other Benue-Congo languages, including northwestern Bantu

Person, number, gender	Northwestern Bantu and Benue-Congo	Proto-Bantu*		
		Non-verbal	Subject on verb	Object on verb
1st singular	*mi, (*N-)	*-mi-	*ñi-	*-ñi-
2nd singular	*u	*-w-	*u-	*-ku-
1st plural	*tu~ti	*-cu-	*tu-	*-tú-
2nd plural	*nu~ni	*-nu-	*mu-	*-mú-
3rd singular human = class 1	*(j)u, *a	*-w-, *-j-	*ú-, *a-	*-mu-
3rd plural human = class 2	*ba	*-ba-	*ba-	*-ba-

Note: * after Babaev (2008: 148) and Schadeberg (2003b: 149, 151)

Table 7: The reconstruction of pronominal marking in Bantu and Benue-Congo

> several Proto-Bantu pre-verb-stem forms without precedents in pronouns of Benue-Congo outside canonical Bantu and even within canonical Bantu outside the specific verbal context

- 2nd singular object “pre-radical” *-ku-
- 2nd plural subject “initial” and object “pre-radical” *-mú-
- 3rd singular human (= class 1) object “pre-radical” *-mu-

> subgroup innovation in connection with the emergence of the concatenative predicate by:

- strengthening, notably with weak vocalic forms: object “pre-radicals” sealed-off from preceding prefixes (cf. also Polak 1986: 405) - Bantu “macro-stem”
- ?enhancing paradigmatic distinctions: 2P *(-)mu- (instead of *nu~ni) vs. 1S *(-)ni-

+ Proto-Bantu “post-final” *(n)j for plural addressee (cf. Meeussen 1967: 111, Schadeberg 1977) also derived from the assumed 2nd plural pronoun *nu~ni in Proto-Benue-Congo

> possibly older than the pre-stem forms in view of the non-Bantu precedents

(27) Ekpeye (Igboid, West Benue-Congo)

a. *à-kà* *à-kà-ñi*
 1P-say 1P-say-P.AD
 we (excl.) said ... we (incl.) [we + you] said ...

b. *í-kà* *í-kà-ñi*
 2S-say 2S-say-P.AD
 you said ... you people said ... (Clark 1972: 103)

(28) Tikar (Bantoid, East Benue-Congo)

wu-ê-ñi *bwí' wu-è-ñi*
 kill-IRR-P.AD 1P kill-IRR-P.AD
 tuez(-le)! tuons(-le)! (Stanley 1991: 58, 60)

4 Conclusions

+ **Proto-Niger-Congo** still intractable, but no robust evidence in favor of proto-pattern III:

*[A-B-C-D-E-F] > *[A-B-C] [D-E-F] > *[A-B] [C] [D-E-F] > *[A] [B] [C] [D] [E] [F]

+ **Proto-Bantu** assessment up to now hampered by a methodological problem: majority pattern generalized without fully addressing the diversity at the genealogical and geographical root of the family - data available so far also compatible with proto-pattern II:

*[A-B] [C] [D-[E-F]] > *[A-B] [C] [D-E-F] > *[A-B-C] [D-E-F] > *[A-B-C-D-E-F]

+ **In general:** any claims are premature according to historical-comparative standards

> most data adduced so far are irrelevant for the relevant scope: in large language groups, many features (even opposite ones) recur and are in principle candidates for reconstruction

> still missing but crucial step is to look at each feature in a given language (group) in comparison with its closest relatives and see how deeply entrenched it is in the relevant higher-order genealogical group, under robust exclusion of all alternative hypotheses like universal trends, language contact, etc.: **BOTTOM-UP RECONSTRUCTION!!!**

Abbreviations

Arabic numbers = Noun class or (before S and P) Person, A Aspect, ABS Absolutive, AD Addressee, ACT Active, ANTICAUS Anticausative, APPL Applicative, ASS Associative, BEN Benefactive, CAUS Causative, CFUG Centrifugal, COP Copula(tive), CPET Centripetal, DAT Dative, DUPL reduplication, E Exclusive, EMPH Emphatic, ERG Ergative, EXT Verb extension, FUT Future, FV Final vowel, HAB Habitual, INF Infinitive, IPFV Imperfective, INSTR Instrumental, IRR Irrealis, ITR Intransitive, M Modality, NEG Negative, NPST Non-past, P Plural or (after TAM) Polarity, PASS Passive, PERF Perfect, PFV Perfective, PLUR Pluractional, PN Proper name, PROG Progressive, PROX Proximative, PST Past, PURP Purposive, RCPR Reciprocal, REFL Reflexive, REM Remote, RESULT Resultative, S Singular, SIM Simultaneity, T Tense

References

- Anderson, Gregory D. 2012a. On the history of the morphological structure of the Munda languages. Paper presented at the Workshop on the Diachronic Stability of Complex Templatic Morphology, LSA meeting, Portland, 6 January 2012.
- Anderson, Gregory D. 2012b. S/TAM/P (portmanteau subject/TAM/polarity) morphs in Niger-Congo languages. Paper presented at the International Congress "Towards Proto-Niger-Congo: Comparison and Reconstruction", Paris, September 18-21, 2012.
- Atoyebi, Joseph D. 2010. A reference grammar of Oko: a West Benue-Congo language of north-central Nigeria. *Grammatische Analysen afrikanischer Sprachen* 37. Köln: Rüdiger Köppe.
- Babaev, Kirill. 2008. Reconstructing Niger-Congo personal pronouns I: Proto-Bantoid. *Journal of West African Languages* 35,1/2: 131-183.
- Bastin, Yvonne and Pascale Piron. 1999. Classifications lexicostatistiques: bantou, bantou et bantoïde: de l'intérêt des "groupes flottant". In Hombert, Jean-Marie and Larry M. Hyman (eds.), *Bantu historical linguistics: theoretical and empirical perspectives*. CSLI Lecture Notes 99. Stanford: Center for the Study of Language and Information (CSLI), 149-163.
- Bearth, Thomas. 1995. Nominal periphrasis and the origins of the predicative marker in Mande languages - an alternative view. *Afrikanistische Arbeitspapiere* 41: 89-117.
- Blackings, Mairi and Nigel Fabb. 2003. A grammar of Ma'di. *Mouton Grammar Library* 32. Berlin/ New York: Mouton de Gruyter.
- Breen, John G. 1981. Margany and Gunya. In Dixon, Robert M. W. and Barry J. Blake (eds.), *Handbook of Australian Languages* 2. Amsterdam: John Benjamins, 274-393.
- Bybee, Joan L. 1985. Morphology: a study of the relation between meaning and form. *Typological Studies in Language* 9. Amsterdam: John Benjamins.
- Clark, David J. 1972. A four-term person system and its ramifications. *Studies in African Linguistics* 3,1: 97-105.
- Creissels, Denis et al. 2008. Africa as a morphosyntactic area. In Heine and Nurse (eds.), 86-150.
- Doke, Clement M. 1992 [1927]. *Textbook of Zulu grammar*. Cape Town: Maskew Miller Longman.

- Elders, Stefan. 2007. Complex verb morphology in Kulango (Gur): similarities and dissimilarities with Bantu. In Kula and Marten (eds.), 187-200.
- Fortune, George. 1955. *An analytical grammar of Shona*. London/ Cape Town/ New York: Longmans and Green.
- Gensler, Orin D. 2003. Shared quirks: a methodology for "non-orthodox" historical linguistics. Paper presented at the 17th International Conference of Linguists (Prague, 29 July 2003).
- Gensler, Orin D. and Tom Güldemann. 2003. S-Aux-O-V-Other in Africa: typological and areal perspective. Paper presented at the 4th World Congress of African Linguistics, Workshop "Distributed predicative syntax (S P O V X)", Rutgers University, June 21, 2003.
- George, Isaac. 1971. The á-construction in Nupe: perfective, stative, causative, or instrumental. In Kim, Chin-Wu and Herbert Stahlke (eds.), *Papers in African linguistics. Current Inquiry into Language and Linguistics* 1. Edmonton/ Champaign: Linguistic Research, Inc., 81-100.
- Good, Jeff and Tom Güldemann. 2006. The Bantu verbal prefixes and S-Aux-O-V order in Benue-Congo. Paper presented at the International conference on "Bantu Grammar: Description and Theory", School of Oriental and African Studies, University of London, 20 – 22 April 2006.
- Greenberg, Joseph H. 1949a. Studies in African linguistic classification: I. The Niger-Congo family. *Southwestern Journal of Anthropology* 5,2: 79-100.
- Greenberg, Joseph H. 1949b. Studies in African linguistic classification: III. The position of Bantu. *Southwestern Journal of Anthropology* 5,4: 309-317.
- Greenberg, Joseph H. 1963. *The languages of Africa*. Research Center in Anthropology, Folklore, and Linguistics Publications 25. Bloomington: Indiana University.
- Greenberg, Joseph H. 1972. Linguistic evidence for Bantu origins. *Journal of African History* 13: 189-216.
- Greenberg, Joseph H. 1977. Niger-Congo noun class markers: prefixes, suffixes, both or neither. *Studies in African Linguistics, Supplement* 7. Los Angeles: Department of Linguistics, University of California, 97-104.
- Grollemund, Rebecca. 2011. Phylogenetic classification of northwestern Bantu languages. Paper presented at 20th International Conference on Historical Linguistics (ICHLXX), Osaka, July 25-30, 2011.
- Guthrie, Malcolm. 1948. *The classification of the Bantu languages*. London: Oxford University Press.
- Güldemann, Tom. 2003. Grammaticalization. In Nurse and Philippson (eds.), 182-194.
- Güldemann, Tom. 2007. Preverbal objects and information structure in Benue-Congo. In Aboh, Enoch O., Katharina Hartmann and Malte Zimmermann (eds.), *Focus strategies in African languages: the interaction of focus and grammar in Niger-Congo and Afro-Asiatic*. Trends in Linguistics - Studies and Monographs 191. Berlin: Mouton de Gruyter, 83-111.
- Güldemann, Tom. 2008. The Macro-Sudan belt: towards identifying a linguistic area in northern sub-Saharan Africa. In Heine and Nurse (eds.), 151-185.
- Güldemann, Tom. 2010. Sprachraum and geography: linguistic macro-areas in Africa. In Lameli, Alfred, Roland Kehrein and Stefan Rabanus (eds.), *Language and space: an international*

- handbook of linguistic variation, volume 2: language mapping. *Handbooks of Linguistics and Communication Science* 30,2. Berlin: Mouton de Gruyter, 561-585, Maps 2901-2914.
- Güldemann, Tom. 2011. Proto-Bantu and Proto-Niger-Congo: macro-areal typology and linguistic reconstruction. In Hieda, Osamu, Christa König and Hiroshi Nakagawa (eds.), *Geographical typology and linguistic areas, with special reference to Africa*. Tokyo University of Foreign Studies, *Studies in Linguistics* 2. Amsterdam: John Benjamins, 109-141.
- Heath, Jeffrey. 1997. Lost wax: abrupt replacement of key morphemes in Australian agreement complexes. *Diachronica* 14,2: 197-232.
- Heath, Jeffrey. 1998. Hermit crabs: formal renewal of morphology by phonologically mediated affix substitution. *Language* 74: 728-759.
- Heine, Bernd and Derek Nurse (eds.). 2008. *A linguistic geography of Africa*. Cambridge: Cambridge University Press.
- Hopper, Paul J. 1994. Phonogenesis. In Pagliuca, William (ed.), *Perspectives on grammaticalization*. *Current Issues in Linguistic Theory* 109. Amsterdam: John Benjamins, 29-45.
- Hyman, Larry M. 2003. Suffix ordering in Bantu: a morphocentric approach. *Yearbook of Morphology* 2002, 245-281.
- Hyman, Larry M. 2004. How to become a 'Kwa' verb. *Journal of West African Languages* 30,2: 69-88.
- Hyman, Larry M. 2007a. Niger-Congo verb extensions: overview and discussion. In Payne, Doris L. and Jaime Peña (eds.), *Selected proceedings of the 37th Annual Conference on African Linguistics*. Somerville, MA: Cascadia Proceedings Project, 149-163.
- Hyman, Larry M. 2007b. Reconstructing the Proto-Bantu verbal unit: internal evidence. In Kula and Marten (eds.). 201-211.
- Hyman, Larry M. 2011. The Macro-Sudan belt and Niger-Congo reconstruction. *Language Dynamics and Change* 1,1: 3-49.
- Ikoru, Suanu M. 1996. *The Kana language*. CNWS Publications 40. Leiden: Research School CNWS, Leiden University.
- Joseph, Brian D. 2003. Morphologization from syntax. In Joseph, Brian D. and Richard D. Janda (eds.), *The handbook of historical linguistics*. Oxford: Blackwell, 472-492.
- Jungtraithmayr, Herrmann. 1990. Evolution or reduction? On the history of research into the development of African languages. *Annali del Dipartimento di Studi del Mondo Classico e del Mediterraneo Antico, Sezione linguistica* 12. Napoli: Istituto Universitario Orientale, 19-33.
- Kari, Ethelbert E. 1995. Extensional suffixes in Degema. *Afrikanistische Arbeitspapiere* 44: 149-168.
- Kula, Nancy C. and Lutz Marten (eds.). 2007. *Bantu in Bloomsbury: special issue on Bantu linguistics*. SOAS Working Papers in Linguistics 15. London: Department of Linguistics, School of Oriental and African Studies.
- McGill, Stuart. 2009. *Gender and person agreement in Cicipu discourse*. Ph.D. thesis: SOAS, University of London.
- Meeussen, Achille E. 1967. Bantu grammatical reconstructions. In *Africana Linguistica* 3. *Annalen Wetenschappen van de Mens* 61. Tervuren: Koninklijk Museum voor Midden-Afrika, 79-121.

- Meinhof, Carl. 1936. *Die Entstehung flektierender Sprachen: eine Untersuchung*. Berlin: Dietrich Reimer.
- Meinhof, Carl. 1938. Die Entstehung der Bantusprachen. *Zeitschrift für Ethnologie* 70: 144-152.
- Mensah, Eyo O. 2008. *Efik morphology: a study of word structure in generative grammar*. Ph.D. thesis: Department of Linguistics, University of Calabar.
- Miehe, Gudrun. 1979. *Die Sprache der älteren Swahili-Dichtung (Phonologie und Morphologie)*. Marburger Studien zur Afrika- und Asienkunde A18. Berlin: Dietrich Reimer.
- Mithun, Marianne. 1990. The role of typology in American Indian historical linguistics. In Baldi, Philip (ed.), *Linguistic change and reconstruction methodology*. *Trends in Linguistics, Studies and Monographs* 45. Berlin/ New York: Mouton de Gruyter, 33-55.
- Mithun, Marianne. 1991. The development of bound pronominal paradigms. In Lehmann, Winfried P. and Helen-Jo Jakusz Hewitt (eds.), *Language typology 1988: typological models in reconstruction*. *Current Issues in Linguistic Theory* 81. Amsterdam: John Benjamins, 85-104.
- Mukarovskiy, Hans G. 1963. Some reflexions on a Nigerian class language. *Wiener Völkerkundliche Mitteilungen* 11, Neue Folge 6: 65-83.
- Mukarovskiy, Hans G. 1976/7. *A study of western Nigritic*, 2 vols. *Beiträge zur Afrikanistik* 1/2. Wien: Institut für Ägyptologie und Afrikanistik, Universität Wien.
- Nichols, Johanna. 1996. The comparative method as heuristic. In Durie, Mark and Malcolm Ross (eds.), *The comparative method reviewed: regularity and irregularity in language change*. Oxford: Oxford University Press, 39-71.
- Norde, Muriel. 2009. *Degrammaticalization*. Oxford: Oxford University Press.
- Nurse, Derek. 2007. Did the Proto-Bantu verb have a synthetic or an analytic structure? In Kula and Marten (eds.), 239-256.
- Nurse, Derek. 2008. *Tense and aspect in Bantu*. Oxford: Oxford University Press.
- Nurse, Derek and Gérard Philippson. 2003. Introduction. In Nurse and Philippson (eds.), 1-12.
- Nurse, Derek and Gérard Philippson (eds.). 2003. *The Bantu languages*. *Routledge Language Family Series* 4. London: Routledge.
- Onukawa, M. C. 1999. The order of extensional suffixes in Igbo. *Afrikanistische Arbeitspapiere* 59: 109-129.
- Pakendorf, Brigitte, Koen Bostoen and Cesare de Filippo. 2011. Molecular perspectives on the Bantu expansion: a synthesis. *Language Dynamics and Change* 1: 50-88.
- Polak, Louise. 1986. Les infixes ("prefixes objets") du bantou et leur reconstruction. In *Africana Linguistica* 10. *Annalen Menselijke Wetenschappen* 121. Tervuren: Koninklijk Museum voor Midden-Afrika, 365-421.
- Racine-Issa, Odile. 2002. *Description du kikae: parler swahili du sud de Zanzibar; suivie de cinq contes*. Bibliothèque de la SELAF 399. *Langues et Littératures de l'Afrique Noire* 11. Leuven/ Paris: Peeters.
- Rice, Karen. 2012. The conservatism of Dene (Athabaskan) template morphology. Paper presented at the Workshop on the Diachronic Stability of Complex Templatic Morphology, LSA meeting, Portland, 6 January 2012.

- Rhodes, Richard A. 2012. Algic verb structure. Paper presented at the Workshop on the Diachronic Stability of Complex Templatic Morphology, LSA meeting, Portland, 6 January 2012.
- Schadeberg, Thilo C. 1977. Der Kohortativ "Dual" und Plural in den Bantusprachen. In Voigt, Wolfgang (ed.), XIX. Deutscher Orientalistentag vom 28. September bis 4. Oktober 1975 in Freiburg im Breisgau: Vorträge. Zeitschrift der Deutschen Morgenländischen Gesellschaft, Supplement 3,2: 1502-1507.
- Schadeberg, Thilo C. 2003a. Derivation. In Nurse and Philippson (eds.), 71-89.
- Schadeberg, Thilo C. 2003b. Historical linguistics. In Nurse and Philippson (eds.), 143-163.
- Schadeberg, Thilo C. and Maarten G. Kossmann. 2010. Participant reference in the Ebang verbal complex (Heiban, Kordofanian). *Journal of African Languages and Linguistics* 31,1: 79-100.
- Segerer, Guillaume. 2002. La langue bijogo de Bubaque (Guinée Bissau). *Afrique et Langage* 3. Leuven/ Paris: Peeters.
- Stanley, Carol. 1991. Description morpho-syntaxique da la langue tikar (parlée au Cameroun). *Société International de Linguistique*.
- Vajda, Edward. 2012. The persistence of complex templatic verb morphology in Yeniseian. Paper presented at the Workshop on the Diachronic Stability of Complex Templatic Morphology, LSA meeting, Portland, 6 January 2012.
- Vajda, Edward and Johanna Nichols. 2012. Introduction. Paper presented at the Workshop on the Diachronic Stability of Complex Templatic Morphology, LSA meeting, Portland, 6 January 2012.
- Voeltz, F. K. Erhard. 1977. Proto Niger-Congo verb extensions. Ph.D. thesis: University of California Los Angeles.
- Westermann, Diedrich. 1927. Die westlichen Sudansprachen und ihre Beziehungen zum Bantu. *Mitteilungen des Seminars für Orientalische Sprachen* 30. Berlin: Walter de Gruyter.
- Westermann, Diedrich. 1935. Nominalklassen in westafrikanischen Klassensprachen und in Bantusprachen. *Mitteilungen des Seminars für Orientalische Sprachen zu Berlin, 3. Abteilung: Afrikanische Studien* 38: 1-53.
- Williamson, Kay. 1985. How to become a Kwa language. In Makkai, Adam and Alan K. Melby (eds.), *Linguistics and philosophy: essays in honor of Rulon S. Wells. Current Issues in Linguistic Theory* 42. Amsterdam: John Benjamins, 427-443.
- Williamson, Kay and Roger M. Blench. 2000. Niger-Congo. In Heine, Bernd and Derek Nurse (eds.), *African languages: an introduction*. Cambridge: Cambridge University Press, 11-42.

Appendix

NIGER-CONGO	(= Greenberg's "Niger-Kordofanian")
Kordofanian	
Mande-Atlantic-Congo	(= Greenberg's "Niger-Congo")
Mande	
<i>Atlantic</i>	
Ijo(id)-Congo	
Ijoid	
Dogon-Congo	
Dogon	
Volta-Congo	
West	
Kru	
Senúfo	
Gur-Adamawa (+ Ubangi)	
...	
<i>East (= Benue-Kwa)</i>	
<i>Kwa</i>	
<i>West Benue-Congo</i>	
Yoruboid-Edoid-Akokoid-Igboïd	
Nupoid-Idomoid	
...	
<i>East Benue-Congo</i>	
Central Nigerian	
Kainji	
Jukunoid	
Plateau ...	
Bantoid-Cross	
Cross River	
Bantoid	
Dakoid	
Mambiloid	
Tikar	
South	
(<i>Narrow Bantu</i>)	
...	

Note: *Italic* = genealogical pool, **Bold** = membership seriously questioned

Conceived classification of Niger-Congo (after Williamson and Blench 2000)