

Notes and Documents

Václav Blažek

Department of Linguistics and Baltic Studies
Faculty of Arts, Masaryk University, Brno, Czech Republic
blazek@phil.muni.cz

SURMIC NUMERALS

Abstract. In the article the cardinal numerals 1-10 and decades 20-100 from all described Surmic languages are collected and analyzed from the point of view of their origin, if they are borrowed, usually from East Cushitic, or inherited, if promising Nilo-Saharan cognates exist.

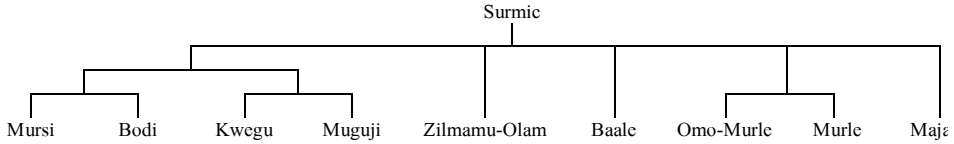
Keywords: Surmic, Nilo-Saharan, East Cushitic, Omotic, inherited, borrowed.

The purpose of the present study is to summarize the data of Surmic numerals and to determine which are inherited and which are borrowed, most frequently from East Cushitic.

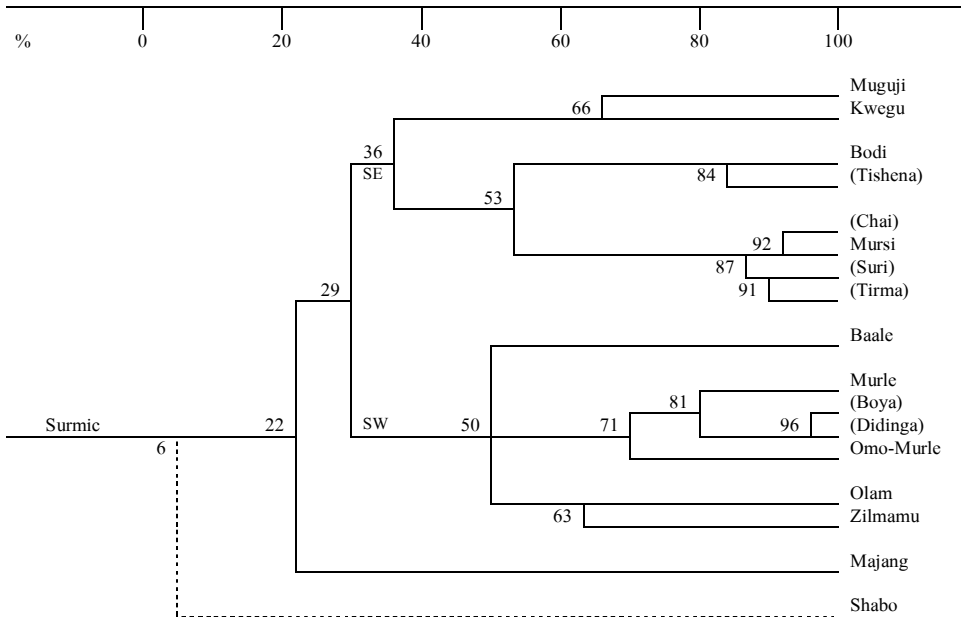
1. Bender (1977, 18) obtained the following cognate rates for the Surmic languages:

%	Majang	Murle	O.Murle	Mursi	Baale	Zilmamu	Olam	Kwegu	Muguji	Bodi
Shabo	22	9	11	6	10	5	6	2	5	3
Majang		26	24	19	25	29	30	16	13	15
Murle			71	41	56	53	55	24	19	31
O.-Murle				36	45	44	53	19	19	25
Mursi					44	36	34	43	32	53
Baale						50	46	26	22	31
Zilmamu							63	27	24	29
Olam								26	22	33
Kwegu									66	37
Muguji										32

1.1. He constructed the following diagram with five coordinate branches:

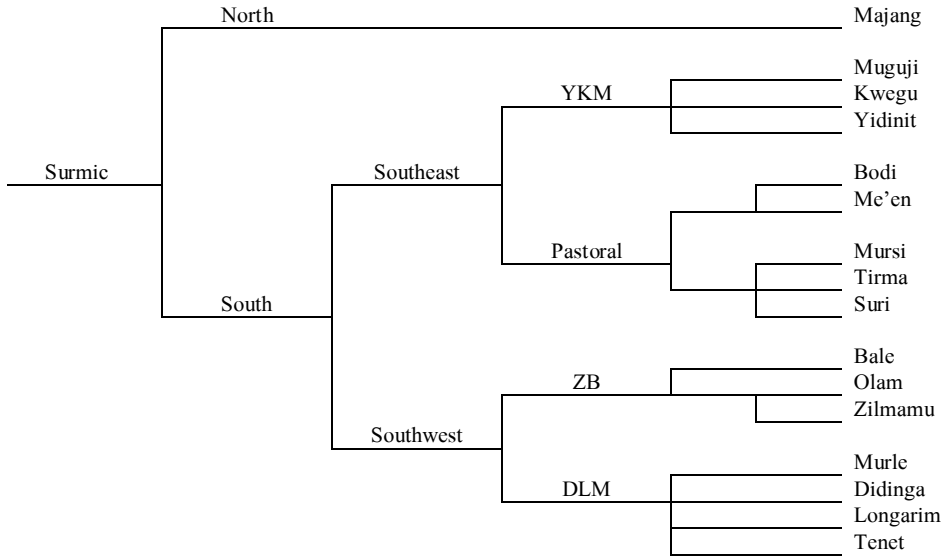


1.2. Bender added the pairs of languages with highest percentages of cognates: Didinga-Boya 96, Mursi-Chai 92, Tirma-Suri 91, Suri-Mursi 87, Tishena-Bodi 84, Murle-Didinga 81. Taking in account all these results (the additional languages are in brackets), it is possible to construct a diagram which is rather different from the scheme proposed by Bender.

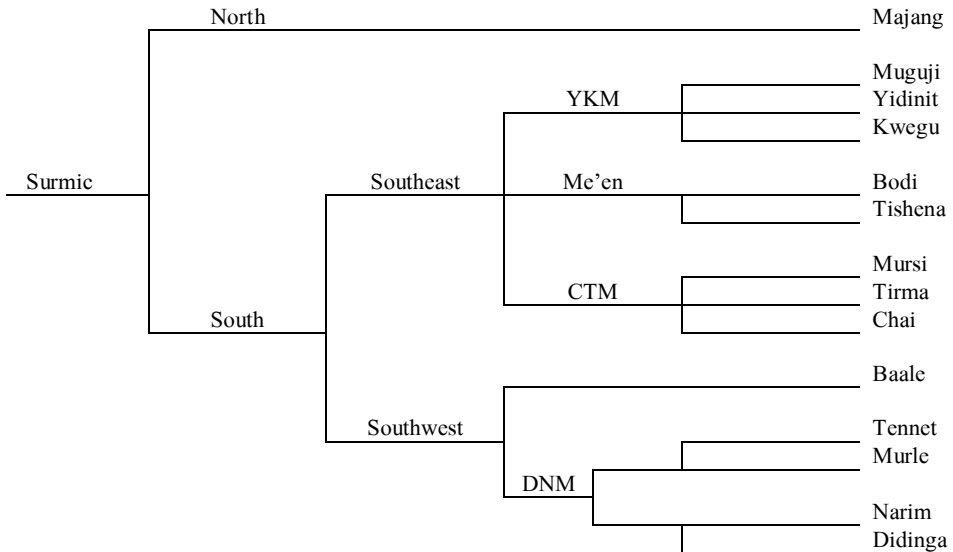


1.3. There are two anomalous results, 22% between Shabo & Majang against the average 6.3% common for Shabo and the remaining Surmic languages, and 38% between Mursi & Southwest Surmic languages. These unexpectedly high figures were probably caused by secondary contacts. In more recent classifications Shabo is not taken in account, but its numerals are apparently borrowed from Majang.

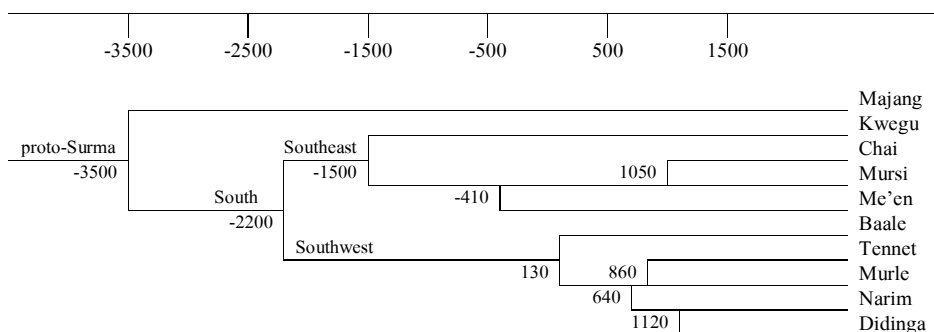
1.4. Classification of Surmic languages (Unseth 1988)



1.5. Classification of Surmic languages (Dimmendaal 1998, 13)



1.6. Glottochronological classification of Surmic languages (G. Starostin 2013)



2. Surmic numerals: survey

	1	2	3	4	5	6	7
Shabo	<i>ɪŋki</i>	<i>bap</i>	<i>jiita</i>	<i>aŋan</i>	<i>tuul</i>	<i>tulu(ŋ/m)</i>	<i>tulikakiŋki</i>
Majang	<i>omɔŋ</i>	<i>pee</i>	<i>jiit</i>	<i>aŋan</i>	<i>tuul</i>	<i>tuulaom</i>	<i>tuulapee</i>
Yidenit	<i>čé:man</i>	<i>ɖa</i>	<i>gi:ʼen</i>	<i>wo:č</i>	<i>há:ča:na</i>	<i>élle</i>	<i>íssabi</i>
Kwegu	<i>kium</i>	<i>ɖaa</i>	<i>jien</i>	<i>ahur</i>	<i>cun</i>	<i>la</i>	<i>tsʼoba</i>
Bodi	<i>kómdo/ kón:a</i>	<i>rámma</i>	<i>sí:zi</i>	<i>wú:ʼič</i>	<i>háčana</i>	<i>élle/ille</i>	<i>íssa:ba</i>
Meʼen	<i>kon</i>	<i>rama</i>	<i>sizzi</i>	<i>woč</i>	<i>hačana</i>	<i>elle</i>	<i>essaba</i>
Mursi ₁	<i>ɖò:nè/ko:n</i>	<i>ràmàn</i>	<i>θizzi</i>	<i>uwì/wu:š</i>	<i>há:nán</i>	<i>illè</i>	<i>iθa:bài</i>
Mursi ₂	<i>a:dó:na</i>	<i>(ar)rámman</i>	<i>sizzi</i>	<i>wú:ʼi(č)</i>	<i>há:na(n)</i>	<i>(h)ille</i>	<i>(h)íssabi</i>
Tirma	<i>done</i>	<i>r/naman</i>	<i>sisi/dizi</i>	<i>uš / woš</i>	<i>ay(e)na</i>	<i>ille</i>	<i>(i)sabai</i>
Chai	<i>ɖò:nè</i>	<i>ràmmán</i>	<i>sizzi</i>	<i>wùý/wùš</i>	<i>háíná</i>	<i>illé</i>	<i>sábái</i>
Baale	<i>óóðe:</i>	<i>rámmá</i>	<i>íyyó</i>	<i>wé</i>	<i>túr</i>	<i>tɔ:rkónɔ:</i>	<i>tɔ:rgére:</i>
Murle	<i>adoi/čodo</i> ^H	<i>ramma</i>	<i>iiyu</i>	<i>weec</i>	<i>tur</i>	<i>tɔrkɔnm</i>	<i>torgereɱ</i>
Omo-Murle	<i>čadoi</i>	<i>ram</i>	<i>hiyu</i>	<i>hueč</i>	<i>tur</i>	<i>turgonom</i>	<i>turgoreɱ</i>
Longarim	<i>čdoi</i>	<i>ramma</i>	<i>iyo</i>	<i>weč</i>	<i>tur</i>	<i>torkonon</i>	<i>turugerem</i>
Didinga	<i>kode(i)</i>	<i>ramma</i>	<i>iyo</i>	<i>weč</i>	<i>tur</i>	<i>torkonon</i>	<i>tukeramma</i>

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	8	9	10		20		30
Shabo	<i>tunajiita</i>	<i>tulaajan</i>	<i>bapif</i>	2 hands (<i>ifu</i>)	<i>ij̥k upa kor</i>	one person	
Majang	<i>tuulajiit</i>	<i>tuulaajan</i>	<i>aarn</i>		<i>rumir idit</i>	person completed	
Yidenit	<i>isse:t</i>	<i>sá'al</i>	<i>tómmo</i>				
Kwegu	<i>lonkai</i>	<i>sal</i>	<i>tomon</i>		<i>lamatam</i>		<i>makamtam</i>
Bodi	<i>isse:t/ issé:te</i>	<i>ságal/sá:le</i>	<i>tómmo(na)</i>		<i>hirkunko</i>	man-one	<i>tómmon tómmon gá:ra sí:zi</i>
Me'en	<i>esset</i>	<i>sakal</i>	<i>tommon</i>		<i>tidam</i>		
Mursi ₁	<i>iθθè</i>	<i>θàkàl</i>	<i>tomon</i>		<i>hir / θuo</i>	man people	<i>hir kon ko tomon</i>
Mursi ₂	<i>issi / hisse</i>	<i>sákal / ássakal</i>	<i>(a)tómmon</i>		<i>hirkun</i>	man-one	<i>hirkúnko tómmon</i>
Tirma	<i>issi / isse</i>	<i>sak(k)al</i>	<i>(a)tomon</i>		<i>irkun</i>	man-one	<i>hirkunku tomun</i>
Chai	<i>líšé</i>	<i>sákkál</i>	<i>tómón</i>		<i>hírkón</i>	man-one	
Baale	<i>tu:rge:</i>	<i>tɔ:rgóɔɔ:</i>	<i>ɔ:mɔ:ðó</i>		<i>e:e:ccí óóðe:</i>		<i>e:e:ccí óóðe: kɔɔ:mɔ:ðó</i>
Murle	<i>turge</i>	<i>tɔrkɔc</i>	<i>amɔtɔ</i>		<i>iyim/etema^H</i>		
Omo-Murle	<i>turge</i>	<i>turkoy</i>	<i>ammato</i>				
Longarim	<i>turugi</i>	<i>torkowei</i>	<i>omoto</i>		<i>etima</i>		
Didinga	<i>turkiyo</i>	<i>turkiweč</i>	<i>omoto</i>		<i>itumwa</i>		<i>itumwa ki omoto / ken iyo</i>

	40	50	60	70	80	90	100
Kwegu	<i>oitam</i>	<i>dontam</i>	<i>latam</i>	<i>ts'obatam</i>	<i>lonkaitam</i>	<i>saltam</i>	<i>dip</i>
Bodi	<i>tómmon</i> <i>tómmon</i> <i>gá:ra wú:ʔič</i>						
Mursi ₁	<i>θuo raman</i>		<i>zuo siizi</i> ²⁰⁰⁸		<i>zuo wuš</i> ²⁰⁰⁸		<i>θuo há:nán</i>
Mursi ₂	<i>zú:gu rámma</i> <i>tómmon</i>						
Tirma	<i>zu ramman</i>						
Chai							<i>jùgòháiná</i>
Baale	<i>e:e:ǎá</i> <i>rámmá</i>	<i>e:e:ǎá</i> <i>rámmá kɾ</i> <i>ɔ:mɔ:ǎǎ</i>	<i>e:e:ǎá íyyó</i>				<i>e:e:ǎá túr</i>
Didinga	<i>ken weč</i>						

3. East Cushitic numerals: survey

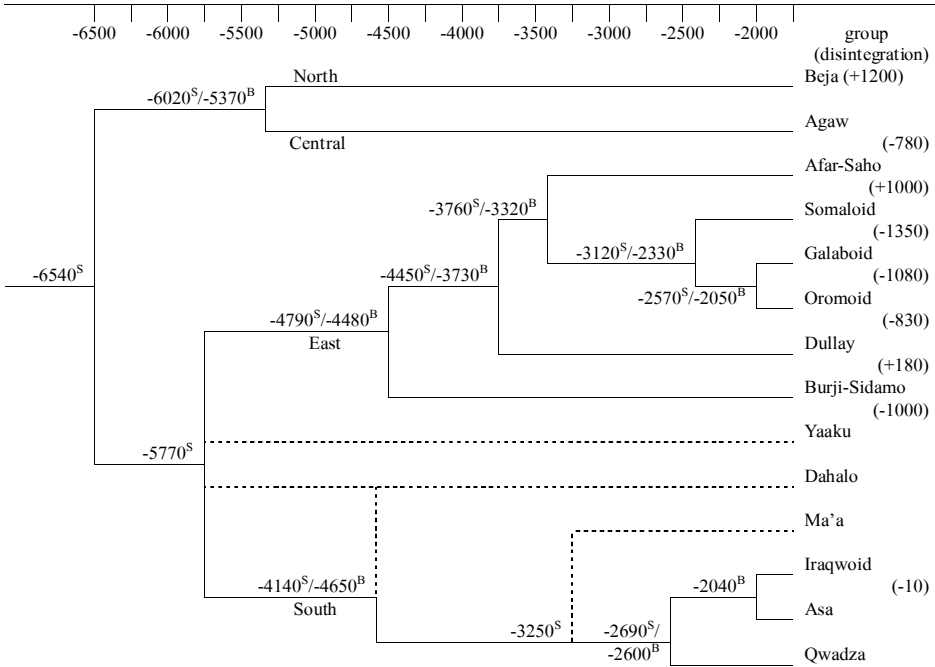
	Afar-Saho	Somaloid	Galaboid	Oromoid	Dullay	HEC	Yaaku
1a		<i>So mid</i>		<i>Or matummanu</i> totally		<i>*matto /</i> <i>*mitto</i>	
1b		<i>*koow</i>		<i>*kaww-</i> alone			
1c			<i>*tokko</i> m. <i>*takka</i> f.	<i>*tokko</i> m. <i>*takka</i> f.	<i>*to'akko</i> m. <i>*to'atte</i> f. <i>Ts dookko/dootte</i>		
1d	<i>*in(V)ki</i>						
1e							<i>wɛheto</i>
2a	<i>*lamm-ay</i>	<i>*lamma</i>	<i>*laama</i>	<i>Or lama</i> <i>Ko-D'i</i> <i>*lakki</i> <i>Mo tammó</i>	<i>Do lammay</i> <i>*lakki</i>	<i>*lamo</i>	
2b							<i>c'ɛ</i>
3a	<i>*sizaḥu /</i> <i>*aszaḥu</i>	<i>*sizzah</i>	<i>*seezzee</i>	<i>*šezziya</i>	<i>*'iszaḥ</i> <i>Do siseḥ</i>	<i>*sadziya</i>	
3b				<i>*kalabatta</i>			
3c							<i>xaat</i>

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4a	* <i>af(f)ara</i> * <i>fer-ey</i>	* <i>afar</i>	* <i>af(f)ur</i>	* <i>afur</i>			
4b					* <i>salaḥ</i>	* <i>šoole</i>	çwen
5a	* <i>koon(-oy)</i>	* <i>kani</i> > * <i>can</i>	* <i>ken</i> > * <i>cen</i>	* <i>kani</i>			
5b					* <i>xoobin</i>		<i>xoopi</i>
5c						* <i>omute</i>	
6a	* <i>lih(-ey)</i>	* <i>lih</i>	* <i>lih</i>	* <i>leh</i>		* <i>(e)liho</i> Bu _{CR} <i>eliyà</i>	<i>ilé</i>
6b					* <i>tabbin</i>		
7a	* <i>mal(V)hiin</i>					* <i>lamala</i>	
7b		* <i>tizzoba</i>	* <i>tizba</i> /* <i>tuzba</i>	* <i>tozba</i>			<i>tisibo'</i>
7c					* <i>taḥḥan</i>		
8a		* <i>sizzeet</i>	* <i>sizeet</i> /* <i>suzzet</i>	* <i>sezzeeti</i>	* <i>sezzen</i>	* <i>sazzeento</i> / * <i>hiszeento</i>	<i>siite'</i>
8b	* <i>bahaar</i>						
8c				D'i <i>lakkušet</i>			
9a	* <i>sagaal</i>	* <i>saagal</i>	* <i>saagal</i>	* <i>sagali</i>			<i>saakal</i>
9b					* <i>gollan</i>		
9c						* <i>honso</i>	
10a	* <i>taman</i>	* <i>tomman</i>	* <i>tommon</i>			* <i>tomne</i>	
10b		(Re <i>kúd</i> 100)		* <i>kuḍan</i>	* <i>kuḍḍan</i>		
10c							<i>qapon</i>

Abbreviations: Bu_{CR} Burji by Conti Rossini, Do Dobase, D'i D'irayta, Ko Konso, Mo Mossiya, Or Oromo, Re Rendille, So Somali, Ts Tsamay.

4. Cushitic classification



Abbreviations: B Blažek, S Starostin, George (p.c. 2010).

5. Comparative analysis of the Surmic numerals

5.1. Southeast & Southwest Surmic numeral 2 and Southeast Surmic numerals 3, 5-10, plus Kwegu 4, are apparently of East Cushitic origin. In East Cushitic the closest counterparts appear in Galaboid. Heine, Rottland & Vossen (1979, 82) tried to explain the similarities between South Nilotic and East Cushitic numerals 6 - 10, 30, 40, 50, 100, assuming an absorption of a hypothetical Omo-Tana population by Southern Nilotes. They designated this hypothetical community *Baz* according to the name of the Lake Turkana. The East Nilotic (especially Maa) counterparts should have been transmitted via Southern Nilotic (ibid., p. 85), but the Southeast Surmic mediation is more probable from the point of view of both phonetics and linguistic geography.

	Surma		South Nilotic (Rottland)		East Nilotic	East Cushitic
	Southeast	Southwest	pKalenjin	Datooga	(Vossen)	late Galaboid
2	* <i>ramma</i>	* <i>ramma</i>				* <i>laama</i>
3	* <i>sizzi</i>					* <i>seezzee</i>
4	Kw <i>ahur</i>					* <i>af(f)ur</i>
5	* <i>(haa)čaana</i>					* <i>cen</i>
6	* <i>ille</i>		* <i>lɔ</i>	* <i>la</i>	TeMaa * <i>älle</i>	* <i>lih</i>
7	* <i>tsaba(i)</i>		* <i>tsap</i>	* <i>isub</i>	NMaa <i>sapa</i>	* <i>tizba</i>
8	* <i>isseet</i>		* <i>sisiit</i>	* <i>sisiit</i>	Maa <i>isiet</i>	* <i>sizeet</i>
9	* <i>sakal</i>		* <i>sakaal</i>	* <i>šageeš</i>	Maa <i>sa(a)l</i>	* <i>saagal</i>
10	* <i>tommon</i>		* <i>taman</i>	* <i>taman</i>	* <i>-tomon</i>	* <i>tommon</i>
20	Me'en <i>tidam</i>		* <i>tiptem</i>	* <i>digdam</i>	Maa <i>tikitam</i>	Oromo <i>digdama</i>

Abbreviations: N North, p proto-, Te Teso.

5.2. The donor-language of the numeral „20“ in Me'en (and of „100“ in Kwegu) is different from the source of the other numerals. It could be a language of the Oromo type. Let us mention that the Oromo numeral „20“ is isolated and unanalyzable within East Cushitic, but intelligible assuming its Nilo-Saharan origin, cf. West Saharan: Kashirda *digidəm*, Tubu *digidom* „20“ etc. and further Gaam *diag*, *dāag* „2“, probably also Surmic: Yidenit *ḍa*, Kwegu *ḍaa* „2“ etc. (cf. Blažek 1997, 163).

5.3. Some of Kwegu numerals are of South Omotic (Aroid) origin: Kwegu *ts'oba* „7“: Karo *tsôbà* „7“, Kwegu *lonkai* „8“: Karo *lonkày* „8“, Kwegu *sal* „9“: Karo *sall* „9“, Kwegu *makamtam* „30“: Karo *makàmm* „3“, Kwegu *oitam* „40“: Karo *oydì* „4“, Kwegu *dontam* „50“: Karo *doonn* „5“ (Conti Rossini 1927, 252; Zaborski 1983, 388).

5.4. Separating the loans, the unborrowed cardinal numerals of the first decade are completely preserved in Majang (and duplicated in Shabo) and almost completely in Southwest Surmic (with exception of „2“). From the Southeast Surmic branch, in Yidenit the numerals „1“, „2“, „3“, „4“ remain, in Kwegu „1“, „2“, „3“, in Bodi, Me'en, Mursi, Tirma and Chai only „1“ and „4“. The

most conservative is the numeral „1“ preserved in all Surmic languages and also the numeral „4“, replaced only in Kwegu. But it is necessary to stress that there are two forms of the numeral „4“, the archaism *aŋan*, common for Majang (& Shabo) and almost all Nilo-Saharan branches, and the innovation of the type Tirma *uš* / *woš*, Bodi *wú:’ič* etc., which is perhaps compatible with common Tama **kus* „4“ (Edgar).

#	Surmic forms	Nilo-Saharan cognates
1a	SWSu <i>*(k-)ad/doi</i>	ENil: Bari <i>kaði</i> „alone“; Kuliak <i>*eδ</i> id. (Eh 299)
1b	SESu <i>*k-/δ-on-</i>	Kuliak: Ik <i>kɔn</i> „1; some; other“ (Be 112; He 56)
2a	Majang <i>pee</i> , Shabo <i>bap</i>	Gu <i>*mban(d)</i> ; Kun <i>’baare</i> ; Mb <i>*mbar-</i> (Eh 273; Be 131)
2b	Yidenit <i>ɔa</i> , Kwegu <i>ɔaa</i>	Gaam <i>diag</i> , <i>ɔaag</i> „2“; Mb: Aiki <i>da</i> „other“ (Be 120)
3	NSu <i>*jiit-</i> , Yidenit <i>gi:’en</i> , Kwegu <i>jien</i>	Berta: Dul <i>zitigini</i> , Bertat <i>sittigini</i> , Wetawit <i>sittijini</i> „3“ (B 5)
4a	NSu <i>*aŋan</i>	NS <i>*ɔŋwal</i> „4“ (B 6; Eh 380; Be 131)
4b	SSu <i>*hweč</i>	Taman <i>*kus</i> „4“ (B 17)
5	NSu <i>*tuul</i> , SWSu <i>*tur</i>	Mb <i>*tura</i> „5“; Kuliak <i>*tud</i> „5“; Taman <i>*tur</i> „6“ (B 4; Eh 436)

Abbreviations: ENil East Nilotic; Gu Gumuz; Kun Kunama; Mb Maban; N North; NS Nilo-Saharan; Su Surmic, SW Southwest.

6. Survey of the compared Surmic languages with synonyms and sources:

Baale - Yigezu & Dimmendaal 1998.
 Bodi - Haberland 1966.
 Chai - Last & Lucassen 1998.
 Didinga - Haberland 1966.
 Kwegu = Koegu - Hieda 1998.
 Longarim = Narim - Haberland 1966.
 Majang = Mesengo - Tefera & Unseth 1989.
 Me’en = Meken = Meqen - Haberland 1966.
 Murle - Haberland 1966.
 Mursi₁ - Turton & Bender 1976.
 Mursi₂ - Haberland 1966.
 Omo-Murle - Haberland 1966.
 Shabo - Tefera & Unseth 1989.
 Tirma - Haberland 1966.
 Yidenit - Haberland 1966.

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