

How to become a Macro-Sudan belt language: the Gulf-of-Guinea creole (GGC) case

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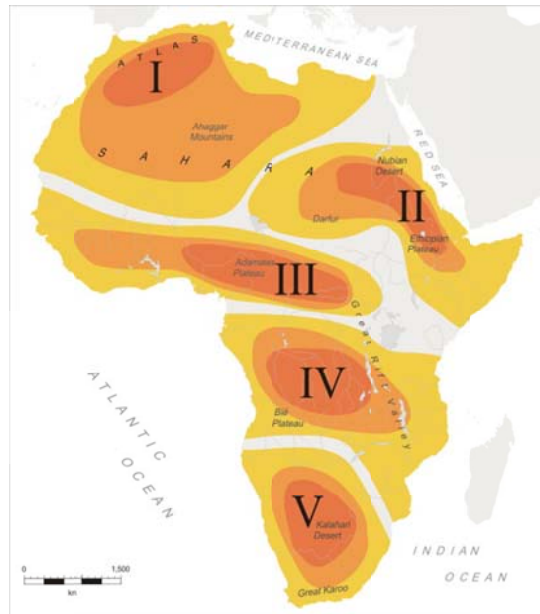
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1 Introduction

1.1 Cross-African areal typology and the Macro-Sudan belt

No.	Macro-area	Comment
(I)	Sahara spread zone	genealogical offshoot of (II)
(II)	Chad-Ethiopia	contact area
(III)	Macro-Sudan belt	contact area
(IV)	Bantu spread zone	genealogical offshoot of (III)
(V)	Kalahari Basin	contact area

Table 1: Proposed recent linguistic macro-areas in Africa (Güldemann 2010)



Map 1: Linguistic macro-areas in Africa before recent large-scale colonizations

+ Macro-Sudan belt as a large contact-mediated area south of the Sahara, north of the rain forest, and west of the Ethiopian plateau, pre-figured by Greenberg (1959, 1983) but established in more detail by Güldemann (2003, 2008) and Clements and Rialland (2008)

Family	Stock	Greenberg's supergroup
Mande	-	Niger-Kordofanian
Kru	Niger-Congo	Niger-Kordofanian
Gur	Niger-Congo	Niger-Kordofanian
Kwa	Niger-Congo	Niger-Kordofanian
<i>Benue-Congo (except Narrow Bantu)</i>	Niger-Congo	Niger-Kordofanian
Adamawa-Ubangi	Niger-Congo	Niger-Kordofanian
Bongo-Bagirmi	Central Sudanic	Nilo-Saharan
Moru-Mangbetu	Central Sudanic	Nilo-Saharan
Atlantic	Niger-Congo	Niger-Kordofanian
Dogon	-	Niger-Kordofanian
Songhai	-	Nilo-Saharan
Chadic	Afroasiatic	-
Ijoid	-	Niger-Kordofanian
<i>Narrow Bantu (Benue-Congo)</i>	Niger-Congo	Niger-Kordofanian
Nilotic	East Sudanic	Nilo-Saharan

Note: **Bold** = core family, *Italic* = major GGC adstrate

Table 2: Families partaking in the Macro-Sudan belt (Güldemann 2008)

No.	Feature	Source(s)
1	Implosive consonants	Maddieson (2005a)
2	Labial-velar consonants	Maddieson (2005c)
3	Three + level tones	Maddieson (2005d), Clements and Rialland (2008)
4	ATR vowel harmony	Hall et al. (1974), Dimmendaal (2001), Maddieson (2005b)
5	Nasalized vowels	Hajek (2005)
6	“Lax” question prosody	Clements and Rialland (2008)
7	SBJ-(AUX)-OBJ-V-X	Gensler and Güldemann (2003)
8	‘(Sur)pass’ comparative	Greenberg (1983), Stassen (2005)
9	Logophoricity system	Güldemann (2003b)
10	Post-V/clause-final NEG	Dryer (2009), Idiatov (2010)
11	Serial verbs	Dimmendaal (2001)
12	Plural word	Dryer (2013)
13	Focus-verb doubling	Bond and Anderson (2014)

Table 3: Relevant linguistic features of the Macro-Sudan belt

1.2 The Gulf-of-Guinea creoles

+ Gulf-of-Guinea creoles:

- family of four languages spoken on three formerly uninhabited islands west of Gabon and Equatorial Guinea, emerged at the end of the 15th century lexically based on Portuguese
- national (minority) languages not used in education and threatened by local lingua franca



Map 2: The four Gulf-of-Guinea creoles (Michaelis 2013b: 50)

Language	ISO	Island	Speakers	Country	Vehicular language
Sãotomense	cri	São Tomé	63.000	Sao Tome and Príncipe	Portuguese
Principense	pre	Príncipe	< 1.000		
Angolar	aoa	São Tomé	11.500		
Fa d'Ambu	fab	Annobón	5.000	Equatorial Guinea	Pichi

Table 4: The four Gulf-of-Guinea creoles (after Ethnologue)

+ different historical phases of GGCs - 2 crucial early phases (cf. Hagemijer 2011):

- (I) Portuguese “superstrate” + Niger Delta “substrate” > founder or proto-creole
- (II) Slightly later but intensive contact with Bantu of zone H (Kongo, (Ki)Mbundu)
- (III) yet later adstrates with various other languages, partly in different places: Portuguese, Kabuverdianu, Umbundu; Fa d'Ambu only: Spanish, Pichi

> relatively short time between “speciation” of proto-creole and additional contact with other African languages > non-trivial distinction between different linguistic influences

+ various possibilities to explain the historical origin of a feature within a language

> relevant hypotheses for the GGCs, including “multiple causation”:

- a) coincidence can be excluded due to kind of feature
- b) universal trends can be excluded due to kind of feature

c) Portuguese “(super)strate”

d) Niger Delta “(sub)strate”

e) Bantu H~Kongo “(ad)strate”

f) other later contact languages not discussed here, in line with findings on c)-e)

+ robust circumstantial evidence for importance of phase (I)~substrate d):

- a) documentary history: early slave trade to São Tomé (ca. 1485-1510) focused almost exclusively on Niger Delta, evidenced by early trading post in the Benin kingdom, explicit reference to “Bini” slaves (hence Edo-speakers), records of ports of embarkation; after 1510, Bantu imports quickly become and remain dominant
- b) genetics: “Benin” genotype well represented despite overwhelming Bantu impact throughout later history (Coelho et al. 2008a, b; Hagemijer and Rocha forthcoming)
- c) linguistics: ??? - see below

2 Macro-Sudan features and the Gulf-of-Guinea creoles

F1 Implosive (= glottalic ingressive) consonants

- + present in GGCs (Ferraz 1979; Maurer 1995, 2009; Zamora 2010)
- + present in Niger Delta including Edoid (Elugbe 1986, 1989)
- + absent in Bantu H, only present in restricted Bantu subareas (Güldemann 2011: 115)
- + absent in Portuguese

F2 Labial-velar consonants

- + today only present in Principense, labialization and other reflexes in the remaining creoles (Table 5) > feature can be reconstructed for Proto-GGC, as Principense is also in other respects structurally conservative

PR	ST	ANG	FA	Etymology	English
<i>ukperi</i>	<i>kwali</i>	-	<i>okwali</i>	Edoid or Ijoid ^a	basket
<i>ikpe</i>	<i>ukwē</i>	<i>ikwe~inkwe</i>	<i>iku</i>	Edo <i>ikpe</i>	seed, grain
<i>ugba</i>	<i>ubwa</i>	<i>ubwa</i>	<i>ubulu</i>	Edo <i>ogba</i>	fence
<i>igbè</i>	<i>ubwē</i>	<i>ôngê</i>	<i>ôguê</i>	Edo <i>igbé</i>	body
<i>ugbami</i>	<i>ubwami</i>	?	<i>ogomu</i>	Edo <i>agbanwen</i>	chin

Table 5: Labial-velar and labio-velar consonants in GGCs (Hagemijer 2011: 119)

- + present in Niger Delta including Edoid (Elugbe 1986, 1989)
- + largely absent in Bantu including zone H (Güldemann 2011: 115)
- + absent in Portuguese

F3 Three and more level tones

- + absent in GGCs but controversial analysis of their prosody as tone or accent systems: Traill and Ferraz (1981), Grégoire and Schang (1998), Maurer (2008)
- > remarkable that tone is at all entertained: unexpected in “new” restructured languages (McWhorter 2005), very rare in creoles (cf. Good 2004 for similar Saramaccan exception)
- + present in Niger Delta including some Edoid languages (Elugbe 1986, 1989)
- + largely absent in Bantu including zone H (Güldemann 2011: 115)
- + absent in Portuguese

F4 ATR harmony

- + Sāotomense: vowel harmony “in the properties frontness, height, etc.” (Ferraz 1979: 111)

(1)	[i]	[u]
	[e]	[o]
	[ɛ]	[ɔ]
	[a]	

(2)	Sāotomense	
	[o'me] ‘middle’	vs. [ɔ'me] ‘man’
	[me'se] ‘to want’	[mɛse] ‘master’
	[mo'le] ‘to die’	[lɔ've] ‘dew’
	[bo'lo] ‘to rub’	[pɔtɔ] ‘door’

- > Hagemeyer (2009) argues for an analysis in terms of mid-vowel harmony that can be viewed as a reduced ATR-system restricted to the open-mid and close-mid vowels (similar to the system in Saramaccan under Gbe influence (McWhorter and Good 2012, N. Smith p.c.))

- + present in Niger Delta including Edoid (Elugbe 1986, 1989)
- + largely absent in Bantu including zone H (Güldemann 2011: 115)
- + absent in Portuguese

F5 Vowel nasalization

- + present throughout GGCs (Ferraz 1979; Maurer 1995, 2009; Zamora 2010)
- + present in Niger Delta including Edoid (Elugbe 1986, 1989)
- + very rare in Bantu, absent in Bantu zone H (Güldemann 2011: 115)
- + present in Portuguese

F6 “Lax” polar question prosody

- + abstract set of cross-linguistically unusual features of final question marking like open vowel, L tone, sentence-final falling intonation, lengthening, and combinations thereof
- (3) Allomorphs of lax question prosody in Ncam (Gur)
- a appears after a consonant-final root:
 ù cò ò ì m̄ S/he walks ù cò ò ì m̄ ː ː Did s/he walk?
 - a is added after other short vowels, where it undergoes a variety of assimilations
 - a replaces a short final i, which is most often epenthetic:
 ù ɲáǰkì S/he repaired ù ɲáǰkà ò ː Did s/he repair?
 - a final long vowel has extra length, with no change in quality:
 aɪ sū ː It's rotten aɪ sū ː ː ː Is it rotten?
 - falling intonation, final lengthening and breathy termination are regularly present (Clements and Rialland 2008: 78)

- + final *a* or *ā* in polar questions present across GGCs with low boundary tone in Principense (Maurer 2009: 146, cf. Figure 1), with falling intonation in Sāotomense and Fa d'Ambu (Hagemeyer f.n., Zamora p.c.), with unknown prosody in Angolar (Maurer, Araújo p.c.)

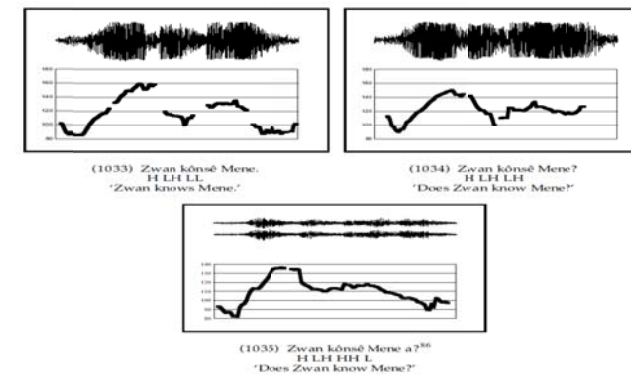


Figure 1: Prosody in declarative (1033), polar question without *a* (1034), and polar question with *a* (1035) in Principense (Maurer 2009: 148)

- + Niger Delta including Edoid (Rialland 2007, Agheyisi 1990): low tone particle *rà* in Edo can be dropped with remaining low tone still marking interrogative function

(4)	Òzó déè èbé rà?
	PN bought book Q
	Did Ozo buy a book? (Agheyisi 1990: 98)

- + so far not widely attested in Bantu (Güldemann 2011: 115)
- + absent in Portuguese

F7 Word order S-(AUX)-O-V-X

+ conditioned or predominant preverbal position of object

(5) Koranko (Mande)

ní sí wò lá-bùù yí rò

1S PROSPECTIVE **that.one** CAUS-fall water in

I'm going to throw her into the water (Kastenholz 1987: 117)

+ absent in GGCs, basic clause order is strictly S-AUX-V-O

+ present in some Niger Delta languages but apparently absent in Edo

+ present in Northwest but absent elsewhere including zone H (Güldemann 2007, 2011)

+ present in Portuguese with pronouns (similar to cases in Niger-Congo)

(6) *Pedro não me viu*

PN NEG **1S.O** see:3S.PST

Peter didn't see me

F8 Surpass comparatives

+ comparative construction with a “surpass” verb marking the standard

(7) Swahili (Bantu, Benue-Kwa)

a-na-andika haraka ku-pita mimi

1-PRS-write fast **INF-pass** 1S

he writes faster than me

+ present in GGCs but synchronically a grammaticalized form without verbal features

(8) Sāotomense

ê sa longô pasa mu

3S be tall **surpass** me

he is taller than I

(9) Angolar

ũa tha masi dhangaru patha ôtô

one be more high **surpass** other

one is higher than the other (Maurer 1995: 52)

- also with a variant for intensification ?and superlative

(10) Sāotomense

mama san sa nglandji pasa

breast 3:POSS be big **surpass**

her breasts are huge

+ present in Niger Delta including Edoid (possibly not the intensifying variant)

(11) Edo (Edoid, Benue-Kwa)

Òzò mòsè sèé Àzàrí

PN be.beautiful **surpass** PN

Ozo is more beautiful than Azari. (Hagemeyer and Ogie 2011: 50)

+ recurrent in Bantu (Güldemann 2011: 115-6, cf. Chatelain 1888/9: 114) for Mbundu)

+ absent in Portuguese

F9 Logophoricity

+ obligatory disambiguation of (non)coreference in reported discourse

(12) Kera (Chadic, Afroasiatic)

a. *wə míntí tó kóoré* vs.

3M.S_x QUOT **3M.S.LOG_x** go.away

b. *wə míntí wə kóoré*

3M.S_x QUOT 3M.S_y go.away

Er sagte, daß er weggehe [he said he would go] (Ebert 1979: 260)

+ absent in GGCs

+ present in Niger Delta including Edoid (Agheyesi 1990: 55-6, Hagemeyer f.n.)

+ largely absent in Bantu including zone H (Güldemann 2011: 116)

+ absent in Portuguese

F10 Post-V/clause-final NEG

+ originally treated as a subareal feature according to Dryer (2009), extended to entire Macro-Sudan belt by Idiatov (2010)

+ present across GGCs (cf. Hagemeyer 2011: 133-4)

(13) Sāotomense

non na tê awa fa

1P NEG have water **NEG**

we don't have water (Hagemeyer et al. 2014b)

(14) Fa d'Ambu

naminsê na mata ngê f

2P NEG kill people **NEG**

you didn't kill the people (Hagemeyer et al. 2014a)

(15) Principense

in we ten posan fa

1S go until town NEG

I didn't go to town (Maurer 2009: 133)

+ present in Niger Delta languages like Ijoid and parts of Edoid (Elugbe 1977) but not in Edo itself (Güldemann and Hagemeyer 2006)

+ recurring in Bantu (Güldemann 2011: 116-7), particularly salient in zone H (Güldemann and Hagemeyer 2006)

+ absent in Portuguese

F11 Serial verbs

+ distinct type of multi-verb construction defined by structural and semantic-functional characteristics (cf., e.g., Stahlke 1970, Ameka 2003)

(16) Yoruba (Yoruboid, Benue-Kwa)

màmá mi á sọ fún mi pé {...}

mother 1S IRR speak give 1S QUOT

My mother would tell me '... (Bamgboṣe 1966: 167)

+ salient in GGCs with a range of different types like directional, locative/goal, instrumental, comitative etc. (Maurer 1995, 1999, 2009; Post 1992; Hagemeyer 2000; Hagemeyer and Ogie 2011)

(17) Sãotomense

ê fe ubwa loja ke dê

3S build fence encircle house 3S:POSS

s/he built a fence around his/her house (Hagemeyer 2011: 122)

(18) Principense

inen zunta we posan

3P gather go town

they went to town together (Maurer 2009: 118)

(19) Angolar

kathô tambu n'kila rê pê kosi bega

dog take tail 3S:POSS put under belly

the dog hid his tail (under his belly) (Hagemeyer 2011: 126)

(20) Fa d'Ambu

amu sa ma xoze bi da-l

1S be take thing come give-3S

I brought it to her (Post 1992: 163)

+ widely present in Niger Delta including Edoid (Hagemeyer and Ogie 2011)

+ largely absent in Bantu, including zone H (Güldemann 2011: 117)

+ absent in Portuguese

F12 Plural word

+ plural word as major means of marking nominal plurality

(21) Chalcatongo Mixtec (Oto-Manguan)

ni-xáá=rí kʷa?à žú?a káni xíná?a

COMP-buy=1many rope long P

I bought many long ropes (Macaulay 1996: 113, cited by Dryer 2013)

> Macro-Sudan feature according to world survey by Dryer (2013)

> recurrent origin in 3rd-person plural pronoun (cf., e.g., Westermann 1947)

+ present in GGCs with likely etymological source in Edo element(s) (Hagemeyer 2011: 129-30) > possibly internal grammaticalization of substrate-based 3P pronominal

(22) Sãotomense

a. *inen kume kani***3P** eat meat

they ate meat

b. *inen migu mu kume kani***P** friend 1S:POSS eat meat

my friends ate meat

(23) Fa d'Ambu

ta ku nan pe nen se sa kha bay, ...

when COMP P man P DEM be TAM go

when these men left, ... (Hagemeyer 2015: 307)

+ plural word from 3P pronoun recurrent in Atlantic creoles > red dots in Map 3



Map 3: Nominal plural marker and 3rd person plural pronoun (Maurer 2013a)

- + present in Niger Delta including parts of Edoid: cf. preposed plural words like *ávbé* (Edo), *évbá* (Emai), *ílàè*, *íbhàè* (Esan) (Qm̄oruyi 1986: 68-9) besides number prefixes
- + absent in Bantu, number marking conveyed by noun class prefixes
- + absent in Portuguese

F13 Focus-verb doubling for predicate-centered focus

+ focused verb doublet for state-of-affairs focus or general predicate-centered focus, in two syntactic configurations, viz. in-situ or in fronted position

(24) Nweh (Grassfields, Benue-Kwa)
Atem a kè? nčíú akendòŋ čúú
 PN 3S PST1 ? :boil plantains **boil**
 Atem BOILED plantains (Nkemnji 1995: 138)

(25) Aja (Gbe, Benue-Kwa)
óò, qà (y) é qà
 no **cook** FOC 3S cook
 [The woman ate the beans.] No, she COOKED (them) (Fiedler p.c.)

- > wide-spread across Africa (Bond and Anderson 2014), but particularly recurrent in Macro-Sudan belt (?and Chad-Ethiopia) and only sporadic or even absent elsewhere (Güldemann ongoing research)
- > both constructional variants particularly frequent in Gulf-of-Guinea coast subarea of Macro-Sudan belt (cf., e.g., Williamson 1986: 10-2)

+ fronting variant present in GGCs (Ogie 2014), like other Atlantic creoles (Maurer 2013b)

- (26) Sãotomense
kôlê so Zon kôlê kyê kobo
run FOC PN run fall hole
 he RAN into the hole (Hagemeijer 2011: 27)
- (27) Principense
adê ô, bēbē êli ki n sa bēbē
 no “VALIDATION” **drink** FOC 1S PROG drink
 no, I am DRINKing (Maurer 2009: 144)

+ present in Niger Delta including Edoid (e.g., Williamson 1986: 11-2)

(28) Edo (Edoid, Benue-Kwa)
usaanmwē ne I saan-ren
VN:jump REL 1S jump-PST
 I took a real jump/ I really jumped. (Hagemeijer 2011: 127)

- + sporadic in Bantu (Güldemann, Fiedler and Morimoto 2015), but salient particularly in group H10 (Hadermann 1996, De Kind et al. 2014)
- + absent in Portuguese

Summary

No.	Macro-Sudan feature	GGCs	Edoid	Bantu H	Portuguese
1	Implosive	X	X	-	-
2	Labial-velar	(X)	X	-	-
3	Three+ level tones	-	(X)	-	-
4	ATR harmony	(X)	X	-	-
5	Vowel nasalization	X	X	-	X
6	“Lax” polar question prosody	X	X	-	-
7	S-(AUX)-O-V-X word order	-	-	-	(X)
8	Surpass comparative	X	X	X	-
9	Logophoricity	-	X	-	-
10	Post-V/clause-final NEG	X	(X)	X	-
11	Serial verbs	X	X	-	-
12	Plural word	X	(X)	-	-
13	Focus-verb doubling	X	X	X	-

Note: (X) feature with restricted presence

Table 6: Summary of Macro-Sudan features in Gulf-of-Guinea creoles and adstrates

3 Discussion

3.1 Linguistic and social history of the Gulf-of-Guinea creoles

- + GGCs have a typical Macro-Sudan belt profile in (partially) displaying 10 of 13 features
- > transparent differential contribution of three major linguistic population components:
 - a) Edo(id): almost all relevant features in line with its membership in the Macro-Sudan belt
 - b) Portuguese: just 1 of 10 relevant features despite its central lexical contribution
 - c) Bantu zone H: just 3 of 10 relevant features in line with Bantu profile different from Macro-Sudan belt (cf. Güldemann 2011) > Bantu impact far less extensive than originally assumed by Ferraz (1979) (cf. Güldemann 2013)
- > Niger Delta languages and Edo in particular as the major source of the non-Portuguese features in GGCs

- + strong linguistic Macro-Sudan affiliation of GGCs fully in line with other evidence for Hagemeyer's (2011) historical model
- > GGCs present a strong case for a specific substrate in a founder creole providing a good explanation for an individual linguistic profile (against anti-substrate creole theories)
- > macro-areal typology as a potentially useful heuristic for reconstructing historical trajectories of particular linguistic lineages (cf. Güldemann 2011)

- + broad sociolinguistic history of GGCs relatively well understood:
 - Niger Delta population quickly pidginized and nativized Portuguese to a proto-creole on São Tomé island
 - language shift of slaves accompanied by significant retention of Niger Delta substrate features in the contact language due to heavy imbalance of slave-white ratio and limited access to and acquisition of the target language Portuguese
 - creole (or extended pidgin) also became the target language for new slave arrivals (mainly Bantu speakers) and diversified to a family, notably by spreading to two more islands, Príncipe and Annobón
- > linguistic mechanism for contact-mediated feature transfer in crucial early phase was “**shift-induced substrate interference**” rather than “borrowing” in terms of Thomason and Kaufman (1988)

3.2 GGCs and the historical modelling of the Macro-Sudan belt

- + provided language contact scenarios can explain linguistic macro-areas, what is the relative role of the two major patterns by Thomason and Kaufman (1988)
- > most previous accounts of the Macro-Sudan belt tend to privilege borrowing over shift-induced substrate (or don't consider the latter in the first place) by entertaining family spread and subsequent feature transfer: cf. Greenberg (1983), Güldemann (2003: 382-3)
- > ?alternative approach: substrate is (A) at least as or (B) more important than borrowing

- + hypothesis (A) should be viewed as null hypothesis:
 - (I) substrate as a more natural explanation for degree and kind of feature transfer
 - (II) substrate also explains well other robust contact-induced areas in and outside Africa:
 - Dravidian substrate in Indo-Aryan
 - Cushitic substrate in Ethiosemitic
 - Tuu + Kx'a substrate in Khoe (Güldemann and Fehn forthcoming)
 - etc.
 - (III) GGCs etc. provide concrete and relatively transparent cases for reconstructing the emergence and dynamics of a synchronic typological profile of a language (family)

- + indigenous lineages in macro-areas like the Macro-Sudan belt with a largely opaque history in terms of populations dynamics
- > GGCs potentially attractive as a partial analogue for a more abstract modelling of macro-areas, this in various ways:
 - a) new linguistic entity in a certain geographical area ends up in a heavily restructured form with a typical local linguistic profile
 - > sociolinguistically marked creole genesis representative for long-term precolonial history in Africa? - cf. strong substrate effects in non-creole cases
 - b) language resulting from the original contact event expands to a larger family under retention of numerous features
 - c) provided an appropriate environment, features can be stable despite heavy subsequent contact with languages of a different profile and demographic superiority

- + more extreme hypothesis (B) would tend to explain old contact-induced areas by a strong early founder effect, where the substrate “oozes up” into new linguistic population layers, implying a model according to which “linguistic features sit and populations move”
- > Is that a possible scenario for the deep history of macro-areas?

Abbreviations

CAUS Causative, COMP Complementizer, DEM Demonstrative, FOC Focus, INF Infinitive, IRR Irrealis, LOG Logophoric pronoun, M Masculine, NEG Negative, P Plural, PN Proper name, POSS Possessive, PQ Polar question, PROG Progressive, PRS Present, PST Past, QUOT Quotative, S Singular, VN Verbal noun

References

- Agheysi, Rebecca. 1990. A grammar of Edo. UNESCO.
- Ameka, Felix K. 2003. Multiverb constructions in a West African areal typological perspective. In Beermann, Dorothee and Lars Hellan (eds.), *The Proceedings of the Trondheim Summer School (TROSS) 2003: multi-verb-constructions*. Trondheim: Norges teknisk naturvitenskapelige universitet.
- Bamgboṣe, Ayọ. 1966. A grammar of Yoruba. West African Language Monographs 5. Cambridge: Cambridge University Press.
- Bond, Oliver and Gregory D. S. Anderson. 2014. Aspectual and focal functions of cognate head-dependent constructions: evidence from Africa. *Linguistic Typology* 18,2: 215-250.
- Chatelain, Héli. 1888-89. *Grammatica elementar do kimbundu ou lingua de Angola*. Ridgewood, New Jersey: Gregg Press.
- Clements, Nick and Annie Rialland. 2008. Africa as a phonological area. In Heine and Nurse (eds.).
- Coelho, Margarida et al. 2008a. Human microevolution and Atlantic slave trade: a case study of S. Tomé (Gulf of Guinea). *Current Anthropology* 49,1: 134-143.
- Coelho, Margarida et al. 2008b. Slave trade and human genetic microdifferentiation. In Calò, C. and G. Vona (eds.), *Atti del XVII Congresso dell' Associazione Antropologica Italiana*, Cagliari 26-29/09/2007. *International Journal of Anthropology (special issue 2008)*, 2-11.
- De Kind, Jasper et al. 2014. Event-centrality and the pragmatics-semantics interface in Kikongo: from predication focus to progressive aspect and vice versa. University Gent: unpublished ms.
- Dimmendaal, Gerrit J. 2001. Areal diffusion versus genetic inheritance: an African perspective. In Aikhenvald, Alexandra Y. and Robert M. W. Dixon (eds.), *Areal diffusion and genetic inheritance: problems in comparative linguistics*. Oxford: Oxford University Press, 358-392.
- Dryer, Matthew S. 2009. Verb-object-negative order in central Africa. In Cyffer, Norbert, Erwin Ebermann and Georg Ziegelmeyer (eds.), *Negation patterns in West African languages and beyond*. *Typological Studies in Language* 87. Amsterdam: John Benjamins, 307-362.
- Dryer, Matthew S. 2013. Coding of nominal plurality. In Dryer, Matthew S. and Martin Haspelmath (eds.), *The World Atlas of Language Structures Online*. Leipzig: Max Planck Institute for Evolutionary Anthropology. (Available online at <http://wals.info/chapter/33>, Accessed on 2015-08-05.)
- Ebert, Karen H. 1979. *Sprache und Tradition der Kera (Tschad) Teil III: Grammatik*. Marburger Studien zur Afrika- und Asienkunde A15. Berlin: Dietrich Reimer.

- Elugbe, Ben O. 1977. Some implications of low tone raising in Southwestern Edoid. *Studies in African Linguistics, Supplement* 7: 53-62.
- Elugbe, Ben O. 1986. *Comparative Edoid: phonology and lexicon*. Delta Series 6. Port Harcourt: University of Port Harcourt.
- Elugbe, Ben O. 1989. Edoid. In Bendor-Samuel, John (ed.), *The Niger-Congo languages*. Lanham: University Press of America, 291-304.
- Ferraz, Luiz I. 1979. *The creole of São Tomé*. Johannesburg: Witwatersrand University Press.
- 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, 21 June 2003.
- Good, Jeff. 2004. Tone and accent in Saramaccan: charting a deep split in the phonology of a language. *Lingua* 114: 575-619.
- Greenberg, Joseph H. 1959. Africa as a linguistic area. In William R. Bascom and Melville J. Herskovitz (eds.), *Continuity and change in African cultures*. Chicago: Chicago University Press, 15-27.
- Greenberg, Joseph H. 1983. Some areal characteristics of African languages. In Dihoff, Ivan R. (ed.), *Current approaches to African linguistics 1*. *Publications in African Languages and Linguistics* 1. Dordrecht/ Cinnaminson: Foris, 3-22.
- Grégoire, Henri-Claude and Emmanuel Schang. 1998. L'angolar est-elle une langue tonale? *Verbum* 20,1: 61-71.
- Güldemann, Tom. 2003. Logophoricity in Africa: an attempt to explain and evaluate the significance of its modern distribution. *Sprachtypologie und Universalienforschung* 56,4: 366-387.
- 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. 2009. Areal typology in Africa and its significance for the history of Afro-European creoles. Paper presented at the International APiCS Conference, MPI-EVA Leipzig, 5-8 November 2009.
- 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.

- Güldemann, Tom. 2013. Towards identifying Bantu Zone H features in Santome. Paper presented at the Workshop I “Origins and development of creole societies in the Gulf of Guinea”, Instituto para a Investigação Interdisciplinar da Universidade de Lisboa, 22 March 2013.
- Güldemann, Tom. 2014. The Gulf-of-Guinea creoles as Macro-Sudan belt languages? Paper presented at the Workshop II “Origins and development of creole societies in the Gulf of Guinea”, Faculdade de Letras da Universidade de Lisboa, 4-5 September 2014.
- Güldemann, Tom and Tjerk Hagemeyer. 2006. Negation in the Gulf of Guinea creoles: typological and historical perspectives. Paper presented at the ACBLPE annual Meeting, Universidade de Coimbra, 26-28 June 2006.
- Güldemann, Tom, Ines Fiedler and Yukiko Morimoto. 2015. Predicate “partition” and predicate-centered focus across Bantu. Poster presented at the Final Conference of the SFB 632 “Advances in Information Structure Research 2003-2015”, Berlin, 8-9 May 2015.
- Güldemann, Tom and Anne-Maria Fehn. forthcoming. The Kalahari Basin area as a “Sprachbund” before the Bantu expansion. In Hickey, Raymond (ed.), *The Cambridge handbook of areal linguistics*. Cambridge: Cambridge University Press.
- Hadermann, Pascale. 1996. Grammaticalisation de la structure infinitif + verbe conjugué dans quelques langues bantoues. *Studies in African Linguistics* 25,2: 155-169.
- Hagemeyer, Tjerk. 2000. Serial verb constructions in São-Tomense. M.A. Thesis: Universidade de Lisboa.
- Hagemeyer, Tjerk. 2009. Initial vowel agglutination in the Gulf of Guinea creoles. In Aboh, Enoch and Norval Smith (eds.), *Complex processes in new languages*. Amsterdam: John Benjamins, 29-50.
- Hagemeyer, Tjerk. 2011. The Gulf of Guinea creoles: genetic and typological relations. *Journal of Pidgin and Creole Languages* 26,1: 111-154.
- Hagemeyer, Tjerk. 2015. The Gulf of Guinea creoles: a case-study of syntactic reconstruction. In Carlotta Viti (ed.), *Perspectives on historical syntax*. Amsterdam: John Benjamins, 291-316.
- Hagemeyer, Tjerk and Ota Ogie. 2011. Èdó influence on Santome: evidence from verb serialisation. In Lefebvre, Claire (ed.), *Creoles, their substrates, and language typology*. Amsterdam: John Benjamins, 37-60.
- Hagemeyer, Tjerk and Jorge Rocha. forthcoming. Creole languages and genes: the case of São Tomé e Príncipe. *Faits de Langues*. (special issue edited by Alain Kihm).
- Hagemeyer, Tjerk et al. 2014a. Fa d'Ambô corpus. Centro de Linguística da Universidade de Lisboa (CLUL).
- Hagemeyer, Tjerk et al. 2014b. Santome corpus. Centro de Linguística da Universidade de Lisboa (CLUL).
- Hajek, John. 2005. Vowel nasalization. In Haspelmath et al. (eds.), 46-49.
- Hall, Beatrice L. et al. 1974. African vowel harmony systems from the vantage point of Kalenjin. *Afrika und Übersee* 57,4: 241-267.
- Haspelmath, Martin, Matthew Dryer, David Gil and Bernard Comrie (eds.). 2005. *The world atlas of language structures*. Oxford: Oxford University Press.

- Heine, Bernd. 1975. Language typology and convergence areas in Africa. *Linguistics* 144: 27-47.
- Heine, Bernd. 1976. A typology of African languages based on the order of meaningful elements. *Kölner Beiträge zur Afrikanistik* 4. Berlin: Dietrich Reiner.
- Heine, Bernd and Derek Nurse (eds.). 2008. *A linguistic geography of Africa*. Cambridge: Cambridge University Press.
- Hyman, Larry M. 1999. The historical interpretation of vowel harmony in Bantu. 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), 235-295.
- Hyman, Larry M. 2003. Segmental phonology. In Nurse and Philippson (eds.), 42-58.
- Idiatov, Dmitry. 2010. Clause-final negation as a Macro-Sudan areal feature. Paper presented at the International Conference “Syntax of the World’s Languages 4”, Laboratoire Dynamique du Langage (DDL) Lyon, 23-26 September 2010.
http://webh01.ua.ac.be/dmitry.idiatov/talks/2010_SWL4_Idiatov.pdf
- Kastenholz, Raimund. 1987. *Das Koranko: Ein Beitrag zur Erforschung der Nord-Mande-Sprachen*. Afrikanistische Arbeitspapiere, Supplement.
- Maddieson, Ian. 2003. The sounds of the Bantu languages. In Nurse and Philippson (eds.), 15-41.
- Maddieson, Ian. 2005a. Glottalized consonants. In Haspelmath et al. (eds.), 34-37.
- Maddieson, Ian. 2005b. Vowel quality inventories. In Haspelmath et al. (eds.), 14-17.
- Maddieson, Ian. 2005c. Presence of uncommon consonants. In Haspelmath et al. (eds.), 82-85.
- Maddieson, Ian. 2005d. Tone. In Haspelmath et al. (eds.), 58-61.
- Maurer, Philippe. 1995. *L'Angolar: un créole afro-portugaise parlé à São Tomé*. Hamburg: Helmut Buske Verlag.
- Maurer, Philippe. 1999. El verbo locativo poner en santomense, principense y angolar. In Klaus Zimmermann (ed.), *Lenguas criollas de base lexical española y portuguesa*, 89-100. Frankfurt/Madrid: Vervuert/ Iberoamericana.
- Maurer, Philippe. 2009. Principense - grammar, texts, and vocabulary of the Afro-Portuguese creole of the island of Príncipe. London: Battlebridge.
- Maurer, Philippe and the APiCS Consortium. 2013a. Nominal plural marker and third-person-plural pronoun. In Michaelis et al. (eds.). (Available online at <http://apics-online.info/parameters/25>, Accessed on 2015-08-05.)
- Maurer, Philippe and the APiCS Consortium. 2013b. Verb doubling and focus. In Michaelis et al. (eds.). (Available online at <http://apics-online.info/parameters/105>, Accessed on 2015-08-05.)
- McWhorter, John H. 2005. *Defining creole*. Oxford: Oxford University Press.
- McWhorter, John and Jeff Good. 2012. *A grammar of Saramaccan Creole*. Berlin: De Gruyter Mouton.
- Michaelis, Susanne et al. (eds.). 2013a. *Atlas of Pidgin and Creole language structures online*. Leipzig: Max Planck Institute for Evolutionary Anthropology.
- Michaelis, Susanne et al. (eds.). 2013b. *The survey of pidgin and creole languages, Vol. II. Portuguese-based, Spanish-based, and French-based languages*. Oxford University Press.

- Nkemnji, Michael. 1995. Heavy pied-piping in Nweh. Ph.D. thesis: Department of Linguistics, University of California Los Angeles.
- Nurse, Derek and Gérard Philippson (eds.). 2003. The Bantu languages. Routledge Language Family Series 4. London: Routledge.
- Ogie, Ota. 2014. Extraction in ÈDÓ and Santome: empty categories, pronominal plugs and resumptive pronouns. Paper presented at the Workshop II “Origins and development of creole societies in the Gulf of Guinea”, Faculdade de Letras da Universidade de Lisboa, 4-5 September 2014.
- Ọmọyúyí, Thomas O. 1986. Pluralization strategies in Èdo. *Journal of West African Languages* 16,2: 61-75.
- Post, Marike. 1992. The serial verb construction in Fa d'Ambu. In d'Andrade, Ernesto (ed.), *Actas do Colóquio sobre Crioulos de Base Lexical Portuguesa*. Lisboa: Colibri, 153-169.
- Rialland, Annie. 2007. Question prosody: an African perspective. In Riad, Tomas and Carlos Gussenhoven (eds.), *Tones and tunes: typological studies in word and sentence prosody*. *Phonology and phonetics* 12,1. Berlin: de Gruyter, 35-62.
- Stahlke, Herbert. 1970. Serial verbs. *Studies in African Linguistics* 1,1: 60-99.
- Stassen, Leon. 2005. Comparative constructions. In Haspelmath et al. (eds.), 490-93.
- Thomason, Sarah G. and Terrence Kaufman. 1988. *Language contact, creolization, and genetic linguistics*. Berkeley: University of California Press.
- Trail, Anthony and Luiz Ferraz. 1981. The interpretation of tone Principense creole. *Studies in African Linguistics* Volume 12,2: 205-215.
- Westermann, Diedrich. 1947. *Pluralbildung und Nominalklassen in einigen afrikanischen Sprachen*. *Abhandlungen der Deutschen Akademie der Wissenschaften zu Berlin 1945/6, Philosophisch-Historische Klasse 1*. Berlin: Akademie-Verlag.
- Williamson, Kay. 1986. Niger-Congo: SVO or SOV? *Journal of West African Languages* 16: 5-15.
- Zamora, Armando. 2010. *Gramática descriptiva del fa d'ambô*. Barcelona: CEIBA Ediciones.