

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

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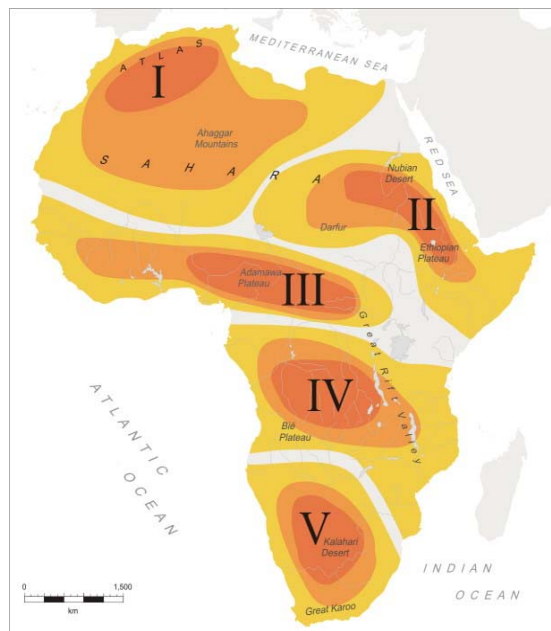
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### 1 Introduction

#### 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
<b>Mande</b>	-	Niger-Kordofanian
<b>Kru</b>	Niger-Congo	Niger-Kordofanian
<b>Gur</b>	Niger-Congo	Niger-Kordofanian
<b>Kwa</b>	Niger-Congo	Niger-Kordofanian
<i>Benue-Congo (except Narrow Bantu)</i>	Niger-Congo	Niger-Kordofanian
<b>Adamawa-Ubangi</b>	Niger-Congo	Niger-Kordofanian
<b>Bongo-Bagirmi</b>	Central Sudanic	Nilo-Saharan
<b>Moru-Mangbetu</b>	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

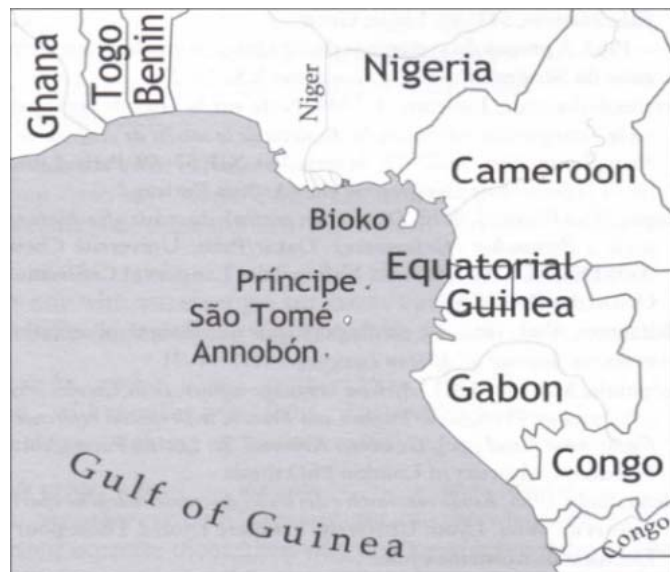
Table 2: Families partaking in the Macro-Sudan belt (Güldemann 2008)

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 15<sup>th</sup> 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 Principe	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 historical 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>kwall</i>	-	<i>okwall</i>	Edoid or Ijoid <sup>a</sup>	basket
<i>ikpe</i>	<i>ukwê</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>igbê</i>	<i>ubwê</i>	<i>ôngê</i>	<i>ôguê</i>	Edo <i>ègbé</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)



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

+ conditioned or predominant preverbal position of object

(5) Koranko (Mande)

*ní sí wò lá-biù yí r̀̀*

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 some 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** 1S

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 s̀̀é Àzàrí*

PN be.beautiful **surpass** PN

Ozo is more beautiful than Azari. (Hagemeijer 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<sub>x</sub> QUOT **3M.S.LOG<sub>x</sub>** go.away

b. *wə míntí wə kóoré*

3M.S<sub>x</sub> QUOT 3M.S<sub>y</sub> 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, Hagemeijer 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. Hagemeijer 2011: 133-4)

(13) Sāotomense

*non na tê awa fa*

1P NEG have water **NEG**

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

(14) Fa d'Ambu

*naminsê na mata ngê f*

2P NEG kill people **NEG**

you didn't kill the people (Hagemeijer 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-Manguean)

*ni-xáá=rí k"á?à žú?á káni xiná?a*  
 COMP-buy = 1 many 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 besides number prefixes: cf. preposed plural words like *ávbé* (Edo), *évbá* (Emai), *ílàè̀n*, *íbhàè* (Esan) (Omoruyi 1986: 68-9)  
 + 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? nčúú akendòŋ čúú*  
 PN 3S PST1 ?:boil plantains **boil**  
 Atem BOILED plantains (Nkemnji 1995: 138)

(25) Aja (Gbe, Benue-Kwa)  
*óò, d̀à (yí) é d̀à*  
 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) but 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  
*kòlê so Zon kòlê kyê kobo*  
**run** FOC PN run fall hole  
 he RAN into the hole (Hagemeyer 2011: 27)

(27) Principense  
*adê ô, b̀ebê êli ki n sa b̀ebê*  
 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)  
*usaanmwèn ne I saan-ren*  
**VN:jump** REL 1S jump-PST  
 I took a real jump/ I really jumped. (Hagemeyer 2011: 127)

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

**Summary**

No.	Macro-Sudan feature	Edoid	GGCs	Portuguese	Bantu H
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 Hagemer'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 African slave-European 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 widespread phenomenon and 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 in South Asia
    - Cushitic substrate in Ethiosemitic in Ethiopian Plateau
    - Tuu + Kx'a substrate in Khoe in Kalahari Basin (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? - likely in view of strong substrate effects in non-creole cases
    - b) language resulting from the original contact event expands and becomes 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 try 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 this model 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

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