

The historical-comparative status of East Sudanic

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1 Research history and inventory

(I) originates in pre-Greenbergian classifications but there divergent conceptualizations:

a) Westermann (1911, 1912), Struck (1911/2) establish concept:

- **geneological** entity of Sudanic in which East(ern) is contrasted to the West(ern) 'core'
- East(ern) comprises particularly Nilotic, Nubian and geographic neighbors like Kunama
- > Westermann (1935, 1940) abandons wide Sudanic concept by excluding Nilotic and doubting membership of Nubian, Kunama etc. (cf. Murray's (1920) wide "Nilotic")

b) Tucker (1940) builds directly on Westermann's later views:

- concept of East(ern) Sudanic moves west, constituted by subparts of modern:

- a) Central Sudanic family: Bongo-Bagirmi, Kresh, Moru-Madi, Lenduic
- b) UBANGI pool: Ndogoic, Raga, Zandic

- replaces geneological concept by a purely **areal** one

(II) Greenberg (1950, 1963), without any relevant references, ignores late Westermann and Tucker but revives the then obsolete concept by early Westermann, Struck and Murray in terms of both geography and historical nature

Greenberg (1963)	Bender (e.g., 1989)	Ehret (e.g., 1989)	Rilly (2005, 2010)	Dimmendaal (2007, 2014)
-	-	-	Meroitic	Meroitic
1. Nubian	Nubian	Nubian	Nubian	Nubian
3. Barea	Nara	Nara	Nara	Nara
7. Merarit, ...	Taman	Taman	Taman	Taman
5. Nyima, ...	Nyimang	Nyimang	Nyimang	Nyimang
4. Ingassana, ...	Jebel	Jebel	Jebel	Jebel
8. Dagu of Darfur, ...	Dajuic	Dajuic	Dajuic	Dajuic
2. Murle, ...	Surmic	Surmic	Surmic	Surmic
9. Nilotic	Nilotic	Nilotic	Nilotic	Nilotic
6. Temein, ...	Temeinic	Temeinic	Temeinic	Temeinic
10. Nyangiya	-	Kuliak	-	-
-	-	Berta	-	-

Table 1: The development of East Sudanic since Greenberg (1963)

(III) Greenberg's (1963) concept today widely accepted among Africanists (but see Köhler 1955, Heine 1970) albeit with revisions > Tables 1 + 2

- subsumes today ca. 100 languages, which represents about half of the Nilo-Saharan total
- languages partly described poorly until today > inhibits conclusive historical assessment
- 10-12 lineages, currently widest consensus about 10 including extinct ancient Meroitic
- disagreement about internal classification

	Lineage	No.	1	2	3	Areal affiliation according to Güldemann (2018a)	
						Macro-area	Accretion zone
	(Kuliak)	3	X			East Sudan-Gregory Rift	
Northern	Taman	4		X	X	Chad-Ethiopia	
	Nyimang	2		X	X	Chad-Ethiopia	Nuba Mountains
	Nara	1		X	X	Chad-Ethiopia	
	Meroitic	1	X	X	X	Chad-Ethiopia	
	Nubian	13				Chad-Ethiopia	Nuba Mountains
Southern	Dajuic	7		X		Sahel	
	Temeinic	2	X	X	X	Nuba Mountains	
	Nilotic	51				East Sudan-Gregory Rift	Southern Gregory Rift
	Surmic	10				East Sudan-Gregory Rift	Ethiopian escarpment
	Jebel	4	X	X		Ethiopian escarpment	
	(Berta)	1		X	X	Ethiopian escarpment	

Note: No. = Number of languages; 1 = No grammar sketch before 1965;

No comprehensive modern published description: 2 = before 2000, 3 = today

Table 2: Basic classificatory units of East Sudanic

2 Linguistic evidence

- + my present aim here is to assess the publicly available evidence for East Sudanic in view of the accepted methodological framework of historical-comparative linguistics
- > Greenberg's (1963) African classification is "badly in need of major reinvestigation and reworking" (Campbell and Poser 2008: 128)
- standard methodology requires evidence of a particular type in order to "prove" relatedness
- > "quality over quantity":
 - phylogenetic plausibility (regularity, diachronic typology, ...)
 - morphological over lexical evidence
 - paradigms over atomic items
- + as opposed to Niger-Congo and Afroasiatic, there is no substantial, diagnostic evidence for a secure core of Nilo-Saharan or East Sudanic against which membership of uncertain languages can be assessed, which complicates the issue considerably
- > report below on available typological (§2.1), morphological (§2.2), and lexical (§2.3) evidence and on low-level genealogical proposals within East Sudanic (§2.4)

2.1 Typology

+ structural diversity in Table 3 similar to that between unrelated languages and so far not accounted for in terms of diachronic typology (but see §3.1 below)

No.	Lineage	Word order	Peripheral case	Attested alignment by case marking	Tripartite number
U25	<i>Shabo</i>	HF	<i>Shabo</i>	NOM	-
U23	Songhay	HI	-	-	-
U20	Kadu	HI	<i>Krongo</i>	-	X
U21	Kuliak	HI	<i>Ik</i>	NOM	X
U22	Central Sudanic	HI	-	-	-
U24	<i>Kunama</i>	HF	<i>Kunama</i>	NOM~DOM	-
U26	Furan	HF	<i>Fur</i>	NOM~DOM	X
U27	Saharan	HF	<i>Kanuri</i>	NOM~DOM ERG	-
U28	Maban	HF	<i>Maba</i>	NOM~DOM	X
U29	Taman	HF	<i>Tama</i>	NOM~DOM	X
U30	Nyimang	HF	<i>Ama</i>	NOM	-
U31	<i>Nara</i>	HF	<i>Nara</i>	NOM	-
U32	<i>Meroitic</i>	HF	?	NOM	-
U33	Nubian	HF	<i>Dongolese</i>	NOM~DOM	X
U34	Dajuic	HI	-	-	X
U35	Temeinic	HI	?	?	X
U36	Nilotic	HI	<i>Turkana</i>	NOM M.NOM ERG	X
U37	Surmic	HI	<i>Murle</i>	NOM M.NOM	X
U38	Jebel	HI	<i>(Gaam)</i>	-	(X)
U39	<i>Berta</i>	HI	<i>(Berta)</i>	M.NOM	-
U40	Koman	HI	-	(NOM) (ERG)	-
U41	Baga~Gumuz	HI	-	(M.NOM)	-
U46.C	Ari-Banna (Omotic)	HF	<i>Dime</i>	NOM	(X)
U46.A	Ta-Ne (Omotic)	HF	<i>Gimira</i>	NOM M.NOM	-
U46.B	Maji (Omotic)	HF	<i>Sheko</i>	NOM	-
U45	Cushitic	HF	<i>Oromo</i>	NOM M.NOM	X

Note: ERG = ergative-absolutive, HF = head-final, HI = head-initial, DOM = differential object marking in NOM, M.NOM = marked nominative, NOM = nominative-accusative, (...) = non-canonical, - = feature absent, ? = no information;

Bold = (Likely) Afroasiatic; Frame = Nilo-Saharan according to Dimmendaal

(2014); Light grey = Northern East Sudanic; Dark grey = Southern East Sudanic

Table 3: Typical typological features of Nilo-Saharan (Güldemann 2018b)

2.2 Morphology

+ Greenberg's (1950) evidence looks substantial but does not meet requirements of proof: non-representative lineage coverage; non-diagnostic short, atomic forms; etc.
 > exemplified by means of a survey of fuller modern data on pronouns - Appendix

Lineage	Nilotic	Surmic	Jebel	Dajuic	Nubian	Nara	Taman	
No. of languages	51	10	4	7	13	1	4	
Feature	> 1 lang.	<i>Didinga</i>	<i>Tabi</i>	<i>Dagu</i>	> 1 lang.	<i>Barea</i>	<i>Merarit</i>	
1	1S.SBJ	.a	a	-	a	ai	-	wa
2	2S.SBJ	.i	i	-	i	.i-	-	i
3	2S/P.POSS	.(-)u(-)	(c)u(ni)	u(n)	-	-	-	onu
4	3 DEM	-	či	-	-	te-r	ti	te
5	S/P on DEM	-n/-k, n-/č-	-n/-gi	-	-	-	-	-
6	REL~ADJ	ma-	-	-	ma-	-	-mo	-
7	P.DEM~REL	.T	-	-	-	-	-te-	-
8	REL~ADJ	ko-	-	-	-	-go	-go	-k
9	FEM	.n	-	ñe	-	-en	-	-
10	S on noun	.-Vt	-it	-	-	-(i)d	-	-t
11	P on noun	.K	k	-k	-	-gu	-ka/-gu	ŋ < k
12	P on noun	.T	-ta	-	-	-du	-ta	-
13	P on noun	.-N	-en/-nV	-	-	-in	-	-
14	P on noun	.-V ^{front}	-i	-	-	-i	-	-
15	Suppletion	see §2.3 below						
16	NOM.S	-	-i	-	-	-i	-	-
17	GEN.S	-a	-o	-	-	-u	-	-
18	LOC.S	.-T-	-to/-ti	-te	-ti	-do	-t(V)	ta
19	LOC.S	-	-	-ul	-	-la	-li	-
20	ACC.S	-	-	-	-	.-kV	-	ŋ < k
21	LOC.P	-nV	-ni	-	-	-	-	-
22	COP~tense	.a	-	-	-	a	-	-
23	P on verb	-	-k	-	-(ka)	-	-K(e)	-key
24	FUT	.-P-	-	-	-	PV	-	-
25	NEG on verb	.B-	(ma)	-	ba	m-	(ma)	m-
26	INCH	.N	-aN	-	-	-	-en	-
27	DAT on verb	.-K(in)	-eki	-	-	-	-	-

Notes: X = language-specific element, .X = pseudo-reconstruction from several languages

Table 4: Greenberg's (1950: 154-7) grammatical evidence for East Sudanic

2.3 Lexicon

- + early work by Westermann (1912: 36-44) associates Nilotic and Nubian as the later core of East Sudanic, taken up by other scholars like Murray (1920), Conti Rossini (1926), and Verri (1950), also including Kunama and Nara
- + later work by Greenberg (1963), Bender (e.g., 2005), and Ehret (e.g., 2001) largely employ unsystematic and potentially deceptive "mass comparison"
- a) hazardous distribution of "cognates" for 'dog' in and **outside** Nilo-Saharan > Table 5
- b) purported isogloss of stem suppletion for 'cow/cattle' (Southern) East Sudanic (cf. Greenberg 1950, 1963; Ehret 1983, 2001; Dimmendaal 2007, 2011) > Tables 6/7

Language group	Language	Root 1	Root 2
NILO-SAHARAN			
U21 Kuliak	<i>Ik</i>	<i>nok^a</i>	
U22 Central Sudanic			
A Bongo-Bagirmi	<i>Sara</i>		<i>bísi</i>
	<i>Baka</i>		<i>isi</i>
G Lenduic	<i>Baledha</i>		<i>tsée</i>
I Mangbetu-Asua	<i>Mangbetu</i>		<i>nesi</i>
U26 Furan	<i>Fur</i>		<i>asa</i>
U28 Maban	<i>Maba</i>	<i>nok</i>	
U29 Taman	<i>Tama</i>		<i>wi</i>
	<i>Mararit</i>		<i>wiš</i>
U31 Nara	<i>Nara</i>		<i>wəs</i>
U34 Dajuic	<i>Shatt</i>		<i>iis</i>
U36 Nilotic			
West	<i>Burun</i>	<i>gɔk</i>	
	<i>Naath</i>	<i>jiok</i>	
South	<i>Nandi</i>		<i>sese</i>
AFROASIATIC			
U42 Semitic	<i>Amharic</i>		<i>wišša</i>
U45 Cushitic	<i>Sidamo</i>		<i>wɔšš-ico</i>
U46 Omotic: C Ari-Banna	<i>Ari</i>		<i>aksi</i>
NIGER-KORDOFANIAN			
U18 Kordofanian: D Rashadic	<i>Orig</i>		<i>wùsù</i>
U17 Ubangi: B Zandic	<i>Zande</i>	<i>ango</i>	

Note: Light grey = Northern East Sudanic; Dark grey = Southern East Sudanic

Table 5: Comparative series for 'dog' (after Bender 1981: 258-7, 266)

Family	(Proto)-language	Singular	Plural
Dajuic	Daju of Lagowa	<i>tepe</i>	<i>tukke</i>
Temeinic	Temein	<i>n-tɛŋ</i>	<i>ki-tók</i>
Nilotic	Proto-Nilotic	*ɖeŋ	*ɖok
Surmic	Majang	<i>taŋ</i>	<i>tɔgi</i>
Jebel	Gaam	<i>tɔ</i>	<i>tɔgg</i>

Table 6: Irregular forms for 'cow' in Southern East Sudanic (Dimmendaal 2011: 97)

So powerful is this piece of evidence that it is almost enough by itself to show that the languages with the innovation form a separate subgroup of Nilo-Saharan excluding Nubian-Tama [belonging to northern East Sudanic], Central Sudanic, and Maban, all of which maintain the simple unmodified root. (Ehret 1983: 400)

Family	(Proto)-language	Singular	Plural	(Additional) source
Nyimang	Proto-Nyimang	.(m)bṽr	.(m)bṽr	Bender (2000: 107, 118)
Nara	Nara	<i>ar</i>	<i>aré</i>	Reinisch (1874: 105)
Meroitic	Meroitic	? <i>dime</i>	?	Rilly (2010: 120)
Taman	Tama	<i>tɛɛ</i>	<i>tɛɛŋ</i>	-
	Proto-Taman	.tEE	.tE(-)	Edgar (1991d: 218)
Nubian	Proto-Nubian	.tEE	.tE(-)	Rilly (2010: 521-2)
Dajuic	Daju of Lagowa	<i>tepe</i>	<i>tukke</i>	-
	Proto-Dajuic	* <i>tepe</i>	* <i>təke</i>	Thelwall (1981b: 139)
Temeinic	Temein	<i>n-tɛŋ</i>	<i>ki-tók</i>	Stevenson (1976-86)
	Keiga Jirru	<i>a-ɖéŋ</i>	<i>ku-ɖok</i>	Blench (nd.)
	Tese	<i>ɛ-ɖéŋ</i>	<i>kwú-ɖùk</i>	
	Proto-Temeinic	.-ṽŋ	.kV-ṽUk	-
Nilotic	Proto-Nilotic	*ɖeŋ	*ɖok	Dimmendaal (1988: 36)
Surmic	Majang	<i>taŋ</i>	<i>tɔgi</i>	Joswig (2011: 12)
	Proto-Southwest	* <i>taŋ(a)</i>	.tiin	Moges (2001: 318, 327, 364)
	Proto-Southeast	* <i>bi</i>	.bio	Dimmendaal and Last (1998)
	Proto-Surmic	? .taŋ	?	-
Jebel	Gaam	<i>tɔ</i>	<i>tɔgg</i>	Stirtz (2011: 101)
	Aka	<i>mɔɔ-gɔ</i>	<i>mɔɔ</i>	Bender (1997a: 208)
	Molo	<i>mɔ</i>	-	
	Kelo	<i>mɔ</i>	<i>mɔ</i>	
	Beni Sheko	<i>mu</i>	-	
	Proto-Jebel	.mɔ	.mɔ	-

Notes: Light grey = Northern East Sudanic, Dark grey = Southern East Sudanic,

bold = apparent reflex of suppletion pattern

Table 7: Fuller survey of forms for 'cow/cattle' in East Sudanic (Güldemann 2018b)

- + more systematic approaches to assessing synchronic lexical similarity do not strongly and consistently support East Sudanic
- a) traditional lexicostatistic studies confirm robust primary units but beyond display values also compatible with similarity due to chance and/or contact - cf., e.g., Thelwall's (1978) study on 6 Nubian, 5 Dajuic and 2 West Nilotic languages
- b) Brown's (2017) more stringent quantitative BWB system assesses the degree of support for genealogical proposals in collections of comparative sets with regard to whether or not observed lexical similarity exceeds coincidental expectation
- four African test cases: Defaka/Nkoro in Ijoid, Proto-Khoe/Kwadi in Khoe-Kwadi, Efik/Proto-Bantu in Benue-Congo, and crucial Nubian/Nilotic in East Sudanic: last case based on Greenberg's (1963) comparative set is the only one that is evaluated as "No support for historical connection"
- > overall, non-canonical assessments of synchronic lexical similarity, even quantitative ones, depend on diverse individual approaches and thus remain subjective and arbitrary

2.4 Genealogical proposals within East-Sudanic

- + Ehret's (e.g., 2001) structured Nilo-Saharan family tree with various genealogical hypotheses within East Sudanic, based normally on purported lexical innovations
 - Nilotic-Surmic
 - Jebel-Berta aka "Jebel"
 - Taman-Nubian aka "Western Astaboran"
 - Nyimang-Temeinic aka "Nuba Mountains"
- little detailed discussion referring merely to Ehret (1983) and non-diagnostic lexicostatistic studies by Bender (1971) and Thelwall (1981, 1982)
- > discuss below only proposals that have been taken up by other scholars and/or are based on morphological evidence

2.4.1 Surmic-Taman (crosses typological north-south divide)

- Bryan (1955) compares verb structure of three languages each from Surmic (*Murle*, *Didinga*, *Me'en*) and Taman (*Tama*, *Sungor*, *Merarit*) concluding that both families share a presumably inherited morphological verb template with partly similar markers
- numerous problems in comparison:
 - "reconstructed" templates cannot be recovered conclusively from her data
 - numerous exceptions and/or restrictions regarding virtually all template slots
 - only five template slots (italic) of seven appear to be shared
 - only three (bold) of the five are semantically specific and thus potential diagnostics
 - no consideration of universal tendencies in morphological verb templates

Taman: ***First person-Vowel-Aspect**-“Stem”-**Plural**-Vowel -Ø -Non.person
 Surmic: ***First person-Vowel-Aspect**-“Stem”-**Plural**-Ø -Person -Non.person

- similarities in the form of exponents are very irregular without obvious reconstructability in each lineage and involve very short unmarked segments
- > Bryan's "best" examples (cf. Table 8), which are not representative and do not conform fully to her templates, merely involve a (singular) imperative suffix *-k* and, in finite forms, a plural suffix *-k* and a functionally indeterminate suffix *-i* in the singular

	Tama 'wash'				Sungor 'do, make'				Murle 'beat'					
IMP.S	<i>aise</i>		<i>-k</i>		<i>ene</i>		<i>-k</i>		<i>ru</i>		<i>-k</i>			
IMP.P	-				<i>k</i>		<i>-ene -k -a</i>		<i>u</i>		<i>-ru -it</i>			
	FIRST PERSON	ROOT	PLURAL	NON-PERSON	FIRST PERSON	ROOT	PLURAL	NON-PERSON	FIRST PERSON	VOWEL PREFIX	ROOT	PLURAL	PERSON	NON-PERSON
1S	<i>n</i>	<i>-aise</i>		<i>-i</i>	<i>n</i>	<i>-ane</i>		<i>-i</i>	<i>k</i>	<i>-a</i>	<i>-ru</i>			<i>-i</i>
2S		<i>aise</i>		<i>-i</i>		<i>ane</i>		<i>-i</i>		<i>a</i>	<i>-ru</i>			<i>-i</i>
3S		<i>aise</i>		<i>-i</i>		<i>ane</i>		<i>-i</i>		<i>a</i>	<i>-ru</i>			<i>-i</i>
1P.I									<i>k</i>	<i>-a</i>	<i>-ru</i>		<i>-k</i>	
1P.(E)	<i>n</i>	<i>-aise</i>	<i>-k</i>	<i>-ε</i>	<i>n</i>	<i>-ane</i>	<i>-k</i>	<i>-e</i>	<i>k</i>	<i>-a</i>	<i>-ru</i>	<i>-k</i>	<i>-a</i>	
2P		<i>aise</i>	<i>-k</i>	<i>-ε</i>		<i>ane</i>	<i>-k</i>	<i>-e</i>		<i>a</i>	<i>-ru</i>	<i>-k</i>	<i>-u</i>	
3P		<i>aise</i>	<i>-k</i>	<i>-ε</i>		<i>ane</i>	<i>-k</i>	<i>-e</i>		<i>a</i>	<i>-ru</i>	<i>-k</i>		

Table 8: Similar verb paradigms of Tama, Sungor and Murle after Bryan (1955: 314-5., 318-5., 328-11.)

2.4.2 Jebel-Berta (goes beyond received East Sudanic)

- goes back to Evans-Pritchard (1932) who classified Non-Gaam Jebel languages with Berta
- taken up by Bender (1971), Ehret (1989, 2001), Bremer (2015) > Berta as East Sudanic!
- rejected and explained as contact by Bender (1983) and not supported by pronominal data (see appendix), where Jebel looks much closer to Nilotic, Surmic and Temeinic

2.4.3 Nilotic-Surmic

- multiple promising evidence in diverse linguistic domains:
 - lexicon: Ehret (1983), Dimmendaal (1988), Denning (1989)
 - morphology: Dimmendaal (1983, 1998), Unseth (1989, 1998)
 - (diachronic) typology: Dimmendaal (1998)
- persistent problems: so far no complete and compact outline and discussion of the evidence, no exclusion of isoglosses that are possibly contact-induced (cf. Dimmendaal 1982, Hieda 1991, Arensen n.d.)

2.4.4 Southern East Sudanic

- subsumes all lineages with head-initial syntactic profile
- so far not proven, in fact not universally accepted, as a genealogical unit (cf. Table 1)
- Nilotic-Surmic as a very probable core but remains to be reconstructed fully
- on this basis, worth pursuing the idea that other lineages can be joined
- > pronominal data (see appendix) particularly suggest Temeinic and Jebel

Number/person	1st	2nd	3rd
Singular	*V ^{LOW} -N	*V ^{HIGH} -N	*V ^{MID} -N
Plural	*V ^{LOW} -G	*V ^{HIGH} -G	*V ^{MID} -G

Table 9: Pronoun canon shared by Nilotic, Surmic, Temeinic and Jebel

2.4.5 Northern East Sudanic

- subsumes all lineages with head-final syntactic profile
- relatives of Nubian with this structural characteristic suspected since early on - cf. notably Murray (1920) and Lang (1926) on Nara, Thelwall (1982) on Taman and Nyimang
- major advance by Rilly (2005, 2010; see also Rilly and de Voogt 2012) in connection with evaluating the increased linguistic knowledge about extinct Meroitic according to a canonical historical-comparative approach
- > proposed evidence extensive and concerns typology, morphology (Table 10), and lexicon
- > methodological problems remain (see Güldemann 2018b: 305-7) - cf. pronominal data in appendix which are not obviously compatible with those in Table 10 below
- currently the most promising but not yet conclusive larger genealogical hypothesis within the East Sudanic domain

Element	Nara	Nubian	Taman	Nyimang
1S pronoun	*a	*a-i	*wa	*a-i
1P pronoun	*ag	*a-	*wag	*agV
2S pronoun	*e-n	*e-/en-	*i	*i
2P pronoun	*eng/eg-n	*u-	*ig	*igV
3S pronoun	*t-u	*ta-	*an	*an
3P pronoun	*t-ug	*te-	*ang	*angi
Object	-go	*-gV	-ij (<i>Tama</i>)	-(u)η (<i>Ama</i>)
Singulative	*-t	*-ti	-t (<i>Tama</i>)	-
Plural	*-gu	*-gu	-Koo (<i>Sungor</i>)	-go (<i>Dinik</i>)
Adjectivizer	-ku	?*-ko	*-k	-ij (<i>Ama</i>)
Negative	ma	*m(a)-	mɔ (<i>Merarit</i>)	? fa (<i>Ama</i>)

Table 10: Morphological similarities in Northern East Sudanic (after Rilly 2005: 7-10)

3 Discussion and outlook

3.1 The Wadi Howar hypothesis

- + recent research has combined the history of East Sudanic with an archeological finding about the ancient Wadi Howar river area north of Khartoum that supported human settlement in the past but desertified later (cf. Pachur and Kröpelin 1987)
- > two different hypotheses about the relation between this area and an early population speaking some East Sudanic language, namely correlating with:
 - Proto-East Sudanic (Dimmendaal 2007)
 - implies a major southward migration to areas far away from this assumed homeland
 - associated with his (2007: 56–65) hypothetical typological history of East Sudanic: Proto-East Sudanic with a head-final and dependent-marking profile, which was retained in northern branch but replaced by a head-initial and head-marking profile in southern branch due to language contact with unknown local populations
 - > this complex scenario ceases to be necessary if no East Sudanic family is assumed
 - Proto-Northern East Sudanic (Rilly e.g., 2009, 2016) - favored here for now
 - compatible with modern language distribution and/or likely migration trajectories out of the desertifying area and not requiring any further hypotheses

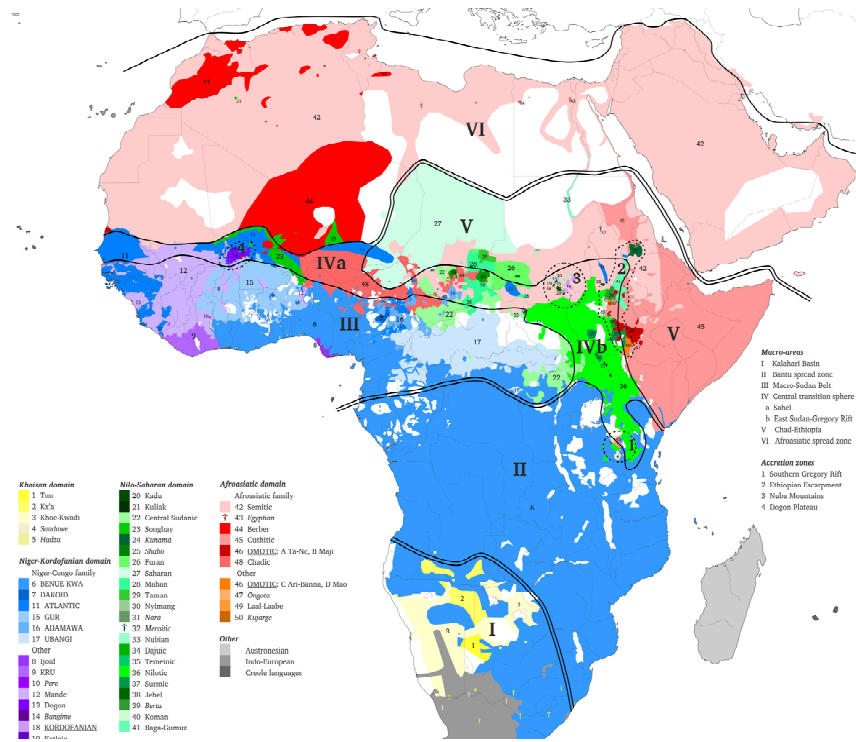
3.2 What if East Sudanic is not a genuine language family?

Branch	Typology	Macro-area	Major	Minor
North	Head-final	Chad-Ethiopia	Nubian	Taman, Nyimang, Meroitic, Nara
South	Head-initial	East Sudan-Gregory Rift	Nilotic	Surmic, Temeinic, Jebel, ?Dajuic

- > optimistic view: 2 family spread zones each with one expansive lineage and smaller units sedimented in adjacent accretion zones (Nuba Mountains and Ethiopian Escarpment)
- + isoglosses across "branches" or particularly between Nilotic and Nubian contact-induced?

3.3 Research outlook

- + many current Africanist hypotheses on genealogical language classification are not compatible with standards of general historical linguists, including East Sudanic
- > after an unsatisfactory status-quo of 70 years need of reorienting research program:
 - more complete language documentation - 7 of 10 units are still very poorly known (cf. Table 2): Dajuic and Jebel with a single and Taman, Nyimang, Nara, (Meroitic), Temeinic with no modern comprehensive grammar!
 - bottom-up reconstruction in primary units focusing on morphological and paradigmatic structures: partly complex verb and noun morphology still largely untapped
 - cross-unit comparisons on the basis of group reconstructions



Map: Basic classificatory units, genealogical relations and macro-areal profile in Africa (Güldemann 2018a, b)

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Appendix: Pronouns across East Sudanic lineages

+ possible recognition of a concrete paradigmatic canon across several East Sudanic lineages based there on quasi reconstructions:

"block" pattern with counterposed vowel qualities low/high/(front)-mid for person and consonant alternation N/G for number

> noticed previously: notably, Murray (1920: 345-6), Greenberg (1950), Bryan (1968, 1975), Bender (1989, 2000); but purely synchronic and

overly abstract comparisons and thus generalization for the whole of East Sudanic and beyond instead of stringent a more identification

a) robustly present in four of five groups of Southern East Sudanic: Temeinic, Nilotic, Surmic, Jebel

b) Dajuic does not obviously show the pattern and thus remains more isolated regarding this domain

c) Berta shows no obvious relation to Jebel or any other East Sudanic group

d) Northern East Sudanic without straightforward reconstruction let alone in line with above pattern (pace Murray 1920, Rilly 2005 etc.)

> pronoun data do not yet provide robust evidence for the whole of East Sudanic!

No.	Lineage	1SG	1PL(.E)	1PL.I	2SG	2PL	3SG	3PL	Source
U33	<i>Midob</i>	á(y)	àadí	àngá	ná, ín	ùngú	nà, òon	àngá	Werner (1993: 36-7)
	<i>Old Nubian</i>	ay	er	u	ír	ur	tar	ter	Browne (2002: 40)
	<i>Nobiin</i>	ây	ùu	-	ìr	úr	tàr	tér	Werner (1987: 116-20)
	<i>Dongolese</i>	ái	ár	-	ér	ír	tér	tír	Armbruster (1960: 172)
	<i>Birgid</i>	ama	adi	-	edi	udi	tar (M)/ idi (F)	?	Thelwall (1977: 203, 205, 207, 208)
	<i>Uncunwee</i>	ye	? a-	-	ad	?	fo	fi	Williams and Comfort (n.d.: 12, 17)
	<i>Dair</i>	ē	ā, ai	-	ai	ū	tō	tī	Junker and Czermak (1913: 18)
	<i>Dilling</i>	ẹ	i	-	a	u	tẹ	ti	Kauczor (1920: 96)
	Nubian	ai	a(D)	-	V(D)	u(D)	tV(r)	tV ^{High} (r)	-
U31	Nara	ag	agga	-	ʔin̄ga	in̄ga	tib	tiba	Bender (2000: 100)
U30	<i>Ama</i>	a(i)	aji	-	i	ji	en	ani	Bender (2000: 100-1)
	<i>Afitti</i>	oi	ɔgɔ	-	i	ig(w)o	ano	an̄ge	Bender (2000: 100-1)
	Nyimang	ai	?	-	i	?	En	an-	-
U29	Taman IND:	wa	wai	-	ii	(a)i	ansi	ansin̄	Edgar (1991d: 119-20)
	VERB:	n-	n-/k-	-	V-/Ø-	V-/Ø-	Ø-/C-	Ø-/C-	

U34	Dajuic	·a(n)ga	·asko	*kon-	·(in)ing(i)	·Vngo	*ce (F)/ *ma (M)	*sa	Thelwall (1981b: 161)
U35	<i>Temein</i>	<i>nán</i>	<i>káɸ</i>	<i>sasák/ sák</i> (DU)	<i>nín</i>	<i>kíɸ</i>	<i>naKa</i>	<i>naKaɸa</i>	Stevenson (1956-7, 1976-1986)
	<i>Keiga Jirru</i>	<i>náj</i>	<i>kák</i>	<i>kalásik</i>	<i>náj</i>	<i>kík</i>	<i>né</i>	<i>kmná'</i>	Stevenson (1956-7, 1976-1986)
	<i>Tese</i>	<i>náj</i>	<i>kák</i>	<i>kasák</i>	<i>náj</i>	<i>kík</i>	<i>enná'</i>	<i>kmná'</i>	Stevenson (1976-1986)
	Temeinic	·n.a.N	·k.a.K	·(-)sak	·n.i.N	·k.i.K	?	?	Bender (2000: 98)
U36	West: South Lwoo	*an	*wan	-	*in	*wun	*en	*gin	Heusing (2004: 219-22)
	South	*an(a)	*aca	-	*ɪn(a)	*ɔkwa	*ma	*(r)ca	Rottland (1982: 229, 248)
	East	?	?	-	?	?	?	?	-
	Nilotic	·a.n	-	-	·i.N	-	·E.n	·(I).C	-
U37	Southwest	·ane-, ·nana	·aGe-	-	·ine-, ·nina	·iGe-	?	?	Moges (2011: 197, 270, 374, 390, 395)
	Southeast	*aɲɲe	·aGe	-	·iɲɲe	·iGe	?	?	Moges (2011: 300, 374, 390, 395,
	Core Surmic	·a.N	·a.G	-	·i.N	·i.G	-	-	-
U37	Majang IND: POSS:	<i>eet</i> -a-	<i>etenk</i> -a-	-	<i>iin</i> -o-	<i>iinak</i> -o-	<i>se.en</i> -ε-	<i>se.eg</i> -ε-	Joswig (2011: 14)
U38	<i>Aka</i>	<i>ee</i>	<i>ege</i>	-	<i>in</i>	<i>egu</i>	<i>enə</i>	<i>ege</i>	Bender (1983: 55)
	<i>Kelo</i>	<i>əɲ</i>	<i>əɣ</i>	-	<i>uɲ</i>	<i>uu</i>	<i>εenε</i>	<i>igeegə ?</i>	Bender (1983: 55)
	<i>Molo</i>	<i>əɲ</i>	<i>ɔɣ</i>	-	<i>in</i>	<i>uu</i>	<i>een</i>	?	Bender (1983: 55)
	<i>Gaam</i>	<i>a</i>	<i>a.gg</i>	-	<i>ɔ</i>	<i>ɔ.gg</i>	<i>ε</i>	<i>ε.gg</i>	Stirtz (2011: 78)
	Jebel	·V.(N)	·V.(g)	-	·i.N	·V.(g)u	·E.n-	·E.g	-
U39	<i>Berta</i>	·Ali	·haDaɲ	-	<i>ɲgo'</i>	·haDu	·Nine	·mAre	Bender (2000: 107)

Notes: No. = lineage abbreviation according to Güldemann (2018b), DU = dual, F = feminine, M = masculine, PL = plural, SG = singular,
 * = published reconstruction, · = quasi reconstruction based on survey of individual languages