

# **Supposing we have been completely wrong about the shape of early Niger-Congo roots?**

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## 1. Introduction

A common assumption about the shape of Proto-Niger-Congo roots is that stems were disyllabic. This is supported by a vision of Bantu-like roots for nouns with the canonical shape (C)V-CVCV. Even where noun-classes have been lost, stems are often disyllabic synchronically. Reconstructed roots (such as they are) in Westermann and Mukarovsky are frequently one or two syllables. There are problems with this interpretation, connected with additional syllables which appear in citation forms, especially in languages without traces of noun classes such as Dogon and Ijoid. If roots in these languages are cognate, then the additional syllables must be analysed as affixes or old compounds. If a cognate segment also shows up in a noun-class branch of Niger-Congo, then it is hard to know why it should not be reconstructed.

Another problematic issue in Niger-Congo reconstruction is vowel alternation between branches. In common roots like 'head' the basic form looks like #tV, but the vowel sometimes surfaces as a high back vowel and sometimes a high front vowel. Hence reconstructed proto-forms are given the shape \*tui, \*twi and similar. This is hard to account for by some regular process of sound correspondence, but if both are descendants of a long form which included both front and back vowels, then this is explicable.

This discussion document puts forward a radical alternative, that many early Niger-Congo roots were trisyllabic, CVCVCV, and that surface forms across the phylum can be accounted for by a variety of erosional pathways. The inspiration for this comes from the Ijoid and Dogon branches of Niger-Congo and in particular a paper by Kay Williamson (1979), where she touches on this idea for Ijò but never completely accepts it. Williamson (1992) also sets out cognates for triconsonantal roots although it does not discuss the issues for reconstruction. Observing that a significant number of proto-Ijoid forms have to be reconstructed with a CVCVCV formula, she suggests that the medial consonants can be found elsewhere in Niger-Congo in segments otherwise discarded for reconstruction. This is relevant to Bantu, which often appears to be particularly conservative. Mukarovsky's (1976-1977) 'Proto-Western Nigritic' forms purport to be West Africa wide, but all too often reflect the segmental material in proto-Bantu, lacking evidence from languages westward. Mukarovsky did not admit Ijoid or Dogon into his canon, thereby losing crucial evidence.

The proposal advanced here is that in early Niger-Congo, triconsonantal roots were far more common than in most languages today, and that this reflected a language where tone had a low functional load, and which semantic classes were not marked morphologically. If so, then Dogon and Ijoid conserve some of these roots in a shape close to their original form, and most other branches have eroded the segments according to a variety of pathways, often finally becoming monosyllabic. An exactly similar route is characteristic of Sino-Tibetan, where the long forms of Nepalese languages become pervasive monosyllabism in Sinitic and other East Asian branches. Secondly, that these triconsonantal roots usually included a mix of high front and back vowels, and that as erosion occurred, either one could emerge as the stem vowel, but with the consequence that labialisation was often phonologically significant. Alternatively erosion could give rise to labial-velars, and front rounded vowels.

An additional feature of the triconsonantal roots reconstructed here is that the 'third syllable' in Dogon and Ijoid was often r/IV- (usually a back vowel) and this becomes NV- and then nasalisation in other Niger-Congo languages. Furthermore, typical eroded forms of CVCV shape took on a life of their own and were then transmitted in parallel to forms which retained traces of the three original consonants. This partly accounts for the multiple versions of the same root proposed by Guthrie for Common Bantu. Harmony processes are pervasive in Niger-Congo and were certainly present from the period of the evolution of Ijoid, which accounts for vowel copying and assimilation in cognates in many languages. The interpretation of what looks like an old affix in both Dogon and Ijoid is uncertain, but it is possibly a definiteness marker.

Finally, is this 'proto-form-stuffing', to use a term adopted by Blust for Austronesian? Is this an attempt to account for all surface forms by simply positing long reconstructions? I would argue not, as these long

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forms are attested synchronically with cognate segments in at least two Niger-Congo branches. However, they inevitably make us think quite differentl about the canonic forms of early Niger-Congo.

2. Evidence Tables

2.1 General

The following tables have been compiled from my database of Niger-Congo roots, with the syllables I posit as cognate aligned beneath one another. So far these are summary and before publication the sources need to be correctly identified and the glosses completed. A blank in the gloss column implies that the meaning is as in the table header. The starred forms at the head of each table are merely suggestions, not fully worked out forms. I am still seeking further cognates in the other branches of Niger-Congo;

2.2 Verbs

*kedèri	to split ,	cut, break				Comment	Source
Family	Subgroup	Language					
Dogon		Ana	ke	dè	le	cut	RMB
Ijoid		P-Ijò	kā		ā	tear	KW
Ijoid		Defaka	ké	é		cut	
Mande		Bambara	ká		rí	cut	Ba
Kordofania	Talodi	Nding	ke	é	[gi]	cut	Sch81b
n							
Atlantic		Wolof	xa		r	tear, cut	Di
Atlantic		Bullom	ke	th-		<i>couper</i>	GS
Atlantic		Kisi	ke		l	cut	Ch00
Bijogo		Bijogo	-ke		n(ki )	<i>couper, tailler</i>	Sg
Kru		Nyabwa	ʎè		i	cut	ALKrCI
Adamawa		Galke	kə		ŋ	<i>couper</i>	B
Adamawa		Mumuye	ka			break	Sh83
Adamawa		Mumuye	ko			cut in two	Sh83
Ubangian		Ndunga-le	-kè	lé-		<i>couper</i>	Mo95
Kwa		Igo	k		lô	break pot	Ro
Kwa		Ga	kpó			break off	Kr99
VN		Nupe	ke			be split, be cut	Ba14
EBC	Jukunoid	Wap <sup>h</sup> a	kà		m		St
Bantoid	Furu	Bikyak	kpà			<i>erbrechen</i>	RK
Bantoid	Mambiloid	Mambila	ke	r <sup>3</sup>			PM
Bantoid	Dakoid	Nnakenyare	ké		(k)		B
Bantoid	Ekoid	Nkim	kê		m		C
Bantoid	Ekoid	Mbe	kpé	t~			BA
Bantoid	Tikar	Tikar	ke	ɾ	ti		J
Bantoid	Ring	Oku	kâ		(k)	cut loose	R
Bantoid	Eastern	PEG	*kE		(k)		EVL
Bantu		CB	-kè	d			G
Bantu		CB	ʎé		(ʎ-)		G
Bantu		PB, CB	-kè		(k-)		
Bantu		PB	ká	d		<i>tear, cut</i>	BLR
Bantu	Manengub	Akɔɔse	-kw	èl			He632
	a						

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**Commentary:** This is a remarkable root, if the Ana form is indeed a reflection of early Niger-Congo. The medial -d- is conserved and reflected in PB. However, at the stage of Dakoid, a final -k is added to a root which was by then of kV- shape and this is retained as an alternate in PB/CB. It is not certain that the roots with a labial-velar in C<sub>1</sub> position form part of the same set; often there are doublets in a given language, so this may be distinct.

**Refs:** W. 227+243; Ar64. 43; M. 75+202+203+256+22; G. 280+304+1029+1033+1045; Gr:80; G:97,135,154; B:122, 133; Boyd (1994:106)

*sɔŋguri	to wash v.t.							
Family	Group	Language					Gloss	Source
			*sú	ŋú	ri			
Dogon		Walo	sú	kó			wash cloth	JH
Dogon		ToroTegu	sú	ngó	ró		rub hands together	JH
Ijoid		Proto-Ijò	sɔ	ɔɔ	ri		wash	KW
Ijoid		Defaka	su	ku			wash s.t.	Je83
Mande		Guro	fó		lí		wash	VV
Atlantic		Sua	su	gbu	ni		<i>laver (corps)</i>	GS
Adamawa		Mambay	fwǎ		ʼnà		<i>laver</i>	EA
Adamawa		Mundang	cù	ù			wash	SE
Adamawa		Samba Leko	sū	g			<i>laver</i>	Fa
Adamawa		Pere	sò	g	do			
Adamawa	Mumuye	Zing	sò	kè			wash	Sh83
Ubangian		P-Gbaya	*fɔ		r		<i>laver</i>	Mo95
Kwa		Ga	fó				wash	Kr99
Kwa		Ga		kpá				Kr99
VN	Yoruboid	Yoruba	fò					Ab
VN	Edoid	Urhobo	fò		ṛò			
VN	Edoid	Ghotuɔ		kɔ			wash body	E
VN	Igboid	Owere		kwa			wash s.t.	KW
VN	Nupoid	Nupe	fù				wash s.t.	Ba14
VN	Nupoid	Nupe			ná		wash s.t.	Ba14
EBC	Plateau	Izere		ku(su)			wash s.t.	RMB
EBC	Plateau	Berom		kū(j)			wash s.t.	RMB
EBC	Cross River	Baan	fǎǎ		nǎ		wash, clean	Na92
Bantoid	Mambiloid	Gembu		kù	lá		wash	Co
Bantoid	Dakoid	Nnakenyare		kók			wash	Bo
Bantoid	Tikar	Tikar		kpɔ'			rub	J
Bantoid	West Momo	Atong	su					SIL
Bantoid	Tivoid	Manta	sòò				wash	AA02
Bantoid	Ekoid	Ejagham	sù					Wa
Bantoid	EG	PEG	*-ʃû	g-			wash	ELV
Bantu	A	P-Manenguba	*-sù	g-			wash s.t.	He87
Bantu		CB	*-ʃò	ku	di		wash	G
Bantu		CB		kó(ʃ)-			wash, rub	G

**Commentary:** The assumption is that the Plateau forms have undergone metathesis, and that the second CB form is an independent descendant from this innovation. This sort of model may well help us understand the apparent co-existence of multiple forms in PB. The correspondence between the nasality in Adamawa and Cross River is quite suprising and a loan might be suspected. However, these languages are very remote geographically. It is suggested that the final continuants became nasal as in Atlantic, which then resulted in

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word-level nasalisation. The s~f correspondence is attested elsewhere as in Nupe. Nupe has two words to 'to wash' tr. and perhaps both of them are cognate with different elements of the #fãñã type roots.

**Ref:** M. 85; G. 410+435+136; Ohiri-Aniche (1991,II:271-29); W. 239; M. 246+272; G. 303+1099+1186+1199+1277; Boyd (1994:110); Williamson (1979: 83)

#tokori	chew						
Family	Subgroup	Language				Gloss	Source
Dogon		Toro-Tegu	tò	gú	rú	chew	JH
Ijoid		Proto-Ijò	*to	ko	ri		KW
Mande		Odienne	dò	gò	nì	eating	VV
		Jula					
Atlantic	North	Diola	to	ko	ɲ	?	M
Atlantic	North	Basari	dy	ak		<i>dévoré,</i> <i>croquer</i>	Fe
Bijogo			-de		ɲ		GS
Kru		Grebo	tá			eat, chew	
Kru		Bete	tá		lè	<i>mâcher</i>	ALKrCI
Gur		Moore	tá	kə	m-	<i>mâchonner</i>	Ni98
Adamawa		Samba Leko	tò		m	<i>avalé</i>	Fa04
Kwa		Avatime	tà				ALKwCI
Kwa		Ga	tà			chew, gnaw	Kr99
Kwa		Ega	tà				
VN	Igboid	Igbo	-ta				
VN	Nupoid	Nupe	ta			chew	Ba14
EBC	Kainji	Kambari	tàà		mâ	chew	DC
EBC	Plateau	PP2	*ta				Ge
EBC	Plateau	Eggon	tá		ŋ	bite	RMB
EBC	Cross River	KoHumono	taa <sup>+</sup>				Co
Bantoid	Mambiloid	Vute	tà		ŋ	eat	P
Bantoid	Dakoid	Daka	taà		n	eat, chew	Bd94
Bantoid	Nyang	Denya	cwà			chew	Mb
Bantoid	Tivoid	Tiv	tâ		m		
Bantu		PB	tá	kú	n		BLR3
Bantu		CB	ta	kɔ	n-	chew	G

**Commentary:** This root is a good example of a former triconsonantal root that has been eroded in different patterns in different Niger-Congo subgroups, but is still conserved in its essential form in some Bantu languages, as well as Dogon and Ijò. Boyd (1994:70) points out that this root undergoes a semantic shift to 'swallow' in much of Adamawa. The citations which have a bilabial in C<sub>3</sub> position appear to be directly cognate with the alveolar nasal, although such a shift is not usually accepted as common in historical linguistics.

**Refs:** W. 285; M. 489; G. 1651; BCCW, I:44; Bd94:70; P. 42; Skinner (1996:255)

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*singuri rub, smear							
Family	Subgroup	Language				Gloss	Source
Dogon		Toro Tegu	sú	ɲú	ró	rub	JH
Ijoid		P-Ijò	si	ki	ri	rub	KW
Kwa		Twi	ɸ <sup>wi</sup>	w		rub	Ch34
VN	Igboïd	Ohuhu	ɸ		h <sub>i</sub>	smear, rub	Ig99
EBC	Cross River	Oduál	si	ɣə		rub oil on body	Wo69
Bantoid	Tivoid	Tiv	ʃi	ɣè		anoint, smear	Ab40
Bantoid	Tivoid	Esimbi	si	(ɲ)gi		wipe, clean, rub	JMH
Bantu		CB	ɸi	ɲ		rub, smear	BLR3
Bantu		CB (B-S)		kí	d-	rub, wipe	BLR3
Bantu	A	P-Manenguba	*-sí	ɲ-V		wipe	He87

**Commentary:**

**Refs:** M. 509+546; G. 1745; Williamson (1992:390);

*dumigbi	bury, dig,	grave, plant					
Family	Subgroup	Language				Comment	Source
PNC			*ɗ	i	mgbi		
Ijoid		Proto-Ijò	*ɗ	i	bi	bury, plant	KW
Ijoid		Defaka	l	i	bi	bury	Je83
Atlantic N		Wolof	to		bbi	<i>creuser des trous</i>	Di
Gur		Kusaal	d		bi	<i>creuser</i>	Ma75
Senufíc		Jimini	le			<i>enterrer</i>	ALGCI
Adamawa		Mambay	t	ĩ		dig	An12
Ubangian	Gbaya	Sere	du			<i>creuser</i>	Mo95
Kwa	GTML	Igo	d	i		<i>enfonce</i>	
VN	Gbe	Ewe	ɖ	ì		<i>enterrer</i>	Ro
VN	Yoruboid	Yoruba	r	ĩ		bury	Ab58
VN	Edoid	Èdo	ìd	ĩ		grave	Ag86
VN	Igboïd	P-Igboïd	ɗi			<i>bury</i>	
VN	Nupoid	Nupe	dzu			bury, inter	Ba14
EBC	Plateau	Horom	l	i		bury	RMB
EBC	Tarokoid	Tarok	də		p	bury	L&B
EBC	Jukunoid	PJ	*nd	ì	P	bury	Sh
EBC	Lower Cross	*PLC	ù-l	ì		grave	Co91
EBC	Upper Cross	Doko	d	ì		bury	St
EBC	Ogonic	Baan	l	i		bury	Na92
EBC	Central Delta	Aghbolo	ɗ	í	y	bury	Ga80
Bantoid	Ekoid	Abanyom	ɔ̃-l̃		m	grave	Crabb
Bantoid	E Beboïd	Noni	dw	e	y	bury	Schaub
Bantu		PB	d	ì	mb	plant	BLR3
Bantu	A	Proto-Manenguba	*-d	ì	m	corpse	He87

**Commentary:** I am not certain about this one, frankly, as the nasals are only attested quite late in E Benue-Congo.

**2.3 Nouns**

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head	#tígbóri								
Family	Subgroup	Language					Gloss	Source	
Dogon		Beni	kù-	#tí	gbó	rí			
Ijoid		Proto-Ijò		tó	gó	rò	tête	JH	
Ijoid		Defaka		*tí	ḡ	í	head	KW	
Kordofanian	Lafofa	Amira		tó	bó		head	KW	
Kordofanian	Koalib	Fungor		te			head	RCS	
Kru		Dewoin		t	-we		head	RCS	
Atlantic	South	Gola	é-	dî	ú	lú	tête	ALKrCI	
Adamawa	ḡ	Karang		t	ú	l	head	Ul	
Ubangian	Zande	Geme				lī	tête	Mo95	
Kwa	GTML	Siwu	í-	ti			head	?	
VN	Nupoid	Nupe	e	tí			head	Ba14	
EBC	Upper Cross	Ikun	è	t	ò		head	St	
Bantoid	Grassfields	Limbum		t	ù		head	SIL	
Bantu		PB		t	ó	è		BLR3	

**Commentary:** External cognates regularly have a back vowel in V<sub>1</sub> position and this would neatly explain why these occasionally occur in Ijoid (Defaka, AT). The kù- prefix in Dogon is unexplained.

#gbukuru	tortoise,	turtle						
Family	Language		Attestation			Gloss	Source	
Dogon	Tebul Ure	aŋgu	gu	ru		tortoise	RMB	
		ŋ						
Ijoid	Furupagha	ɔbɔ	kɔ	rɔ		turtle	KW	
Mande	Yaure		kú	lú		tortoise	VV	
Senufo	Nabaj		xu	ru		tortoise	ALGCI	
Kru	Bete G		kó	lɔ		tortue	ALKrCI	
Kordofanian	Masakan		(k)ə	rə		tortoise	RCS	
Atlantic	Sereer		xɔ		m	tortue	GS	
Isolate	Mbre		k	ru	wɛ	tortoise	Creissels (p.c.)	
Adamawa	Mumuye		ku	ru		tortoise	Sh83	
Ubangian	Geme		kú	lō		tortue	Mo95	
Kwa	Mbatto	ómó	k	rō	é	tortoise	ALKCI	
Kwa	Ewe		k	lo		tortoise	Ro	
VN	Işekiri	ólu	kú	rú	mè	tortoise		
VN	Nupe	dù	kú			tortoise	Ba14	
EBC	Doka	a-	ku	l		tortoise	BCCW	
Beoid	Kemezung	kí	ku	lə		tortoise	SIL	
Bantu	P-Manenguba		kú	l'		tortoise	He87	
Bantu	CB	-	kú	dù		tortoise	G	

**Commentary:** A labial-velar is reconstructed in C<sub>1</sub> position, if Ijoid \*b corresponds to Dogon \*g. If these form a cognate set, then the \*gbu- prefix is lost after Ijoid diverged. The Nupe form is treated as a metathesis of the usual roots. The bilabial /m/ suffix which appears in scattered forms, may be responsible for the prefix in Mbatto.



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#gongboro chest							
Family	Subgroup	Language	Attestation			Gloss	Source
			n				
Dogon		Jamsay	gò	ŋó		chest	JH
Dogon		Nanga	gò	mbó	rô	chest	JH
Ijoid		Nembe	ku	bu		chest	KW
Ijoid		Nkoroo	kú	yú		chest	KW
Katla-Tima		Kaalak	ko	ŋgə	r	chest	Gi
Kru		Bete Daloa	kɛ	k	lɪ	<i>poitrine</i>	ALKrCI
Ubangian		Baka	kà			<i>sein</i>	Br10
Kwa		Ga	ŋmkpò	kù	á	breast	Kr99
Kwa		Dangme	gú	gú	e	chest	MK
VN		Nupe	kpǎ		dà	chest of animal	Ba14
EBC	Plateau	Kulu	ikwò	k			Mo
EBC	Plateau	Sur	nkwak				RMB
EBC	Plateau	Tarok	ikó	k	sók		RMB
EBC	Jukunoid	Kuteb	kì-ko	k		pl. à-	Sh
Bantoid	Mambiloid	Tep	kà	ŋ			Co
Bantoid	Dakoid	Nnakenyare	gà	ngà			BF
Bantoid	Ekoid	Ejagham	ngà	ŋ		chest	Wa
Bantoid	Nkambe	Limum	ŋgù	ŋ			SIL
Bantoid	Momo	Ngie	ìgú	wè		chest	SIL
Bantu		PB	*kú	bà		chest	BLR

**Commentary:** This root only works if we assume there was a prenasalised labial-velar in medial position, and the nasalisation was sometimes lost while the labial-velar disappeared elsewhere. The PB form is quite problematic, since it only occurs in Zones D-S and is replaced by another root \*-tódò in the northwest. The PB form would have to be \*kúngbà for this to be true reflex of the Niger-Congo roots.

leg, #kpagara  
foot

Family	Subgroup	Language	Attestation			Gloss	Source	
Dogon		Togo Kan	pà	gá		leg	JH	
Ijoid		Defaka	pá		ra	leg	Je83	
Katla-Tima		Kaalak		kà	t	foot	RCS	
Rashad	Tegali	Tegali	ε	ká	n	foot	RCS	
Rashad	Tagoi	Orig	tè	gà	n	foot	S&E	
Mande		Vai		kè	ŋ	foot	K	
Mande		Guro		gǎ	ŋǎ	<i>jambe</i>	ALMSCI	
Kordofania	Koalib	Koalib	ka	ga		foot	RCS	
Kordofania	Talodi	Asheron	zε-	gε	k	leg	No00	
Atlantic		Fulfulde		koy	nga	l	leg	Sg
Atlantic	South	Gola	ke	kpa	a	foot, leg	Wi07	
Gur		Lorhon		kpa	ra	ya	leg	ALGCI
Gur	Oti-Volta	Wama		kwe	d-i	<i>cuisse</i> ( <i>jambe, pied</i> )	Ma75	
Adamawa		Mono		ɓà	l	<i>pied</i>	E	

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Adamawa		Mambay	ɓǎ	ʳ	ná	<i>pied, jambe, roue</i>	EA
Ubangian	Sango	Kpatiri		ga	la	<i>pied</i>	Mo95
Ubangian	Mba	‘Dongo ko		kà	ɲà	<i>pied</i>	Mo95
Kwa		Animere	dì	kpa	rì	foot	Ring
VN	Igboid	Proto-Igboid	ó-	kpà	(á )	leg	KW
EBC	Kainji	Reshe	ú-	ká	nà	leg	RMB
EBC	Cross River	Obolo	ú-	kó	t	leg, foot	Co91
EBC	Upper Cross	Olulumo	kè	ká	t̄	leg	St
Bantoid	East Beboid	Noni	é	kâ	lĕ	foot	Lu
Bantoid	Grassfields	Bafut	à-	kò	rò	leg	BCCW
Bantoid	Ring	Wushi		kwó		leg	Hy
Bantoid	Ekoid	Bendeghe	è-	ká	d	leg	Cr65
Bantu		PB		kó	nò	E-S	BLR3
Bantu	A	P-Manenguba		*kò	ò	leg	He87

**Commentary:** The Lorhon form may well be the key to understanding this root, even though its two syllables may have become inverted. If the root was originally trisyllabic and reduced in different ways it would produce the Dogon and Defaka forms. Defaka retains the older root and Ijò innovates. The introduction of initial kp- was probably characteristic of Atlantic and the development of noun-class languages, as it is not attested in Dogon, Ijoid etc. To explain cognacy with ɓ- in this position, it is necessary to assume an intermediate stage of gb-. The switch to a back vowel in the stem, already attested in Cross River, becomes dominant in Bantu proper. Discussed in Williamson (2000:64) but with a largely different set of cognates. Mukarovsky (1976:119) reconstructs a form #-gwùl for ‘shin’ which conflates various roots.

**References:** W. 239; M. 119; Williamson (2000:64)

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#ku(n)duŋo		knee							
Family	Subgroup	Language	Attestation			Comment	Source		
Dogon		Tebul Ure	ku	ndu	gɔ	knee	RMB		
Dogon		Tiranige	kú	ndzú	gó	knee	JH		
Ijoid		Biseni	íkó	ní	ée	knee	KW		
Mande		Soninke	xu	ru	ŋi/ o	<i>genou</i>	VV		
Katla-Tima		Domurik	ku	ru	ŋoo	knee	GS		
Kordofania	Talodi	Masakin	ku	ŋ	gu	knee	RCS		
Atlantic	South	Gola	ké		gò lo	foot, leg	We21		
Bijogo		Caravela	ku	nu		<i>genou</i>	Sg		
Kru		Jrewe	kù	rù		<i>genou</i>	ALKrCI		
Gur	Oti-Volta	Kɔnni		dú	ŋ	<i>knee</i>	Cahill		
Adamawa		Leko of Mapeo		du	n	<i>leg</i>	Bo94		
Ubangian		Yakoma	lì-kũ	rũ		<i>genou</i>	Mo95		
Kwa	Guang	Chumburung	kù		ŋú rí ?	knee	Sn89		
Kwa	GTML	Igo	ì-lùkù			if metathesis			
VN	Gbe	Ewe	kò	lí		<i>genou</i>	Ro		
VN	Edoid	Emai	úgú	'ò	è	knee [òè = leg]	SE07		
VN	Igboïd	Igbo of Udi	íkpe	rè		knee	KW		
EBC	Plateau	Hyam	kpu	rú		knee	RMB		
EBC	Plateau	Yanjkam		rú	ŋ	knee	RMB		
EBC	Lower Cross	PLC	*é-	ló	ŋ	knee	RMB		
EBC	Upper Cross	Ubaghara	ì	rù	ŋ	knee	Co91		
Bantoid	Dakoid	Nnakenyare (M)		lúù			Bo94		
Bantoid	Buru	Buru	e-	nú			Ko		
Bantoid	Bendi	Bekwara	ìrì	nù	ŋ		St		
Bantoid	Tivoid	Batu Afi		nú	n		K		
Bantoid	Ring	Isu	íŋ	ú			R		
Bantoid	Ekoid	Ejagham	ê	ré	ŋ		Wa		
Bantu		Zones A-S		dú	í	knee	BLR3		
Bantu		Zones K-L		nú	í	knee	BLR3		

**Commentary:** Biseni is isolated within Ijoid and may thus be a loan from a neighbouring language. BLR3 says the alternation between dúí/núí ‘*est à étudier*’, but if this reconstruction is correct, the two are simply different erosional results of an original –nd-. A rather different form, \*BU(N)KA is proposed as a ‘world etymology’ in Bengtson & Ruhlen (1994). The cognates of Bullom ‘knee’ in South Atlantic show a wide semantic range, for example, Temne ‘leg’ (*a-ləŋk*) and ‘arm’ *a-loŋk*, Baga Koba *a-raŋk* ‘thigh’. This is widespread in West Chadic and the #-rum element may have been loaned into Plateau and its prefix re-analysed.

**Refs:** W. 252; M 109; G.722+729; G.:101,123, G. 884; M. 163+304; B:133; B81.:261, Gr.:82,84,

Roger Blench Triconsonantal roots in Niger-Congo? Circulated for comment

#-bugbulu	hole	Attest						
Family	Subgroup	Language	ation			Gloss	Source	
		PWS	-bù		ò	<i>Loch</i>	W	
		PWN		-kho	lo-	hole, hollow	M	
Ijoid		Proto-Ijo	*ó	pó	kó	ló	KW	
Kordofania	Rashad	Orig	li-	bu	gu	l	SE	
Mande		Tura			gù	lù	hole	
Gur		Proto-Central		*bo		n	Ma79	
Gur		Birifor		bɔ	ɔ		Kuch	
Gur		Dagbane		bo	ɣ	li		
Ubangian	Banda	Linda	ō		gō	rō	<i>trou</i>	
Kwa		Ega	ì	gb	ó			
Kwa		Eotile	à	bò			ALKCI	
Kwa		Krachi	ó	bó			Sn89	
Kwa		Ga		fó		l ò	hole	
VN	Nupoid	Nupe		gbò		r ǒ	hole	
EBC	Kainji	Lopa	ru	bu	u	r u	RMB	
EBC	Platoid	Iten		bo		ŋ	RMB	
Bantoid	Mambiloid	Mambila		bɔ	ŋ <sup>2</sup>		PM	
Bantoid	Ekoid	Ejagham		fú	g		W	
Bantoid	Nyang	Kenyang	m	bo	k		M	
Bantoid	Grassfield	Ngyembɔɔn			ɣò	ó	An	
Bantu	A	P-Manenguba	*-pò	n	d	ó	hole	

**Commentary:**

**Refs:** W. 213; M. 264; G. 122,140; G. 84;

2.4 Others

*tunuru	five					
Family	Subgroup	Language				Source
Dogon		Toro Tegu		nu	ŋi	RMB
Ijoid		Proto-Ijọ	*tɔ	ŋɔ̃	řɔ̃	KW
Ijoid		Izọn	só	ón	rś	KW
Ijoid		Defaka	tú	ú	nǔ	KW
Mande		Mandinka		lúu	lu	VV
Mande		Guro	sò		lù	VV
Atlantic	North	Nalu	tɛɛ		du(ŋ)	Wi07
Atlantic	North	Kobiana		ju	n	Sg
Atlantic	South	Temne	ta	ma	th	Wi07
Gur		Lorhon	tɔ'			ALGCI
Gur		Tayari		nu	n	Ma75
Adamawa		Pere		nóó	no	Bo89
Adamawa		Kpasham		nú	ŋ	K&Y
Kwa		Avatime	ò-tsú			Sc
Kwa		Abron	ɲ	nú	m	ALKCI
Kwa	Guang	Gonja	à-	nú	?	Sn89
Kwa	GTML	Sekpele		ɲ	nɔ	RMB
Kwa		Ga	é	nù	mǔ	Kr99
VN	Edoid	Degema	ìsw	ón		E86
Ukaan		PU	tʃò	n(-)		Ab
Ayere		Ahan	(in)tu			RMB
EBC		Idun	e-tó	n		BCCW
EBC	Jukunoid	PJ	*i-ton			Sh80
EBC	Lower Cross	PLC	*i-tí	òn		Co91
Bantoid	Furu	Bikyak	ətò	ŋ		RK
Bantoid	Ekoid	Ejagham	ńdô	n		Wa
Bantoid		PG	ítà	n		RK
Bantoid	Grassfields	Meta'	tá	ɲ		BCCW
Bantu		PB	táà	nò		BLR 2768
Bantu		PB	tʃáà	nè		BLR 448
Bantu	A	P-Manenguba	táà	n-		He87

**Commentary:** Williamson (2000:59) discusses some of the Niger-Congo evidence for this root. Apparently completely replaced in Kru, Ubangian. Within Ijoid, Defaka preserves the older root, *túúnǔ*. Both Ijoid and Mande show t→s, also attested elsewhere, e.g. ‘bow’. Kru appears to have no cognates with either root, unless the bilabial nasals in Kru, e.g. Wobe *m̃m̃* are cognate with the nasals in other Niger-Congo branches. This is possible, as in both Dogon and Oti-Volta languages the N<sub>2</sub> sometimes undergoes the change n→m, for example Tayari *nun*, but Bieri *num*. There do not appear to be any clear attestations of the *#nuni* form in Western or Eastern Benue-Congo, where the *#turu* root predominates.

**Ref:** W. 271; M. 562; 275+276+1662;

3. Conclusion

This is just a preliminary exercise to compile potential triconsonantal roots for early Niger-Congo. A great deal more data will need to be searched to see if this idea will fly.

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