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in the study of

SUDANESE LANGUAGES

No. 7

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Summer Institute of Linguistics

1997

A number of institutions and individuals are interested in research on languages in Sudan and there is a need to make research presently being done available to others. The purpose of these Occasional Papers is to serve as an outlet for work papers and other useful data which might otherwise remain in private files. We hope that Sudanese and non-Sudanese linguists alike may profit from such a series of papers.

Manuscripts for the series are welcomed. A clear, type-written copy following the format of the papers in this volume should be sent to the Editor for consideration.

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PREFACE

This seventh volume of *Occasional Papers in the study of Sudanese Languages* consists of four articles related to dialect and language groupings, three on morphology-syntax, and one phonology and orthography update.

The first article gives further information on Dinka dialects, following up on the survey by the Roettgers in OPSL volume six (1989). Next is a grouping of the Bongo-Baka languages, which was presented at the second Nilo-Saharan Conference in 1983 and is the longest overdue for publication. Next is the description of an archaic prefix in Surmic languages, followed by another by Unseth to disentangle two languages which have previously been called "Suri."

Descriptions of morphology-syntax include Surmic interrogatives, which question a Greenberg universal, the pronouns of a Banda dialect in Sudan and word order in Ma'di. The update of Baka phonology and orthography builds on a previous article by Parker in volume 4 (1985).

Dinka is a well-known example of Nilotic within Eastern Sudanic in southern Sudan, while Surmic is a less well-known subgroup of the Eastern Group of Eastern Sudanic in both southern Sudan and Ethiopia. The Bongo-Baka and Moru-Ma'di are subgroups of Central Sudanic. Banda, on the other hand, belongs to the Adamawa-Ubangi family of Niger-Congo.

All of the papers in this volume are presented in the form of work papers. We hope their publication in this form will stimulate further research on the topics discussed. We only regret that publication has been delayed by other priorities for so long. Some were submitted seven years ago. We fully expect volume 8 to be published within a year.

We wish to thank Dennis Greer and Stephen Tucker for their desktop publishing skills.

Richard L. Watson
John Duerksen
Nairobi, January 1997

DINKA DIALECTS

A Preliminary Report
September 1990, Revised October 1995

John Duerksen

The following is a summary of the Dinka dialects based on information gathered from Roettgers' survey report[1], the *Ethnologue*, colleagues and my own experience. The present focus is to show the dialect relationships based on lexical and grammatical data. In the future it is hoped that more information on the socio-linguistic aspects of the dialects can be added.

In the first section we will look at the cognate statistics as gathered from the wordlists collected by Roettgers. The results in this section show us how the dialects are related lexically. The second section shows several grammatical structures and how they vary across the dialects. Next we briefly touch on Roettgers' dialect intelligibility results. More data on intelligibility and inter-dialect attitudes is needed to assess the readiness of the various dialects to accept a single dialect as a standard for all of Dinka. We also include sections on population figures and a dialect map. The final section gives a listing of each dialect with a short summary indicating location, size, church affiliation, literature available in the dialect, etc.

Dinka is a member of the Nilo-Saharan, Eastern Sudanic, Western Nilotic, Dinka-Nuer languages. The most closely related languages are Atuot and Nuer. More distant are the Luo languages. Within the Luo group there are the Northern Luo languages (Shilluk, Jur Luwo, Thuri, Belanda Bor, Anuak, Burun, Jumjum, Mabaan and (Pari) Lokoro) and the Southern Luo languages (Acholi, Lango, Alur, Luo, Kuman and Adhola). See the language chart in Appendix 1 on *The Nilo-Saharan Family: The Nilotic Group.*

Traditionally the Dinka language has been divided into four main dialect groups: Padang, Rek, Agar and Bor. This was based on linguistic boundaries and church denominational areas. In this report, we show an expanded version of the dialect relationships based on our interpretation of the data found in Roettgers' survey report. The results add new light to the dialect relationships and there is some rearrangement of the dialect groupings. Chart 1 shows the relationships as they will be discussed in this report.

[1] The Roettgers finished the initial collection of dialect data by March 1981. Their report was published in 1989 in *Occasional Papers in the Study of Sudanese Languages*, No.6.

DINKA DIALECTS

DINKA	*Chart Code*	*Roettger Code*
North		
North-Eastern	**NE**	
Abiliaŋ	Nb	ABI
Ageɛr (Paloc)	Ng	AGƐ
Doŋjol	Nd	DOIJ
Ŋɔk (Sobat)	Ns	ŊSO
Thoi-Rut-Luac	N3	TRL
Thoi	Nt	THO
Rut		RUT
Luac		ELU
North-Western	**NW**	
Ruweŋ	Nr	REW
Pan Aru	Np	PAN
Alɔr-Ŋɔk		
Alɔr	Na	ALO
Ŋɔk (Kordofan)	Nk	ŊAB
South		
South-Western	**SW**	
Malual-Rek-Tuic		
Malual	Wm	MAL
Rek	Wr	REK
Tuic (western)	Wt	WTW
Luac	Wl	LUA
South-Central	**SC**	
Gɔk	Cg	GƆK
Agar	Ca	AGA
Ciec	Cc	CIC
South-Aliap	**SA**	
Aliap	Cl	ALI
South-Eastern	**SE**	
Bor	Eb	BOR
Athoc		
Tuic (eastern)	Et	ETW
Nyarweŋ	En	NYA
Yɔl	Eɣ	YƆL

Chart 1: Lexical Divisions of Dinka Dialects

1. LEXICAL ANALYSIS: Cognate Counts

Roettgers were able to elicit word lists for most of the Dinka dialects. We have taken their data and reanalyzed it with the help of new computer programs not available to them at the time of the survey. I have found it most helpful to visualize the results (cognate percentages) in tree diagrams instead of number charts. The following tree diagrams represent the cognate percentages as calculated by WORDSURV and interpreted by LEXISTAT. Data from Atuot (AT), Nuer (NU) and Shilluk (SH) has been included to show the relative levels of cognate percentage values. The actual cognate values are given in Appendix 2, *COGNATE MATRIXES.*

Diagram 1: Nearest Neighbor shows the least degree of breakdown between the dialects.

Diagram 2: Farthest Neighbor shows the greatest degree of breakdown between dialects.

Diagram 3: Branch Average shows the balance between the Nearest and Farthest Neighbor.

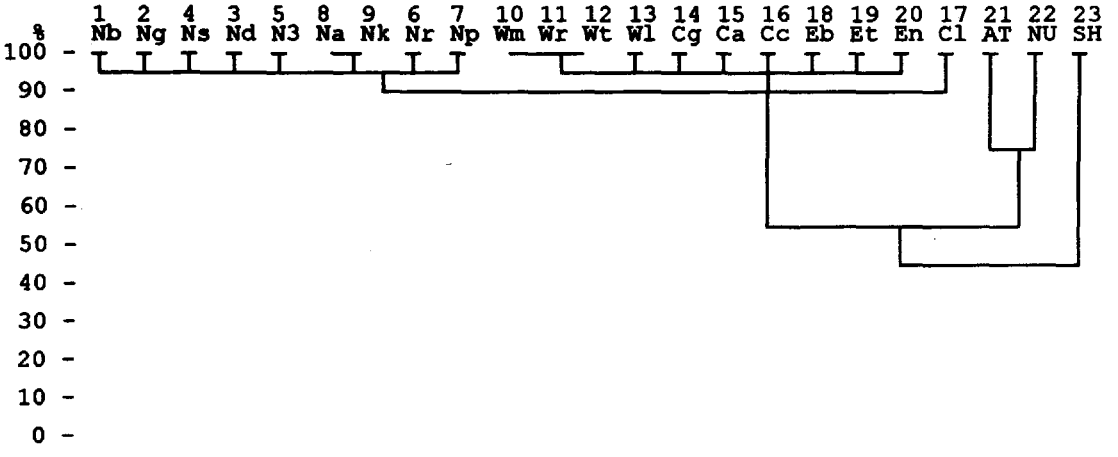


Diagram 1: Nearest Neighbor

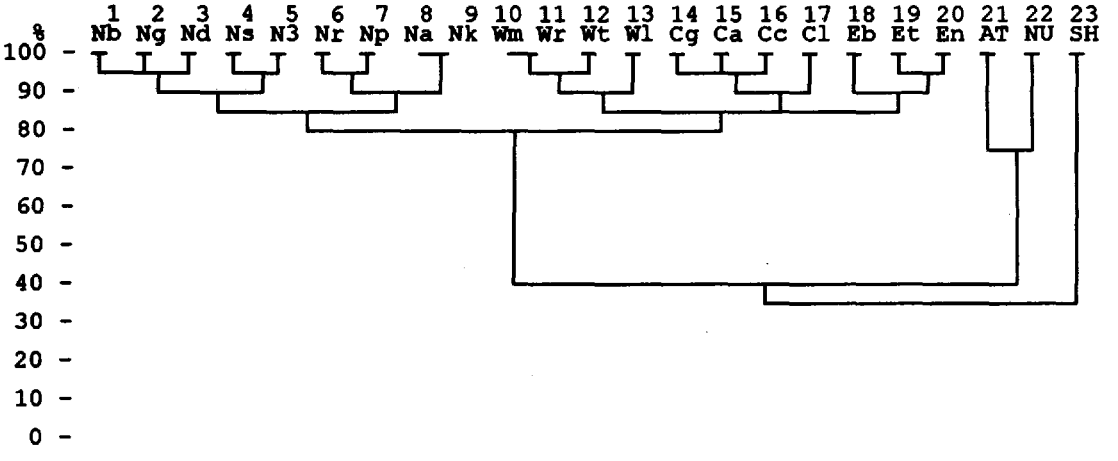


Diagram 2: Farthest Neighbor

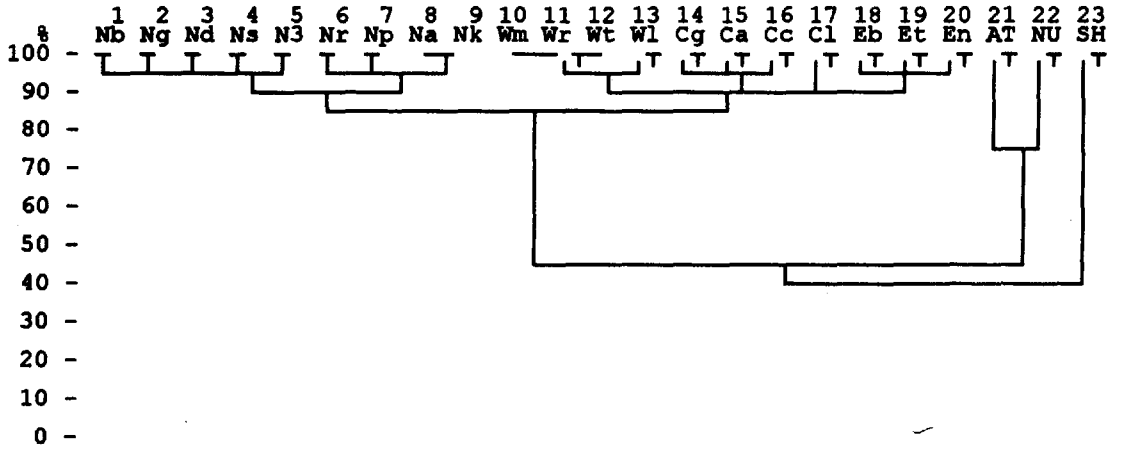


Diagram 3: Branch Average

It can be seen that the Dinka language is linguistically divided into two main groups based on cognate counts:

North Dinka comprising the traditional "Padang" dialect group
South Dinka comprising the traditional; "Rek", "Agar" and "Bor" dialect groups

We can further see that North Dinka divides into two dialect groups while South Dinka divides into four groups. Thus we have:

North Dinka	
North-Eastern	basically east and south-east of Nile River
North-Western	basically west and northwest of Nile River
South Dinka	
South-Western	far west in Dinka area
South-Central	centralized in South Dinka area
South-Aliap	lone dialect (in the South-Central group?)
South-Eastern	far east in Dinka area

We can also note that several of the dialects group together:

In the North-Western group, Alɔr and Ŋɔk (Kordofan) group together.
In the South-Western group, Malual, Rek and Tuic group together.

One can also note that the Aliap somewhat stands alone, only grouping with the South-Central group in the Farthest Neighbor analysis.

The overall grouping of the dialects is seen in Chart 1 on page 2.

2. GRAMMATICAL ANALYSIS

In this section we make several observations based on grammatical aspects such as pronoun usage, word order and verbal prefixes. Our observations are based on the grammar examples and *Primer Story Modifications* found in Roettgers' report.

2.1. Possessive Pronouns

We are able to observe one general trend in the pronoun sets between North Dinka and South Dinka. Pronouns in 1SG and 2PL (both for Singular and Plural nouns) for South Dinka show a "lowering" of the vowel in the

personal possessive pronoun, i.e., /ï/ → /ië/ and /u/ → /uɔ̈/ (uo). This correlates with the basic North-South distinction as shown in the cognate counts.

		Singular Noun		*Plural Noun*	
		1SG	2PL	1SG	2PL
NE	Ng	dï	dun	kï	kun
NW	Np	dï	dun	kï	kun
SW	Wr	dië	dun	kië	kun
SC	Cc	dië	duon	cië	kuon
SA	Cl	dië	duon	cië	kuon
SE	Eb	dia	duor	cia	kuon

2.2. Possessive Phrases

However, an interesting twist is found when one observes the structure of the possessive ('of') phrase. It seems that here we find the South-Eastern dialect group being more similar to the North Dinka groups. The North dialects and the South-Eastern dialects use the fuller form of /de/[2] 'of' in the possessive phrase while the South-Western and the South-Central dialects use the shorter form /e/ or nothing.

		the man's spear	*the elephant's head*	*of*
NE	Ng	tɔŋ de raan	nɔm de akon	de
NW	Np	tɔŋ de monye	nɔm da akɔn	da[3]
SW	Wr	tɔŋ ë moc	nhom (ë) akɔɔn	ë
SC	Ca	--	nhom akɔ̈n	ø
SE	Et	tɔŋ de ran	nom de akɔɔn	de

Although the data for the South-Central dialects is absent for these phrases in Roettgers' report, examples found in the *Primer Story Modification* show that the South-Central dialect usually patterns with the South-Western dialects.

2.3. 'a-' Verb Prefix

Another observation concerns the use of the Indicative /a-/ verb prefix. Here again we find the South-Eastern dialects patterning along with the North dialects. The South-Western and the South-Central dialects have the /a-/ prefix but it is absent in the North and South-Eastern dialects

		We are eating meat.	*IND*
NE	Ng	Wok cuet riŋ.	ø
NW	Np	Ok cuet riŋ.	ø
SW	Wr	Ook aacuet riŋ.	aa-
SC	Ca	Ok acuet riŋ.	a-
SE	Et	Wo cuet riŋ.	ø

[2] The forms are actually /dë/ and /ë/. Where marked, I have rewritten the data from Roettgers' dialect report to match the current orthography. I use (¨) (dieresis) instead of (^) (circumflex) to represent Breathy vowels.

[3] There are morphophonemic rules for vowel assimilation or loss before words beginning with /a-/: /dë/ → [dä] and /ë/ → [ø] (is lost).

2.4. Plural Subject Marker

From the *Primer Story Modification* we observe another example of the North dialects patterning with the South-Eastern dialects. In the first sentence we see the following:

		Hut	*and*	*stable*	*are*	*(pl)*	...
NE	Ng	Yŏt	ku	luak	aye	keek	...
NW	Nk	Yŏt	ku	lua	aaye	ke	...
SW	Wr	Yŏt	ku	luak	aaye	ɸ	...
SC	Ca	Yŏt	ku	luak	aye	ɸ	...
SA	Cl	Yŏt	ku	luak	aye	ɸ	...
SE	Eb	Yŏt	ku	luak	aye	ke	...

Here the Plural Subject marker /ke/ or /keek/ appears in the North and South-Eastern dialects.

2.5. Word Order in Questions

Word order in questions adds more diversity to a 'clean-cut' order of the dialects. Observe the following:

		Is an elephant black?
NE	Nb	Akon col?
	Ng	Col akon?
NW	Np	Akɔn col?
SW	Wr	Akɔ̃ɔ̃n col?
SC	Ca	Col akɔ̃n?
SA	Cl	Col akɔ̃n?
SE	Eb	Col akɔn?

Here we find the North-Western and the South-Western dialects patterning together while the South-Central and South-Eastern pattern with a mixed North-Eastern group.

2.6. Negative Imperative

The grammatical structure of the Negative Imperative brings us full circle and shows more clearly the distinctions of each dialect group.

		Don't buy meat.
NE	Ng	Du riŋ ɣɔc.
NW	Np	Dik riŋ ɣɔc.
SW	Wr	Duk riŋ ɣɔc.
SC	Ca	Duone riŋ ɣɔc.
SA	Cl	Tunĕ riŋ ɣɔc.
SE	Eb	Duone riŋ ɣɔc.

2.7. Conclusions from Grammar Analysis

Observations based on grammatical structures suggest that the North dialects (especially the North-Eastern) and the South-Eastern dialects pattern more closely to one another while the South-Western, South-Central and less closely the South-Aliap pattern together.

In contrast to the cognate percentages for lexical items in which the North-Eastern dialects were lexically the less similar to the South-Eastern dialects (on opposite ends of the relationship line!), in grammatical structures, these two dialect groups often pattern together.[4]

3. DIALECT INTELLIGIBILITY

The dialect intelligibility testing by Roettgers brings us closer to the actual reality of which dialect(s) can be used for literacy purposes. From the testing results we can compose Chart 2: Combined Average Scores for Dialect Intelligibility.

	TEXT WRITTEN IN:			
READ BY:	NE	SW	SC	SE
NE	98.4	88.4	85.8	93.1
NW	95.5	99.0	95.0	94.0
SW	92.8	99.0	93.5	94.2
SC	91.2	94.5	98.2	93.8
SA	91.0	94.5	98.0	97.0
SE	94.2	90.7	93.7	99.2
Atuot	86.0	88.0	97.0	95.0

Chart 2: Combined Average Scores for Dialect Intelligibility

Chart 2 shows the combined average percentages of intelligibility between the dialects for which stories were tested. The basic trend is that the North-Eastern stories and the South-Eastern stories were easier to understand by the other dialects, i.e., a SW person understood more (94.2%) of the SE dialect stories than did the SE person understand (90.7%) the SW stories.[5] Diagram 4 can help us to visualize the results better.

[4] Or does this show a weakness in the way the lexical percentages were analyzed and the use of a linear scale?

[5] Why might it be that the North-Eastern and South-Eastern dialects are better understood? My guess, and let me stress '*guess*', may be that the North-Eastern and South-Eastern dialects have a greater inventory of functors for expressing grammatical information. For example, when the South-Western dialects tend to omit the 'of' in sentences, these Eastern dialects will insert a /dɛ̈/ or /ɛ̈/, giving additional context clues. What do you think?

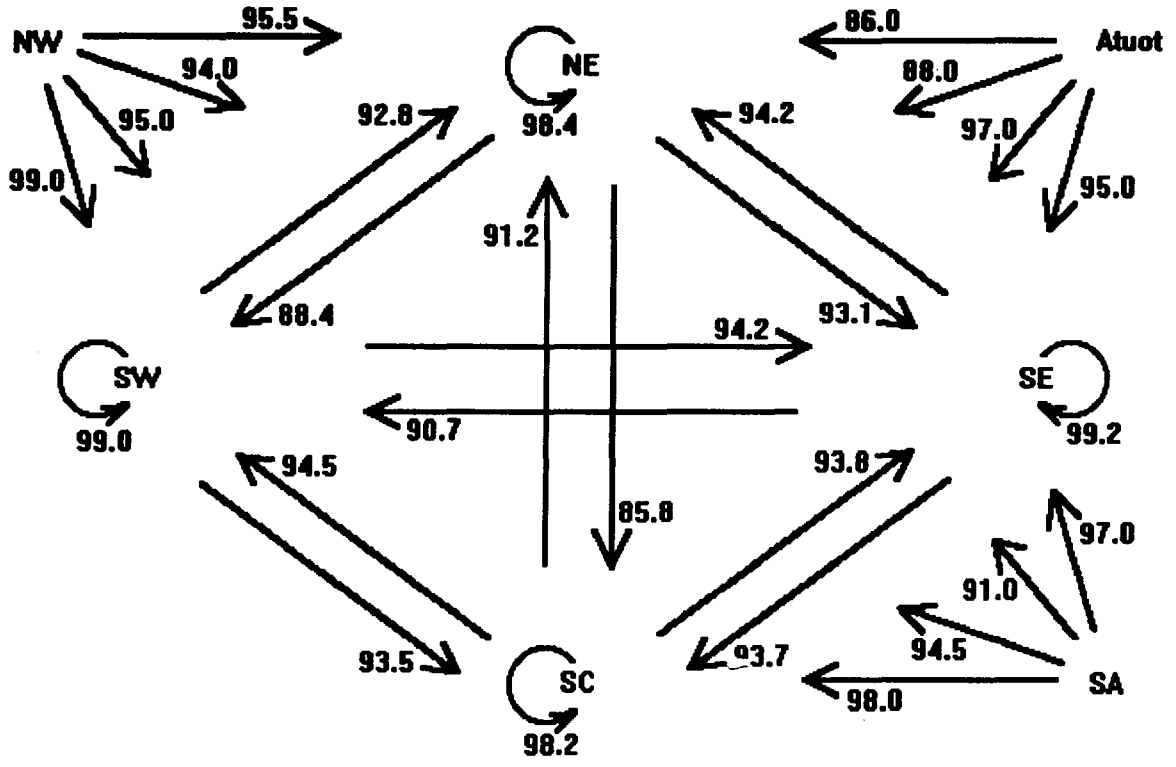


Diagram 4: Dialect Intelligibility

Instead of repeating Roettgers' conclusions for the intelligibility testing, I would encourage you to read their conclusions, particularly the results when they weight the percentages based on dialect populations (see section 3.3. on pages 20-26 in *Occasional Papers*, No.6). Their basic observation is that, although the North-Eastern and South-Eastern dialects are more easily understood, the weighted percentages show that the South-Western dialects are more easily understood by *more* people when the total number of Dinka people are considered. Their evaluation is based on Tucker and Bryan's population figures of 1956. The picture may change if the South-Western population is numerically less when compared with the other dialects as found with the 1982 UBS figures. For more details, see the section *POPULATION STATISTICS* found on page 9.

What can be stressed here is that the Dinka dialects all have a high level of intelligibility. The average is well above 90%.

4. LANGUAGE ATTITUDES

The socio-linguistic aspect of inter-dialect attitudes is an area for which it has been difficult to gather information. Although there is the expected attitude that each person will want his own dialect to be the one chosen for literature development, leaders have also talked about having one unified written language. Given the high percentage of lexical cognates and intelligibility, a one-dialect "standard" may seem like a possibility.[6] More study would be needed to assess the difficulties posed by grammatical differences and the language attitudes.

[6] The Joint Literacy Project originally accepted the (South-Western) Rek dialect as a standard for literature. It has yet to be seen how widely this is accepted. My guess as to why it was chosen is that 1) Fr. Nebel's primers are in that dialect and 2) it is a more "historical" Dinka (??). [The current practice is to develop parallel literacy materials equally in the major dialects (Padang, Rek, Agar and Bor). JD Oct 95]

5. POPULATION STATISTICS

The statistics vary as to the number of Dinka.[7] Note the two comparisons in Chart 3 between the 1956 figures of Tucker and Bryan and the figures given in the 1992 *Ethnologue* (based on 1982 UBS).

	TUCKER & BRYAN 1956		ETHNOLOGUE (UBS 1982)	
Dialect		*Percent*		*Percent*
NE & NW	83,280	13.7	400,000	29.6
SW	364,160	59.9	450,000	33.3
SC & SA	64,582	10.6	250,000	18.5
SE	95,596	15.7	250,000	18.5
TOTAL	607,618		1,350,000	

Chart 3: Population Statistics

The more recent population figures show a more even distribution of the population between the dialects. The figures can perhaps be better visualized in graph form as seen in Diagram 5.

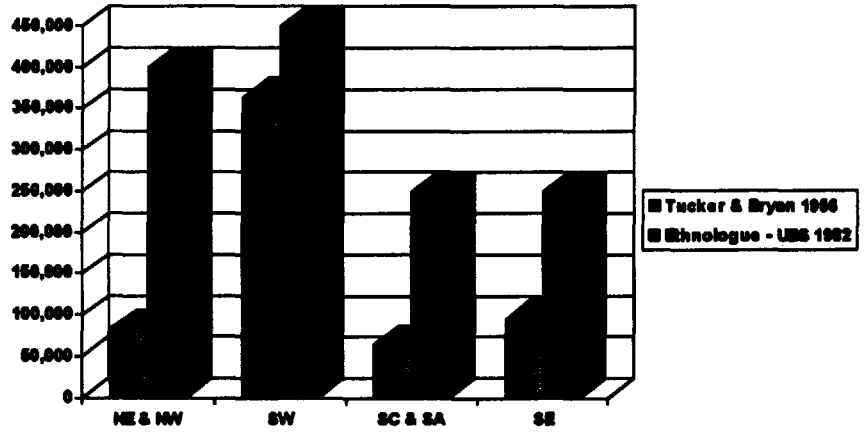


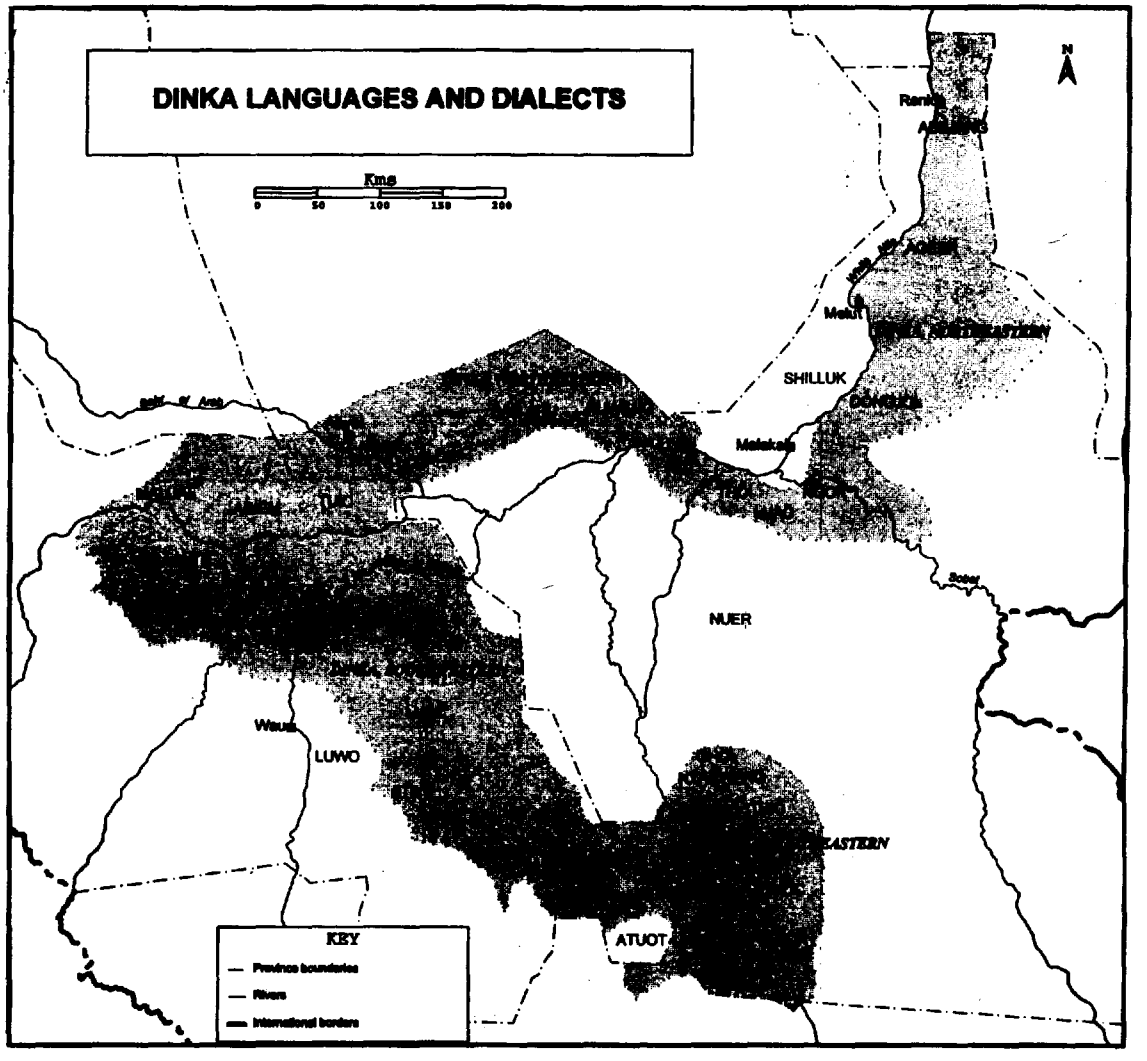
Diagram 5: Dinka Population Distribution

6. DIALECT MAP

The following map shows the dialect areas in relation to the major dialects.[8] From this map it is easy to see why North Dinka is divided into two groups, i.e., they are divided by groups of Nuer and Shilluk.

[7] Job Malou (1983) gives a figure of 2 million Dinka (*Ethnologue*).

[8] This map was produced by Irene Tucker of the SIL Mapping office.



Map 1: Dinka Dialects

7. DIALECT SUMMARIES

The following is a listing of the various dialects based on the linguistic relationships shown in this paper. In addition to a general description about each dialect, the following areas are outlined:

CO: The *Ethnologue* three letter code. [See Chart 1 on page 2 for additional codes.]
AN: Alternate names
LO: Location
PO: Population
TR: Translation progress (as given in *Ethnologue*)
WL: Wordlist availability
HS: History

DINKA

PO: 2,000,000 (1983 Job Malou)
LO: Southern Sudan on both sides of the Nile surrounding the Sudd.

North Dinka

North-Eastern

CO: DIP
AN: Padang, White Nile Dinka, Jaang (name for self)
LO: Southern Sudan north-east of Sudd along both sides of White Nile. Southern-most south of Nile and Sobat Rivers bordering with the Nuer. Northern-most at Renk. East to Nuer. West to areas north-west along the White Nile. Includes Renk, Melut, Khor Adar, Kodok, Sobat River, and Khor Filus.
PO: 320,000 (1986 UBS)
TR: OT in progress. NT 1952. Presbyterians, SIM.
- 95% Traditional religion, 4% Christian, 1% Muslim

Abiliaŋ

AN: Abiliang, Dinka Ibrahim, Akoon, Bawom, Bowom, Giel
PO: 7,200 (1982 UBS)
LO: Renk and south, northern-most of Dinka, east of Nile
WL: By Roettger 1980

Ageer

AN: Ageer, Paloc, Poloic, Ager, Ageir, Abuya, Beer, Niel, Nyel
PO: 13,500 (1982 UBS)
LO: North and south of Melut, east of Nile
WL: By Roettger 1980

Dɔŋjol

AN: Dongjol, (North Dinka Standard)
PO: 9,000 (1982 UBS)
LO: East of Malakal, around Akoka, north of Sobat River
WL: By Roettger 1980
- According to Ethnologue, this dialect has been chosen as the literary standard (for North Dinka).
- Trudinger's Dictionary is in this dialect.

Ŋɔk (Sobat)

AN: Ngok, Ngork, Jok, Ngok East
PO: 16,000 Ngok (1982 UBS), 20,000 Jok (1982 UBS)
LO: South-east of Malakal along Sobat River
WL: By Roettger 1980
- Cp. Ŋɔk (Kordofan) of NW group

Thoi-Rut-Luac

WL: By Roettger 1980

Thoi

PO: 400 (1982 UBS)
LO: Near Atar south of Malakal, east of Nile

Rut

PO: 2,000 (1982 UBS)
LO: At bend of Nile north of Sudd, border with Nuer to the west and south

Luac

AN: Luaic
PO: 2,500 (1982 UBS)
LO: South of Malakal along Sobat River, southern most of North Dinka, Nuer to the south

---

North-Western

CO: DIW
LO: Southern Sudan north of Sudd, north-west of White Nile above the Bahr el Ghazal, west to Abyei in West Kordofan province
PO: 80,000 (1986 UBS)
TR: Possible translation need. Roman Catholic.

Ruweŋ

AN: Ruweng
PO: 80,000 (1982 UBS)
LO: North of Bahr el Ghazal
WL: By Roettger 1980

Pan Aru

LO: North of Bahr el Ghazal around Fariang
WL: By Roettger 1980

Alɔr-Ŋɔk

Alɔr

AN: Alor
LO: Northwest of Bahr el Ghazal around Abiemnom
WL: By Roettger 1980

Ŋɔk (Kordofan)

AN: Ngok West
LO: Southern Kordofan Province around Abyei, west to Bahr el Arab
WL: By Roettger 1980
- Cp. Ŋɔk (Sobat) of NE group

South Dinka

South-Western Dinka

CO: DIK
AN: Western Dinka, Rek, Raik
PO: 450,000 (1982 UBS)
LO: Southern Sudan north and north-west of Wau
TR: Slow translation progress. Work in progress. Anglican, Roman Catholic.

Malual-Rek-Tuic

Malual

AN: Malwal, Atoktou, Atokto, Duliit, Korok, Makem, Akem, Peth
PO: 40,000 (1982 UBS)
LO: Northwest of Aweil, south of Bahr el Arab
WL: By Roettger 1980

Rek

AN: Raik, (West Dinka Standard)
LO: North and northwest of Wau, main towns are Gogrial and **Kuajok**
WL: By Roettger 1980
- Large Catholic Mission at Kuajok, Fr. Nebel's work is in this **dialect**.
- The following four dialects may be part of Rek (family **groups??**): Aguok (Agwok), Apuk, Awan, Lau.

Tuic (western)

AN: Twic, Twich, Twij, Adhiang, Amiol, Nyang, Thon
PO: 50,000 (1982 UBS)
LO: North of Gogrial
WL: By Roettger 1980

Abiem

AN: Ajong Dit, Ajuong Dit, Ajong Thi, Ajuong Thi, Akany Kok, Akem Jok, Apuoth, Apwoth, Anei
PO: 55,000 (1982 UBS)
LO: North of Aweil
WL: none
- Not covered in survey study.

Paliet

AN: Baliet, Ajak, Buoncuai, Bon Shwai, Bwongcwai, Kongder, Kondair, Thany Bur, **Tainbour**
PO: 17,000 (1982 UBS)
LO: Between Gogrial and Aweil
WL: none
- Not covered in survey study.

Palioupiny

AN: Palioping, Palyoupiny, Akjuet, Akwang Ayat, Akuang Ayat, Akwat Ayat, Cimel, Cemel, Gomjuer, Gomjier
PO: 35,000 (1982 UBS)
LO: South and south-east of Aweil
WL: none
- Not covered in survey study.

Luac

PO: 15,000 (1982 UBS)
LO: North-east of Tonj, east of Rek, Nuer to the east
WL: By Roettger 1980

South-Central Dinka

AN: Agar, (Central Dinka), South-western Dinka (old *Ethnologue*)
PO: 250,000 including South-Aliap (Tucker and Bryan)
LO: Southern Sudan west of Nile below Sudd.
TR: Portions 1916. Possible translation need.
- Pastoralists, agriculturalists (grain, corn, peanuts, beans). (Ethnologue)

Gɔk

AN: Cok, Gauk
PO: 25,000 (Tucker and Bryan)
LO: Between Rumbek and Tonj, beginning about 30 miles west of Rumbek
WL: By Roettger 1980
- "Cok is influenced by Western [South-Western] Dinka and has a number of Arabic loans." (Ethnologue)

Agar

AN: (Southwest Dinka Standard)
LO: Around Rumbek and north to Sudd
WL: By Roettger 1980
- "...[Agar] is becoming accepted as the educational standard." (Ethnologue)
- Shadrack Chol claims this dialect is more easily understood by SW and SE groups. They would have difficulty with Northern Dinka.

Ciec

AN: Cic, Chich, Kwac, Ajak, Ador
PO: 22,000 (Tucker and Bryan)
LO: In Lakes District, east of Rumbek, on west bank of Nile, Yirol
TR: Portions 1916, Kyec 1908
WL: By Roettger 1980
- "The direction of change in Ciec is toward Agar..." (E)

South-Aliap Dinka

Aliap

AN: Aliab, Thany, Aker
PO: 2,000 for Aker and 2,000 for Thany (Tucker and Bryan)
LO: Aker is south-east of Agar. Thany is south of Bor in a few fishing villages mainly on the right bank of the Nile, Mandari to the south
WL: By Roettger 1980

South-Eastern Dinka

CO: DIN
AN: Bor, Baer, Behr, Boor, (South-east Dinka), (East Dinka)
PO: 250,000 (Tucker and Bryan).
LO: Southern Sudan on both sides of White Nile around Bor and north, between Yirol and Shambe
TR: OT in progress. NT 1940. SIM, Presbyterian, Anglican, Roman Catholic.

Bor

AN: Bor Gok, (South-east Dinka Standard)
LO: North-east of Juba around Bor
WL: By Roettger 1980

Athoc

AN: Borathoi, Bor Athoic, Atoc, Athoic
LO: North of Bor, mainly east of Nile
WL: No wordlist
- Thought to be very similar to Bor.

Tuic

AN: Twi
LO: Around Kongor, mainly east of Nile
WL: By Roettger 1980

Nyarweŋ

AN: Nyarueng, Nyarweng, Narreweng
LO: Around Duk Failwil, mainly east of Nile
WL: By Roettger 1980

Yɔl

AN: Ghol
LO: Around Duk Fadiet, border with Nure to north, furthest north of South-East Dinka groups
WL: No wordlist

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APPENDIX 1: NILO-SAHARAN FAMILY

The Nilotic Group

- Nilo-Saharan
  - Eastern Sudanic
    - Nilotic

- Eastern Nilotic
  - Bari
    - BARI
    - KAKWA
    - MANDARI
  - Lotuxo-Teso
    - Lotuxo-Maa
      - Lotuxo
        - OTUHO
        - DONGOTONO
        - LANGO
        - LOPIT
        - LOKOYA
      - Ongamo-Maa
        - MAASAI
        - NGASA
        - SAMBURU
    - Teso-Turkana
      - TESO
      - Turkana
        - KARAMOJONG
        - TOPOSA
        - TURKANA
      - Unclassified Teso-Turkana
        - MENING

- Western Nilotic
  - Dinka-Nuer
    - Dinka
      - North-eastern DINKA
      - North-western DINKA
      - South-western DINKA
      - South-central DINKA
      - South-eastern DINKA
    - Nuer
      - NUER
      - ATUOT
  - Luo
    - Northern Luo
      - ANUAK
      - BELANDA BOR
      - LUWO
      - SHILLUK
      - THURI
      - Maban-Burun
        - BURUN
        - Maban
          - JUMJUM
          - MABAAN
      - Unclassified Northern Luo
        - LOKORO
    - Southern Luo
      - ADHOLA
      - KUMAN
      - Luo-Acholi
        - LUO
        - Alur-Acholi
          - ALUR
          - Lango-Acholi
            - ACHOLI
            - Uganda LANGO

- Southern Nilotic
  - Kalenjin
    - Elgon
      - SABAOT
      - KUPSABINY
    - Nandi-Marakweta
      - OKIEK
      - PÖKOOT
      - Marakweta
        - ENDO-MARAKWET
        - TALAI
      - Nandi
        - ARAMANIK
        - KALENJIN
        - KISANKASA
        - MEDIAK
        - MOSIRO
        - North TUGEN
  - Tatoga
    - DATOGA
    - OMOTIK

APPENDIX 2
PERCENTAGES COGNATE MATRIXES

Abiliaŋ
97 Ageer
95 96 Doŋjol
94 97 93 Ŋɔk (Sobat)
95 95 92 94 Thoi-Rut-Luac
92 91 87 90 90 Ruweŋ
94 92 89 92 92 96 Pan-Aru (east Ruweŋ)
94 93 89 92 93 92 95 Alor (west Ruweŋ)
95 95 90 94 92 92 94 98 Ŋɔk (Kordofan)
89 90 84 89 88 86 88 88 90 Malual
90 90 86 90 90 88 89 88 89 99 Rek
89 90 85 89 89 88 88 88 89 97 99 Twic (western)
86 87 82 86 89 84 85 88 89 94 95 91 Luac
83 87 82 85 85 82 82 83 86 92 92 88 87 Gök
85 89 84 86 87 84 84 84 86 93 92 90 89 97 Agar
87 90 85 87 88 85 84 86 87 92 93 90 88 96 97 Ciec
85 88 82 84 86 84 85 84 85 86 87 84 84 90 90 92 Aliap
87 88 84 87 86 85 88 86 88 93 93 91 86 91 90 91 91 Bor
90 90 86 90 90 88 90 88 89 91 90 88 88 91 90 93 90 94 Twic (eastern)
89 92 86 89 89 86 90 87 89 91 91 88 88 89 89 90 87 92 97 Nyarweŋ

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47 48 45 47 48 47 47 49 51 50 52 48 50 53 53 51 49 48 49 47 ATUOT
43 43 42 44 45 44 42 44 47 46 48 43 44 47 48 44 44 44 43 41 77 NUER
40 39 38 36 41 39 40 39 41 40 43 41 40 39 40 40 40 41 38 38 42 39 SHILLUK

GROUPING OF THE BONGO-BAKA LANGUAGES

A.M. Persson 1983

1. Aim and Methods

Both Greenberg and Tucker and Bryan state that within the Bongo-Bagirmi languages there is a smaller grouping containing Bongo and Baka. In connection with this smaller grouping they also mention several other language names, including Jur 'Beli and Morokodo. The identities of Bongo and Baka are well known but hitherto the significance of the other language names has not been clearly established. The purpose of this paper is to show which languages comprise the Bongo-Baka group, how they are related and which names refer to the dialects of which languages.

I have collected word-lists representing most of the language names that are used in connection with this language group and supplemented them with data from my previous researches in the area. Comparison of the word-lists shows how the languages and dialects concerned are related. I have also compared grammatical features of some of the languages and dialects. Although such grammatical comparisons are not usually tabulated numerically an attempt to do so in this case is seen to tally with the results of lexical comparison.

2. Language Names

Tucker and Bryan state that the Bongo language group comprises

1. Bongo
2. Baka
3. 'Beli Dialect Cluster
4. Morokodo Dialect Cluster

Under 'Beli they list

Lori
Modo
Gberi (or Muda)
Wetu
'Beli
Sopi

The dialects of the Morokodo Cluster they give as

Morokodo
Biti
Wira
Mä'du
Nyamusa

Their designation of 'Beli and Morokodo as "dialect clusters" is helpful in that it stresses that these are groups of related dialects in which none, not even the eponymous one, is more prestigious than any other.

Bongo and Baka, however, are clearly separate languages, spoken in areas quite distant from one another and from the other languages and dialects we are concerned with. Bongo is spoken in very scattered pockets near Tonj, Bussere and Yambio. Baka on the other hand is spoken over a distinct area south and west of Maridi.

The remaining languages and dialects, with which I am mainly concerned here, are spoken in an area about 180 km. north to south and 100 km. east to west between Rumbek and Maridi, the Yei River and the Southern National Park. Most of them come within the Mundri District of Western Equatoria Province (see the accompanying maps). From my investigations in the area they are as follows:

'Beli Although this term has sometimes been used for all the dialects it is in fact recognized by only two groups of people. One group of 'Beli, probably the one earlier writers refer to, live south-west of Rumbek. They are at Wulu, westwards along the road to Bahr Gel and southwards towards the southern border of Lakes Province. In some areas they are now heavily intermingled with Dinkas.

A quite separate group of 'Beli live east of Mvolo and have no links with the first group. They are centred round the permanent lake known as Bahri Girinti (on some maps Lake Nyiropo), which is just west of the Yei River.

Sopi This group live north of Mvolo east of the River Naam or Olo.

Lori From a little north of Mvolo the land west of the River Naam or Olo is occupied by the Lori southwards for about 35 miles. Mvolo itself is now populated by a mixture of groups but was probably originally Lori since its name contains the phoneme /mv/ which is only found in Lori.

Modo This group live north-east of Mvolo along the road towards Yirol, and also south of Mvolo. In the north-east they live between the Sopi and the 'Beli of Bahri Girinti and southwards they extend for about 20 miles towards Yeri.

Molo This is a small group, not mentioned by previous writers, who live away from any road. They are south-east of Mvolo and north-east of Yeri, between the Modo and the Nyamusa.

Mo'da This is the name used by a group who now live north-west of Mvolo on both sides of the border of Lakes Province and Western Equatoria Province. They have been referred to by previous writers as Gweri or Gberi, but this would appear to be a clan or village name. They are to the north of the Lori but I am told that in living memory they have come from an area south of the Lori, on the road from Mvolo to Maridi, where there are now Morokodos.

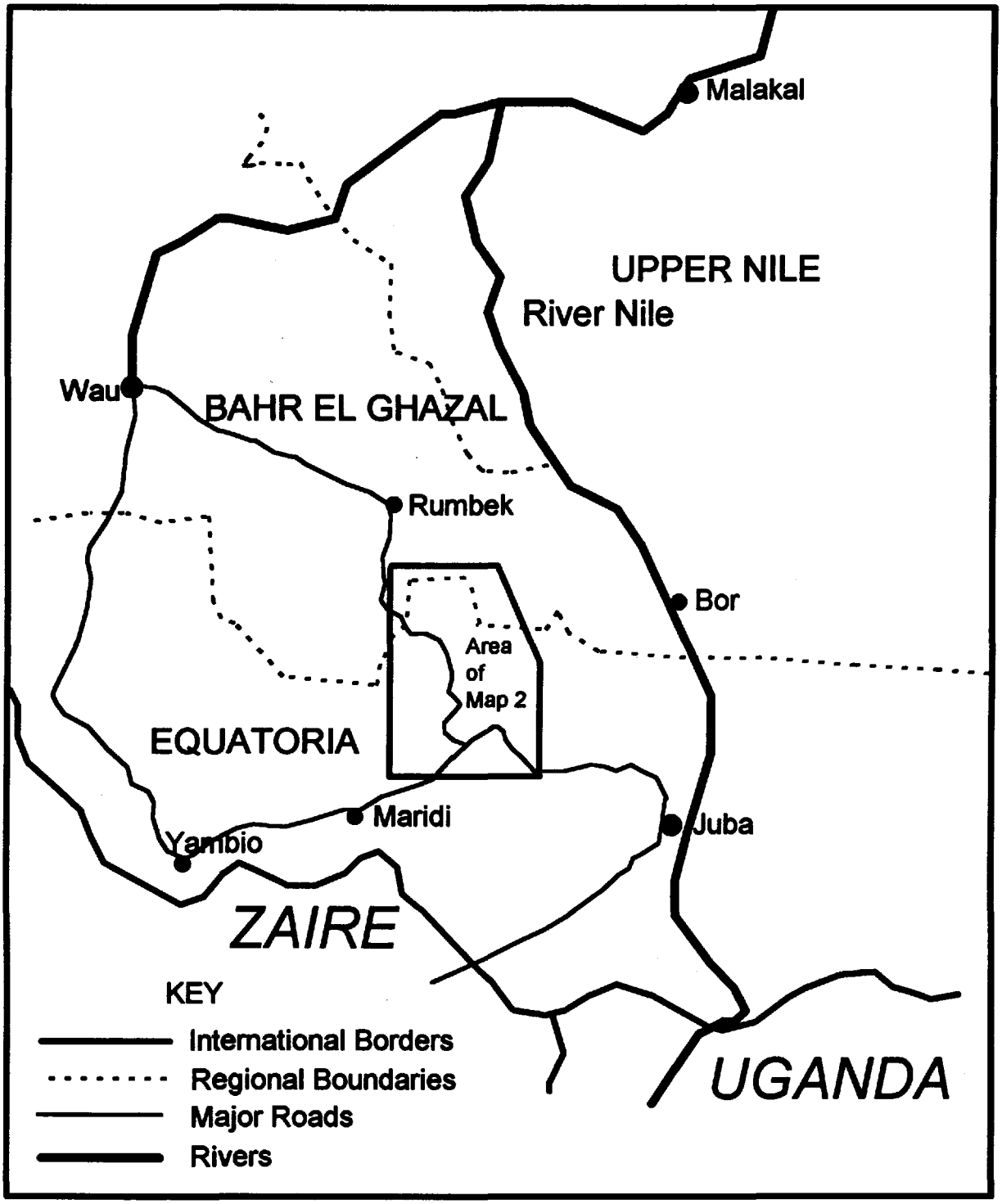
Morokodo This is a large group spread over a wide area from the west bank of the Naam or Olo eastwards to the Yei River at Amadi. On the south they border on the Avukaya and the Moru and on the north the Lori and the Modo. They are known as Ma'di by some of the other groups.

Nyamusa and *Wira* These two groups live east of the Molo and Morokodo, on both sides of the Yei River north of Amadi. East of them are the Mandari.

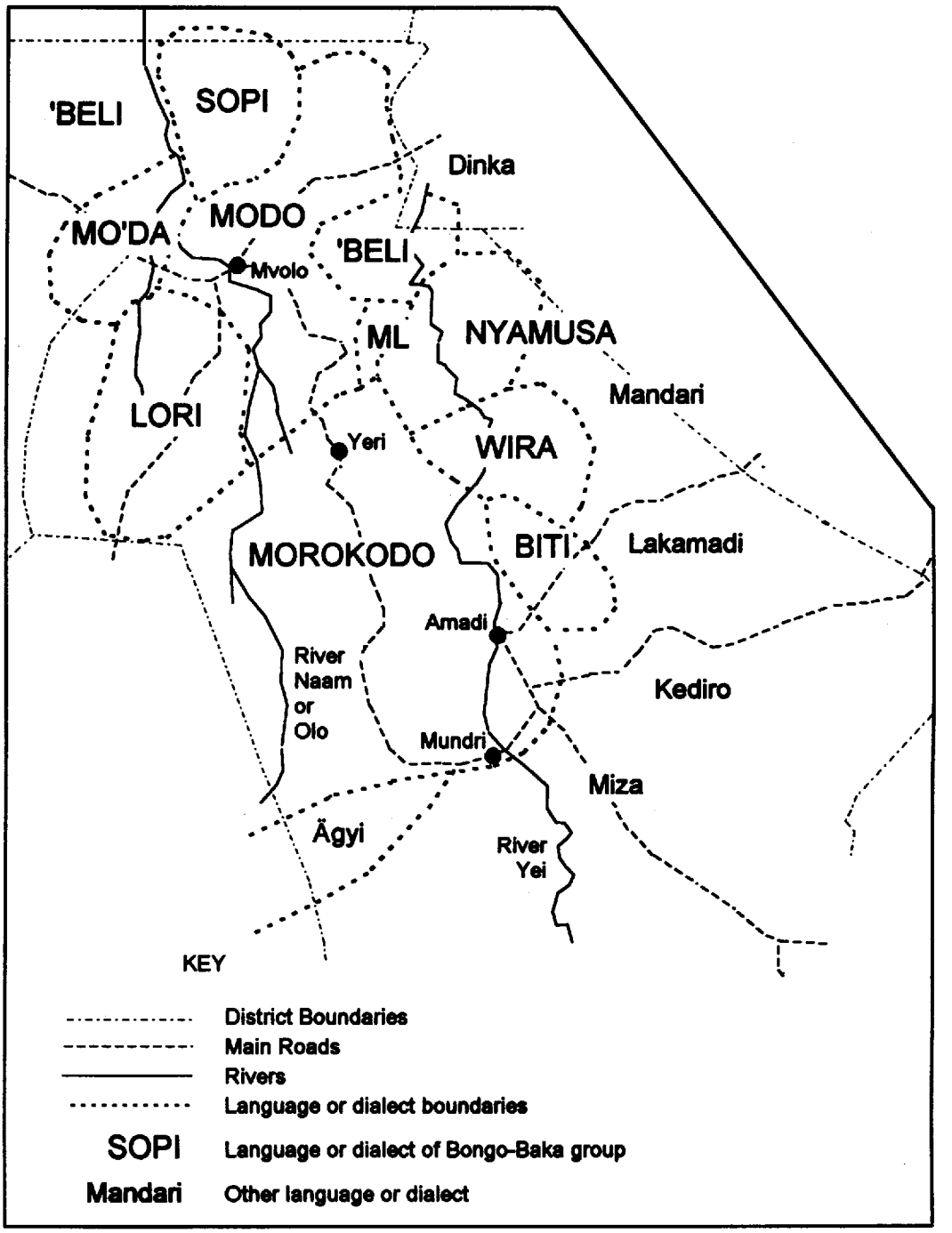
Biti Unfortunately I have no data or information on this group other than that they live to the east of the Yei River just north of Amadi.

The remaining groups mentioned by Tucker and Bryan, Wetu and Mä'du, are probably now extinct. They mention that the Wetu were almost extinct at the date of their information and although nowadays the name is known by people in the Mvolo area they do not know who or where the Wetu people are. I have never come across the name Mä'du.

The people of all these groups recognize that they have similar languages to one another. However they have no overall vernacular name by which to distinguish themselves from others such as Morus and Dinkas. If pressed most groups will say that the term "Jur" applies to all of them, but this is a Dinka term and is not used unless necessary. For instance when asked what his tribe was a man would normally say "Modo" or "Lori", but if he thought the questioner was not likely to know these terms he would simply say "Jur". It is sometimes coupled with the name of a group, as in Jur 'Beli, Jur Modo.



Map 1
Central southern Sudan



Map 2
Languages and Dialects in the Northern part of Mundri District, W.E.P., Sudan

3. Lexicostatistical Comparison

3.1 Swadesh 100 word list

The Swadesh lists from Bongo, Baka, 'Beli, Lori, Modo, Molo, Mo'da, Morokodo, Wira and Nyamusa are given in Appendix 2 to this paper. Comparison of these lists on the basis of simple "look-alike" cognates gives the following table of percentages.

Mo'da									
64	*Morokodo*								
47	59	*Nyamusa*							
49	61	84	*Molo*						
53	62	75	74	*Wira*					
58	63	70	79	87	*Modo*				
55	63	70	75	82	89	*Lori*			
41	41	46	47	47	46	45	*'Beli*		
49	45	45	45	48	49	45	45	*Bongo*	
38	43	37	37	41	46	41	39	61	*Baka*

Table 1. Percentages of cognates in Bongo-Baka group.

3.2 Sanders (1977)

The columns in Table 1 have been arranged according to the principles detailed in Sanders (1977) to show most clearly the relationship between the languages and dialects. On this basis several conclusions can be drawn from the table.

To start with, we can say by their uniform percentages against all the others Bongo and Baka do stand out as separate languages slightly more closely related to one another than they are to the rest.

However, Tucker and Bryan's grouping of dialects into the 'Beli and Morokodo clusters is not confirmed. 'Beli stands out in Table 1 as a separate language, no more closely related to the dialects with which Tucker and Bryan listed it than it is to Bongo and Baka. The word list I have used here was taken from the Bahri Girinti dialect of 'Beli but in my previous studies (Persson 1979) I have established that the Wulu and Bahri Girinti dialects are almost identical and that Sopi is closely related to them. We can say therefore that the 'Beli (or Jur 'Beli) language has three dialects, Wulu and Bahri Girinti (which are very closely related) and Sopi.

The other language names which have been linked with 'Beli are clearly separate languages or groups of dialects. In fact, Modo and Lori are closely related to Wira, which has previously been considered a dialect of Morokodo. These three, Modo, Lori and Wira, comprise one language or dialect cluster, which we may call the Modo dialect cluster.

Closely related to this Modo group are Nyamusa and Molo, which form another dialect cluster. The slightly higher percentages of relationship between Molo and Modo may be due to the fact that the Molo are a small group whose dialect has been influenced by contact with the related larger group.

Morokodo stands out as a separate language. The only other language it may be at all closely related to is Mo'da. The higher percentage of relationship which Mo'da has with Morokodo may be due to a historical link, or to borrowings when these peoples were in geographical contact in the past, as previously mentioned.

On the basis of lexicostatistical comparison we can thus see that within the Bongo-Baka language group there are seven languages or dialect clusters, which may be linked in four sub-groups as follows, although the links in groups 1 and 3 are more debatable.

1. Bongo-Baka sub-group
   A. BONGO language
   B. BAKA language

2. BELI dialect cluster
   Dialects: i. 'Beli
   a. of Wulu
   b. of Bahri Girinti
   ii. Sopi

3. Morokodo-Mo'da sub-group
   A. MOROKODO language
   B. MO'DA language

4. Modo-Nyamusa sub-group
   A. MODO dialect cluster
   Dialects: i. Modo
   ii. Lori
   iii. Wira
   B. NYAMUSA dialect cluster
   Dialects: i. Nyamusa
   ii. Molo

Table 2. The Bongo-Baka language group.

4. Grammatical comparison

Whilst lexical comparison is the normal way of establishing the relationship of languages Tucker and Bryan (1966) have shown that useful insight can also be gained from comparison of grammatical features of languages in this area. An extension of these grammatical comparisons would be to give numerical values to them so that results could be obtained similar to the percentages of lexical cognates given above.

This would give an overall comparison of the grammars of different languages. However it would not have the same sort of validity as percentages of lexical cognates since no theoretical basis has yet been established for sampling grammar in the way that word-lists sample lexicon.

An approach to such a numerical valuing of grammatical comparison has been made by S.A. Wurm (1975) on a group of languages in Papua New Guinea. I have extended his method by comparing and scoring both the presence and absence of particular grammatical features, and also such things as word order and the identity of certain grammatical words. For this reason following the discussion of each feature compared I will give a table of the points scored by each pair of dialects on that comparison.

For those grammatical comparisons I do not have data from Bongo and Baka but I do have it from both dialects of 'Beli and from Sopi.

4.1 Plural marker

In none of the dialects of sub-groups 2, 3 and 4 are simple nouns regularly marked for singular or plural. However they all have ways of marking plural when the noun is qualified by a Demonstrative. The following dialects also mark plural where a noun is qualified by a possessive: Morokodo, Nyamusa, Molo, Wira, Modo, 'Beli of B.G.. Comparing the dialects on this point and scoring 1 where a pair are the same in both having or both lacking this feature gives the following table:

Mo'da									
0	*Morokodo*								
0	1	*Nyamusa*							
0	1	1	*Molo*						
0	1	1	1	*Wira*					
0	1	1	1	1	*Modo*				
1	0	0	0	0	0	*Lori*			
1	0	0	0	0	0	1	*Sopi*		
0	1	1	1	1	1	0	0	*'Beli of B.G.*	
1	0	0	0	0	0	1	1	0	*'Beli of Wulu*

Table 3. Comparison of plural with possessives.

4.2 Possession

There is a split between the dialects as to whether intimate and non-intimate possession are distinguished or not. Those which have the distinction mark non-intimate possession by a possessive marker appearing between the possessed and the possessor nouns. These are: Morokodo 'ba, Nyamusa ka, Molo ga, Wira 'ba, Modo 'ba, Lori a. Comparing the dialects on two counts, whether or not they have the distinction and whether they use the same marker, gives the following table:

Mo'da									
0	*Morokodo*								
0	1	*Nyamusa*							
0	1	2	*Molo*						
0	2	1	1	*Wira*					
0	2	1	1	2	*Modo*				
0	1	1	1	1	1	*Lori*			
2	0	0	0	0	0	0	*Sopi*		
2	0	0	0	0	0	0	2	*'Beli of B.G.*	
2	0	0	0	0	0	0	2	2	*'Beli of Wulu*

Table 4. Comparison of possessive construction.

4.3 Pronouns

In all the dialects there are three sets of personal pronouns, an emphatic set which is used to emphasise subject or object of verbs, a second set which may be used for the object of verbs, and a possessive set. In dialects which distinguish intimate and non-intimate possession the possessive pronouns indicate non-intimate possession, and the object set is used for intimate possession. Third person pronominal subject is usually taken from the emphatic set, but first person is a prefix on the verb and second person is usually a tone change on the verb root.

The emphatic pronouns are as follows (unfortunately I am lacking some data on Wira):

	Singular			Plural		
	1	2	3	1	2	3
Mo'da	ma	wi'i	unë	oze	wohe	oga
Morokodo	ma	yï	mo	ze	ye	zë
Nyamusa	ma	yï	ne	je	ene	nega
Molo	ma	yï	ne	je	'je	pee
Wira	ma	nï	neko	ze		
Modo	ma	nï	bo	ze	kpe	lïjë
Lori	ma	nï	vo	ze	kpe	ïjë
Sopi	ma	yï	mini	je	se	ge
'Beli B.G.	ma	yï	në	je	ye	mene
'Beli Wulu	ma	yï	ne	je	ye	mene

Comparing these and allowing for regular correspondences, such as j/z in first person plural, gives a count of 0-6, which is tabulated as follows:

Mo'da									
2	*Morokodo*								
3	3	*Nyamusa*							
3	3	4	*Molo*						
3	3	4	4	*Wira*					
2	3	2	2	4	*Modo*				
2	3	2	2	4	6	*Lori*			
2	3	3	3	3	2	2	*Sopi*		
3	4	4	4	4	2	2	3	*'Beli B.G.*	
3	4	4	4	4	2	2	3	6	*'Beli Wulu*

Table 5. Comparison of pronouns.

4.4 Demonstratives

There appear to be two degrees of demonstrative throughout the dialects:

	"this"	"that"
Mo'da	ne	no
Morokodo	ne	nani
Nyamusa	ne	nɔnɔ
Molo	ne	nɔne
Wira	ne	nda
Modo	nime	nima
Lori	nime	nima
Sopi	nena	nenda
'Beli B.G.	na	lia
'Beli Wulu	nda	ndaliya

Since the "that" demonstratives vary so widely I will only compare the "this" ones:

Mo'da									
1	*Morokodo*								
1	1	*Nyamusa*							
1	1	1	*Molo*						
1	1	1	1	*Wira*					
0	0	0	0	0	*Modo*				
0	0	0	0	0	1	*Lori*			
0	0	0	0	0	0	0	*Sopi*		
0	0	0	0	0	0	0	0	*'Beli B.G.*	
0	0	0	0	0	0	0	0	0	*'Beli Wulu*

Table 6. Comparison of "this" demonstrative.

4.5 Interrogatives

Although there is not much variation between the dialects in the form of the interrogative pronouns, there is considerable difference in the form of interrogative clauses, as shown by the sentence, "What is he eating?" ("what" is underlined, "eat" is a root no/nyo/nyu):

Mo'da	di rɔ a'di lino
Morokodo	wa'di ra mo ëdï konyo mo
Nyamusa	wani ma ne këni konyo mo
Molo	wani ga ndi ne këni konyo ni
Wira	neko ëdï nyönyu wari
Modo	bo ëdï konyo wa'di
Lori	vo ë tonyo a'di
Sopi	wa'di anda mini na nyu
'Beli B.G.	wayi ni në na nyo
'Beli Wulu	mene nyu wayi

Comparing these simply for whether or not the order of the main elements is the same gives the table:

Mo'da									
0	*Morokodo*								
0	1	*Nyamusa*							
0	1	1	*Molo*						
0	0	0	0	*Wira*					
0	0	0	0	1	*Modo*				
0	0	0	0	1	1	*Lori*			
0	1	1	1	0	0	0	*Sopi*		
0	1	1	1	0	0	0	1	*'Beli B.G.*	
0	0	0	0	1	1	1	0	0	*'Beli Wulu*

Table 7. Comparison of interrogative clauses.

4.6 Verbal Clauses

In the 'Beli dialects and Sopi verb roots begin with a consonant and never occur prefixed. The other dialects all have an initial vowel, which is given a consonant prefix in certain constructions.

Tucker and Bryan (1966) state that languages of this group have two verbal aspects, the definite, used for past, habitual and timeless actions, and the indefinite, used for present and future. However, I have shown elsewhere (Persson 1981) that for Modo at least this is not so. What appears

to be the indefinite aspect of the verb, uses the verb "to be" plus the prefixed verb root, with the meaning "I am doing x". However this is the same structure as a locative clause meaning "I am at x". The "indefinite" verbal clause can therefore be analysed as a locative clause meaning, "I am in the position of doing x," and the verbal prefix as a nominaliser.

As an example of this feature the sentence "I am eating meat." in the different dialects is given below. This is composed of: 1st person singular subject pronoun ma (in some cases appearing as a prefix); the verb "to be"; a verbal prefix (in some cases); the verb root "to eat"; and the noun "meat" (root da).

Mo'da	mëdï oda lino
Morokodo	mëdï konyo ida
Nyamusa	mënï kaanyo da
Molo	mënï monyo da
Wira	mëdï nyönyu dra
Modo	mëdï monyo yida
Lori	më tonyo yida
Sopi	ma na nyu da
'Beli B.G.	ma na nyo da
'Beli Wulu	ma ka nyu da

These can be compared on four counts, (a) whether they are composed of the same elements, (b) whether the elements are in the same order, (c) whether the verb "to be" is cognate, (d) whether the verbal prefix is the same (Modo has three alternative prefixes in this case, m-,k-, and t-).

Mo'da									
2	*Morokodo*								
2	4	*Nyamusa*							
2	3	3	*Molo*						
2	3	3	3	*Wira*					
2	4	4	4	3	*Modo*				
2	3	3	3	3	4	*Lori*			
0	1	1	1	1	1	1	*Sopi*		
0	1	1	1	1	1	1	4	*'Beli B.G.*	
0	1	1	1	1	1	1	4	4	*'Beli Wulu*

Table 8. Comparison of verbal clause, 1st ps. sing.

It is noticeable that Mo'da differs from all the others in having the object before its verb in the above example. However there is more variation between the dialects in the order of elements in the 2nd person plural, several having the pronoun, or person marker, following the verb "to be", and some having it following the main verb root. The sentence "You (pl.) are eating meat." is given below with the pronouns or person markers underlined. The other elements are as in previous examples.

Mo'da	di ga rɔ oda lino
Morokodo	ëdï ni konyo ida
Nyamusa	ënï konyo ene da
Molo	ënï 'je tonyo da
Wira	ëdï nï nyönyu dra
Modo	ëdï konyo ke yida
Lori	ëdï yë tonyo yida
Sopi	se na nyu da
'Beli B.G.	ye na nyo da
'Beli Wulu	ye ka nyu da

These may be compared on the basis of the order of the pronouns and verbal elements, since the position of the object has already been taken into account in Table 8.

Mo'da									
1	*Morokodo*								
0	0	*Nyamusa*							
1	1	0	*Molo*						
1	1	0	1	*Wira*					
0	0	1	0	0	*Modo*				
1	1	0	1	1	0	*Lori*			
0	0	0	0	0	0	0	*Sopi*		
0	0	0	0	0	0	0	1	*'Beli B.G.*	
0	0	0	0	0	0	0	1	1	*'Beli Wulu*

Table 9. Comparison of verbal clause, 2nd ps. plur.

Another point of difference between the dialects is the use of transitive verbs. In some, a normally transitive verb, such as "to eat", "to grind", takes on a passive meaning "to be eaten", "to have been ground" when used without an object. For the active, therefore, an object must always be expressed or some other adjustment made when the verb is used in a general sense, as in "I am eating", "I am grinding." In the sentence "I am eating" below these dummy objects and special verb forms are underlined for those dialects which have this feature.

Mo'da	mëdï lino
Morokodo	mëdï konyo wa
Nyamusa	mënï kaandonyo
Molo	mënï monyo
Wira	mëdï nyonyu
Modo	mëdï monyo wa
Lori	më tonyo wa
Sopi	ma na nyu 'dɔ
'Beli B.G.	ma na nyo
'Beli Wulu	ma ka nyu rɔ

These can be compared on two counts: (a) whether any adjustment has been made and (b) whether the adjustment is the same.

Mo'da									
0	*Morokodo*								
0	1	*Nyamusa*							
2	0	0	*Molo*						
2	0	0	2	*Wira*					
0	2	1	0	0	*Modo*				
0	2	1	0	0	2	*Lori*			
0	1	1	0	0	1	1	*Sopi*		
2	0	0	2	2	0	0	0	*'Beli B.G.*	
0	1	1	0	0	1	1	1	0	*'Beli Wulu*

Table 10. Comparison of transitive verbal usage.

4.7 Equative Clauses

Equative clauses are generally constructed without a verb, but the different dialects use a variety of grammatical markers and there are differences between statement and question forms (in the first sentence "man" is underlined, and in the second "this"):

	Statement "I am a man"	Question "What is this?"
Mo'da	ma rɔ kora	a'di ina
Morokodo	ma kora ra	wa ra ne
Nyamusa	ma bɔ ma	wani ma boni
Molo	ma rɔ bɔtɔni	wani ini
Wira	ma bitɔn dri	wari ka
Modo	ma bɔtɔni	wa na me
Lori	ma vɔtɔni	a'di ne
Sopi	ma ka 'jomone	wa'di na ni
'Beli B.G.	ma hoŋi ni	wayi na
'Beli Wulu	ma ka hoŋi	wayi na

Comparing these on the basis of whether or not they contain a grammatical marker, the identity of the marker, and the order of elements gives a total of 6 over the two sentences:

Mo'da									
2	*Morokodo*								
2	4	*Nyamusa*							
6	2	2	*Molo*						
4	3	4	4	*Wira*					
2	3	3	2	2	*Modo*				
4	2	2	4	4	4	*Lori*			
3	3	3	3	2	4	2	*Sopi*		
4	3	3	4	5	2	4	2	*'Beli B.G.*	
5	2	2	5	4	2	4	4	4	*'Beli Wulu*

Table 11. Comparison of equative clauses.

4.8 Negation

Verbal clauses are negated by a negative marker appearing clause-finally (see word-lists Appendix 2). However, in most dialects the verb "to be" has a special negative form. This appears in locative clauses, which, as has been shown above (4.6), include both clauses of place and present

tense clauses. In some dialects this negative verb "to be" also appears in the negation of equative clauses, which do not contain any verb in the positive. Below are examples of negative locative and equative clauses (with the negative verb underlined and the negative marker shown by *).

	"I am not at home"	"I am not a woman"
Mo'da	mëdï e* 'be	mëdï e* rɔ wara
Morokodo	minza liŋɔ	ma mbara ra dë*
Nyamusa	manja 'be	manja rɔ mu
Molo	manza 'be	ma ŋo ndi dë*
Wira	manza 'biya	manza rɔ 'ja
Modo	minza liŋɔ	minza rɔ 'ja
Lori	minza liŋɔ	minza rɔ i'ja
Sopi	monda ti* 'be	monda ti* ka lia
'Beli B.G.	monda ti* 'be	monda ti* ka lowa
'Beli Wulu	manda 'be	manda lowa

Each of these can be compared on three counts: (a) whether they have the same elements (e.g. negative verb, negative marker) (b) the order of elements, and (c) whether the grammatical elements are cognate, giving a total of 6.

Mo'da								
1	*Morokodo*							
3	3	*Nyamusa*						
1	5	3	*Molo*					
3	3	6	3	*Wira*				
3	3	6	3	6	*Modo*			
3	3	6	3	6	6	*Lori*		
2	2	3	2	3	3	3	*Sopi*	
2	2	3	2	3	3	3	6	*'Beli B.G.*
2	4	4	4	4	4	4	3	3 *''Beli Wulu*

Table 12. Comparison of negative clauses.

4.9 Conclusions

Totalling tables 3-12 gives the following table, with a possible total of 30:

Mo'da								
9	*Morokodo*							
11	19	*Nyamusa*						
16	18	17	*Molo*					
16	17	20	20	*Wira*				
9	18	19	13	19	*Modo*			
13	15	15	14	20	25	*Lori*		
10	11	12	10	9	11	10	*Sopi*	
13	12	13	15	16	9	10	19	*'Beli B.G.*
13	12	12	14	14	11	14	19	20 *'Beli Wulu*

Table 13. Total of grammatical comparisons.

As has been mentioned above (see 4) these figures do not have the same absolute validity as the percentages of lexical cognates. At best they have a relative validity, showing that those pairs of dialects which score higher are more similar in their grammar than those which score lower.

There are nevertheless some similarities between Table 13 and Table 1. The 'Beli dialects and Sopi score consistently less against all the other dialects than most of the others do against one another. This would indicate that they differ in grammar as in lexicon. Mo'da also appears to differ grammatically from the others. To this extent my grouping of dialects as in Table 2 is confirmed.

However, it is noticeable in Table 13 that the grammar of Morokodo shows more similarity to the Nyamusa and Modo dialects than to Mo'da. This may throw suspicion on the linking of Morokodo and Mo'da or it may indicate that some grammatical assimilation has been taking place due to geographical propinquity. Also, the distinction between the Nyamusa and Modo dialect groups does not appear clearly on Table 13.

5. Postscript: Intelligibility

The above findings on lexical and grammatical relationships bear little correspondence to the actual inter-intelligibility of the language and dialects concerned. Which dialects can be understood by which groups of people depends on geography and social contact rather than linguistic factors. Leaving aside Bongo and Baka, about which I have no information, the most central dialects geographically, Modo and Lori, are understood by all the other groups except the 'Beli of Wulu. Between the 'Beli of Wulu and those of Bahri Girinti there is very little intelligibility, despite the strong linguistic similarities, because there is little social contact. The only group who understand Mo'da are the Lori, who live near them, although their dialect is no more closely related than any of the others.

Therefore the value of the linguistic comparisons in this paper is primarily that they show the similarities between the dialects and thus point to the probable family relationships within the language group.

NOTE

My original research in this area was done in 1978 and was written up in a dissertation entitled "A Dialect Study of the Jur 'Beli Cluster" for the MA of the University of Khartoum. Some of the material from that dissertation has been re-worked in the present paper in the light of further experience gained through living in the area from 1980-82.

Appendix 1. Orthography

The transcription used in this paper is the orthography adopted by the Jur Modo Language Committee. It is phonemic and there is negligible allophonic variation within the phonemes.

Phonetically the vowels are:

Set 1 (Dominant)		Set 2	
"ï"	[i]	"i"	[ɪ]
"ë"	[e]	"e"	[ɛ]
"ö"	[ɵ]	"a"	[a]
"u"	[u]	"ɔ"	[ɔ]
		"o"	[ʊ]

The less obvious consonants are:

'b,	'd,	'j		lightly imploded stops (or pre-glottalised)
kp,	gb,	ŋm		labio-velar stops
mb,	nd,	nz,	ŋg	pre-nasalised stops
ŋb				pre-nasalised labio-velar stop
'				glottal stop

Appendix 2. Word lists

These word-lists were collected by my wife and myself in 1982, except for those of Bongo and Baka, for which I am indebted to my colleagues Eileen Kilpatrick and Kirk Parker respectively. For ease of reference I have adapted the Bongo and Baka lists to the Jur Modo orthography (with the addition of the vowel ɨ in Bongo and Baka). The vernacular pronunciation of the language name appears at the head of each list.

	Mo'da (mo'da)	Morokodo (morokɔdɔ)	Nyamusa (nyamɔsa)	Molo (molɔ)	Wira (wira)	Modo (mödö)	Lori (lörï)	'Beli ('bëlï)	Bongo	Baka
I	ma	ma	ma	ma	ma	ma	ma	ma	ma	ma
thou	wi'i	yï	yï	yï	nï	nï	ïyï	yï	ï	yï
we	oze	ze	je	ze	ze	ze	ze	je	je	ze
this	ne	ne	ane	nini	mone	nime	mene	nena		ba
that	no	nani	mɔnɔ	mɔnɔ	monda	nima	me'dë	nenda		ne
who	ë	ëyï	yë	niya	yë	yë	yë	yuwala	amba	yëkï
what	wa'di	a'di	wani	wani	wari	wa'di	wa'di	wayi	'di	'di
not	a	dë	dë	dë	dë	dë	dë	ti	nja	nda
all	pidi	ti'de	kɔfɔ	kpaki	kɔfɔ	pili		pili	kpa	mba
many	pideye	cɔ	pere	ŋbaŋ	pere	ŋbaŋ	ayo	ŋbaŋ	lɔki	tu'du
one	kölö	kölö	kɔtɔ	kɔtɔ	kɔtɔ	kɔtɔ	kɔtɔ	kɔtɔ	kötu	ke'dö
two	rïyö	rïyö	riyo	rïyö	rïyö	rïyö	rïyö	yo	ŋgɔɔr	bre
big	ke'de	kedre	mbiri	öyöbu	mbïrï	löbu, mbïrï	lövu	makogba	kpëny	möŋgu
long	bɔkola	onda	ölïdö	akpa	ɔwɔ	makakpa	kakpa	mabupï		ŋbaŋba
small	bagirr	tisi	titi	titi	titi	matiti	titi	maŋgati	mbaamba	minzere
woman	wara	mbara	mo	ŋo	'jara	'ja	i'ja	lowa	kumara	kara
man	kora	kora	beri	bɔtɔni	vitɔn	bɔtɔni	votɔni	hoŋi	bo'do	ɔ'dɔ
father	'bu	'bu	'bu	'bu	'bu	'bu	wu	'bö	bö	'bu
fish	kenze	kenze	kenge	kenge	kenge	kenze	kenze	ŋgisi	kinji	kenze
snake	wïrï	wiri	keleke	mori	murë	murë	murë	yëë		kama
bird	ali	ali	kali	yali	ali	yali	yali	hɔli	hölï	sölu
dog	bï	wihi	bï	bï	biri	bï	bï	bïï	bïhï	ïsï
louse	marakpa	konye	kenyegi	kenyeti	konye	konye	konye	nyöki	masïkï	misisi
tree	yëri	kaga	ŋgiri	ŋgïrï	ŋgërï	ŋgërï	kaga	ŋgërï	kaga	kaga

	Mo'da	Morokodo	Nyamusa	Molo	Wira	Modo	Lori	'Beli	Bongo	Baka
seed	köfö	kofo	köpö	kopo	kuförö	kupö	kofo	kuwö	yama	kofo
belly	mi	mi	mbeke	meke	miri	mï	mi	mi	hi	simi
neck	mugu	gu	bati	mugu	mugu	mugu	gu	söbï	gɔ	gɔ
breast	mba	omba	mba	mba	mba	mba	omba	mba	maya	ombo
heart	dɔsɔ	dɔkekere	dökï'dï	dökïdï	dekidri	dokï'dï	dikidi	mbeke	kolo	kuru
liver	luru	uru	ruru	rïrï	ruru	luru	luru	huru	hiro	mimbe'de
drink	yuwë	uwë	owe	owe	owe	uwë	uwë	ye	aye	ewe
eat	yino	onyo	onyo	onyo	onyo	onyo	onyo	onyɔ	amöny	ana
bite	yino	onyo	onyo	onyo	onyo	onyo	onyo	onyo	aŋa	nana
see	i'jali	o'ja	o'ja	o'ja	o'ja	o'ja	o'ja	'ja	ata	oro
hear	ɔli	owo	ombo	owo	uwö	uwö	uwö	tëgë	awo	öwo̱
know	iyato	iyɔlɔ	okali	okaki	okali	ikali	okali	kali		ɔwɔ
sleep	yë'du	o'do	ele'bi	ele'bi	ëlë'bë	ö'dö	ëlë'bï	lɔ'bi	a'do	'do'do
grass	loma	loma	mɔli	mɔli	mɔli	mɔli	mɔli	ndoŋma	ndoma	sowo
leaf	yïmbï	wili	mbili	mbïlï	mbili	mbili	mbili	mbili	mbili	mbili
root	ŋgira'da	ŋgara'da	ŋgara'da	ŋgara'da	ŋgara'da	ngira'da	ŋgara'da	giya	giya	cï
bark	wɔwɔ	ɔkɔ	pörï	pörï	fɔri	pörï	fɔri	kobɔŋgɔ		sɔkɔ
skin	wana	lokɔ	yëmï	yëmï	kilaka	kilaka	kalaka	soka	'bana	sana
meat	woda	yida	da	da	dra	yida	ida	da	mëhï	esï
blood	yama	yama	tama	tama	roma	roma	roma	gumö	tirama	sama
bone	iŋba	kiliŋgɔ	koloŋba	kiliŋba	kiliŋba	kiliŋba	kiliŋba	kiliŋba	kiliŋba	cɔŋgɔ
grease	yënï	yënï	'bu	'bu	'bu	'bu	u'bu	su'bu	hï'bu	su'bu
egg	kele	kele	'bö	'bo	'bö	'bö	u'bö	'böwu	'bo	'bö
horn	kazo	kazo	kajo	kajo	kazi	kazo	kazi	bila	lïŋgë	ŋgiri
tail	dagiliti	kötï	këtë	kiti	giti	dɔgiliti	dukötï	hɔlɔ	hɔlɔ	sɔnɔ

	Mo'da	Morokodo	Nyamusa	Molo	Wira	Modo	Lori	'Beli	Bongo	Baka
feather	ubï	yëvï	si	sï	kïnë	sunë	sïnë	bï	bï	bïyï
hair	ubï	yëvï	si	sï	kïnë	sunë	sïnë	bï	bï	bïyï
head	dɔ	dɔ	dɔ	dɔ	drɔ	dɔ	da	dɔ	dö	dɔ
ear	yïmbï	mbili	mbili	mbili	mbili	mbili	mbili	mbili	mbili	mbili
eye	kömö	komo	kɔmɔ	kɔmɔ	kɔmɔ	kɔmɔ	komo	kɔmɔ	kɔmɔ	kɔmɔ
nose	kano	kano	moŋgɔrɔ	kano	moŋgɔrɔ	kano	kano	hɔmɔ	hɔmɔ	sɔmɔ
mouth	ho	hɔ	kpa	kpa	kpara	kpa	kpɔ	kpa	kɔ	tara
tooth	iŋba ho	yingɔ hɔ	koloŋba kpa	tungu	koloŋba kpara	kiliŋba kpa	kiliŋba kpɔ	gbe kpa	'jɔkɔ	sɔ
tongue	ndɔndɔ	ndende	nde'de	dɔnde'de	dendre	dɔnde'de	dinde'de	dɔndo	ndatara	dendene
claw	la'ba	kɔnyi	fisa	pisa	pisa	pisa	siko	kombili	kɔkɔrɔ	sɔkɔ sïlï
foot	ïndï	ndï	ndï	ndï	ndrï	ndï	ndï	kɔnyɔ		sïndï
knee	dɔkɔmɔ	dɔmo	dömölï	dömölï	dɔkorogɔmɔ	dɔkirigömö	dokorogomo	dökulundu	kokohi	ŋgoro sïndï
hand	ïzï	kala	gimo	gï	gegi	közï	közï	dögbëjï	jï	sïlï
water	wini	wini	nyɔrɔ	mi	mindri	mini	mini	mini	mini	ïnï
rain	mïrï	mïrë	tɔrɔ	tɔrɔ	tɔrɔ	tɔrɔ	tɔrɔ	tɔrɔ		ïnï
stone	eto	kiligi	döku	döku	kilibi	döku	döku	kpayi		toto
sand	alida	yayi lida	lida	yayi lida	yayi lida	yayi lida	iyayi lida	gele		sayï
earth	kaŋo	yayi	yayi	yayi	yayi	yayi	iyayi	sayi	hii	kaŋga
cloud	fɔli	fɔli	pɔli	pɔli	fɔli	pɔli	fɔli	pɔli	lola	buluŋgu
smoke	soka	kötu	kötu	kötu	kötu	kötu	kötu	soka	soka	cika
fire	wa'do	wa'do	pa'do	pa'do	padro	pa'do	pa'do	pa'do	pö'du	fö'du
ash	wuku	yïku	buku	buku	vuruku	buruku	vuruku	buruku	boróko	mbuku
burn (tr., intr.)	oŋa, löbö	o'bɔ, laka	oŋma, ö'bö	oŋma, öbö	oŋma, övö	oŋma, öbö	oŋa, ö'bö	oŋge, a'böwa	alaŋba	aŋba

	Mo'da	Morokodo	Nyamusa	Molo	Wira	Modo	Lori	'Beli	Bongo	Baka
path	wïtö	gërï	kɔri	kɔri	kɔri	kɔri	ndïdö	tëyï	koŋgo	'bɔgɔ
mountain	kuruŋgu	lutu	lutu	lutu	dɔdöku	kuruŋgu	kuruŋgu	ŋgɔlɔ	landa	landa
die	ösö	olï	indiki	indiki	ëliyo	ölë	ölë	yö	ayo	oyo
kill	ole	ofo	öfö	nyopo	ufö	upö	ofo	dö	atone	ofo
swim	yele	ele	ele	ele	ele	ele	ele	le	tele	bada
fly	ilebi	öfu	öpu	öpu	ɔfo	öpu	öfu	mbï	amëbë	ndere
go	yawi	ë'bë	ari	ari	ari	ari	ari	ma	ande	ndere
come	ya'i	ayi	ayi	ayi	ako	ako	ako	yë	amayi	ögu
sit	ïma	aloma	eni	ënï	aloma	oloma	ilima	gö	indïhï	ndïsï
stand	yënyï	ënyï	ɔndrɔ	ɔndɔ	ënyï	ënyï	ënyï	nyï	anyi	tɔrɔ
give	yï'bï	i'di	o'di	i'di	ë'dë	i'di	i'di	'bë	i'bï	i'bi
say	icɔ	eya	iya	iya	oya	iya	omo	'jɔ	ajɔ	ya
sun	kada	kadra	kada	kada	kada	kada	kada	kada	kada	kadra
moon	yefe	nyehe	nyepe	nyepe	nyepe	nyepe	nyefe	nyipi	nyihi	efe
star	këlu	këlu	kïlu	kïlu	këlu	këlu	këlu	kërë	kir	kelï
red	bakahi	ahi	bakasi	kasi	makasi	makasi	mokasi	mabosi	kamakahe	bikesï
yellow	bekese	medeŋgiti	kine medeŋgiti	dɔmekeböbö	kïnë madöŋgïtï	dɔmi'bö'bö	dimiböbö	dömïyawa		
white	bakaŋmi	anyi	bakaŋmi	manaŋmi	makaŋmi	makaŋmi	kaŋmi	kabörï	köny	bikenyï
black	bukölu	öndu	bakeleti	eleti	makëlëtï	makölu	kölu	kabulötï	kamakultë	bikulu
night	ndendɔ	yɔndɔ	mundö	bi keleti	ndrɔ	korɔndɔ	korɔndɔ	ndɔri	hindɔ	ndulu
hot	ïtu	ïkïtu	bakötu	kötu	makötutu	ututu	ututu	asobe	kisi	mïrï
cold	u'dï	ëyï	bɔkëdrï	edwi	makë'ï	makëyï	ëyï	adï	kïdï	dru
thin	bɔndende	elise	bɔndende	ndende	makelewa	mandende	ndende	ŋgari		sïyö
new	bökï'ï	nakii	bɔbɔri	mama'ja	ma'ja	mala'ja	la'ja	dökëyï	kamakanda	mikanda

	Mo'da	Morokodo	Nyamusa	Molo	Wira	Modo	Lori	'Beli	Bongo	Baka
good	bekede	laka	bɔjiko	makele	malaka	malaka, makele	malaka	dɔbole	jëkĕ	eme
dry	erele	eli	elere	elere	elere	ilere	ututu	ndötu	ŋaŋana	ŋgere
wet	a'ja	kekpe	a'ji	a'ji	a'ji	a'ji	ka'ji	katödï		bilisa
name	örö	ru	möyï	möyï	möyï	möyï	möyï	rïgï	rɔ	ïrï

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An Archaic Surmic Causative Prefix

Peter Unseth[1]

Introduction

Dimmendaal has described a causative prefix *ɪ̲/i̲ which was found in Proto-Nilotic (1983 and 1988). He also pointed out that there is evidence suggesting a similar prefix in other Nilo-Saharan languages (1983:302-304). He mentioned several other nearby Nilo-Saharan language groupings, but noted that "Verbal prefixes affecting valency schemes of verbs seem to be absent in the closest relatives of the Nilotic group, the Surma [Surmic] group" (1983:302).

This paper will show that traces of this causative prefix *ɪ̲/i̲ can still be found in at least three (and probably more) Surmic (Surma) languages and it can be reconstructed for Proto-Surmic. This prefix is not known to be currently productive in any Surmic language, but is an archaism that has been preserved in at least three present Surmic languages, Me'en, Murle and Majang. Since Me'en, Murle, and Majang are not in contact today (nor is there any sign of significant contact or borrowing in the recent past), the similarity is best explained by retention, rather than borrowing.

The data showing the causative prefix in Nilotic and other languages is widely available, much of it summarized in Dimmendaal's writings, as well as in earlier sources quoted in his references. Since the data showing the causative prefix in Surmic languages are not yet readily available, I give a fairly detailed discussion and a number of examples, both confirmed and speculative.

Before proceeding further, I give a partial chart of Surmic relationships to help the reader identify the languages discussed, a following asterisk marks those that are mentioned in this paper. Since only limited lexical data is available for many Surmic languages, most languages are not discussed in the paper and several are omitted from the chart.

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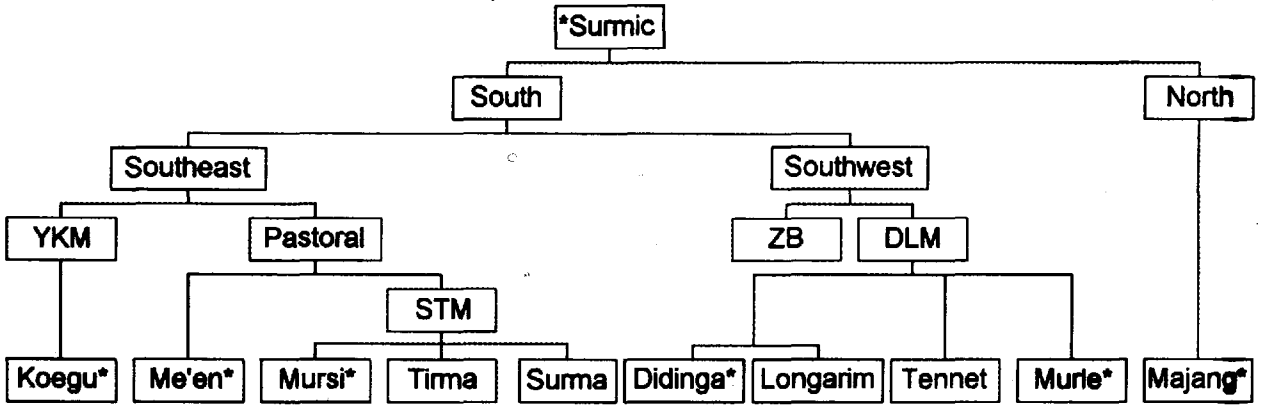
[1] It is my pleasure and responsibility to thank the Institute of Ethiopian Studies and the Institute of Language Studies of Addis Ababa University under whom I studied the Majang language from 1984 to 1990. I also want to thank Hans-Georg Will for sharing his Me'en data with me. I also want to thank Nicky de Jong for his discussion of i- initial verbs in Didinga. Also, Jon Arensen discussed Murle data with me, giving me the Murle examples cited in the text. Ernst-August Gutt and Klaus Wedekind made some useful comments on an earlier draft, but are not responsible for the present form. I also benefitted from discussion of this paper by participants at the 22nd Annual Conference on African Linguistics, at the University of Nairobi, in 1991.

In the Majang and Me'en examples, high tones are not marked, low tones are marked. However, in uninflected Majang roots, tone is not marked at all. Much of the rest of the data was taken from sources without tone marking.

Chart of Surma Relationships

Adapted from Fleming 1983: 533, 554



1. Me'en

In Me'en, a Southeast Surmic language, there are at least four clear examples of causative prefix ì- found in the data given by Will (1991), using upper case letters for implosive consonants, (as is also done in the examples from other languages).

root	gloss	causative	gloss
dibis-	'be full'	ì-dibis	'fill'
bas-	'recover'	ì-baysi	'rescue'
ŋɛs-	'be cool'	i-ŋaysi	'cool' (Vt) (tone not known)
šɛk-	'be good'	ì-šašak	'make correct'

In all of these, it is clearly i-, just what Dimmendaal found in Nilotic languages.

There are a number of other Me'en verbs in Will's data that may also have an archaic causative prefix. This assumption is based on semantics and the fact that they have a suspicious initial i- (though they have no known non-prefixed forms). The following is a sample list, drawn from Will's data.

iboborsi	'spread out and mix' (related to Bor- 'stir'?)
iBaŋ	'put'
icacan	'teach'
idaman	'cast a spell'
ilak	'hang' (compare Majang laalaw- 'hang')
ilodi	'dress proudly'
imat	'escort'
imak	'deny'
išak	'clean'
isok	'slide over'
itaytay	'trade'
iyey	'sharpen'
irɔr	'show'

The root irɔr- 'show' was given with an example sentence "He shows me how to plow" (Will 1990:57). The meaning seems very comparable to the non-prefixed Majang verb roor- 'teach'.

Ricci listed a number of Me'en verbs with initial i-, but noted that it "does not seem to have a specific function" (1974:124 my own translation). (It must be remembered that Ricci's data is not to be relied on in the details, Ricci having tried to organize the data collected many years previously by an ambitious Italian civil servant.) For several of these verbs, he posited a morpheme cut between the initial vowel and the following consonant, followed by a question mark. Three of the more likely forms from this work are given below:

ibataboy	'praise, commend' compare Will's bat- 'praise'
ijiaci	'near, next to', compare his jiaci 'near'
itola	'final' with the note "<i-tola", Will giving non-prefixed tolɔ́ 'end')

2. Majang

In Majang, the Northern branch of Surmic, the four clearest cases of a causative ɪ- are the following transitive and intransitive pairs:

root	gloss	causative	gloss
ŋaa-	'have a smell'	ɪ-ŋaa-	'smell, sniff'(Vt)
bod-	'be safe, well'	ɪ-bod-	'rescue, save'
paak-	'be hot'	ɪ-paak-	'heat' (Vt)
laar-	'go out (of flames)'	ɪ-laar-	'extinguish'

In addition there is another pair that appears both with and without the prefix, yaaŋ and ɪyaaŋ. Though some speakers insist that both forms mean 'show', others suggest various differences in meaning, such as 'appear' and 'show'. I suspect that they originally differed in meaning as follows:

yaaŋ-	'appear'
ɪyaaŋ-	'show'

These are the only pairs that I have found so far showing both an unaffixed intransitive form and a transitive ɪ- prefixed form.

There are a few other forms that are possible examples of fossilized ɪ/i- prefix forms:

ɪbañ-	'chase game animals'	ɪpat-	'unroll a sleeping mat'
ɪtɛyɛ-	'become mature'	ɪpay-	'chase away'
ɪkaŋ-	'cross a river'	ɪlaal-	'send in search of'
ɪkom-	'count'	ɪbaal-	'play/dance'
ɪkeeB-	'quote, mention'	ɪjaag-	'work'
ɪmɛy-	'honor'	ɪsɪs-	'repair'
ɪñaa-	'fill'		

There are four reasons for considering (at least some of) these as possible examples of ɪ/i- prefixation: verb root patterns, negative forms, semantics, and external comparative evidence.

First, in the matter of verb root patterns, CVC- are by far the most common type. There are also a few VCVC- roots. However, except for the V^1CV^2C roots listed above, all of these VCVC- verb roots in my data are V^1CV^1C-, that is, they have the same vowel twice, e.g. agal- 'steal'. (There is one exception in my data, utal- 'jump', a loan from Oromo, where utal- means 'jump, bounce'; some Majang pronounce it as utul-, showing how strong the pattern is that VCVC- verb roots should

have the same vowel in both syllables.) All of the VCVC verb roots that are exceptions to this pattern of root internal vowel agreement have initial ɪ-. Therefore, if these verbs are interpreted as having a prefix, this not only eliminates the exceptions to the V^1CV^1C rule, but also reduces these verbs to CVC, which is by far the most common type of verb root. (The final verb given above, ɪsɪɪs- 'repair', has the same vowel within the root as the causative prefix, so this argument does not carry any weight in suggesting that the initial vowel in this verb is a prefix.)

A similar argument applies to ɪjaag- 'work', ɪbaal- 'dance', ɪlaal- 'send', and ɪkeeB- 'quote'. There are no other V^1CV^2:C roots in my data, only the above four. If these forms have initial prefixes, it eliminates all of the V^1CV^2:C type of roots in my data.

Also, trisyllabic verb roots are rare in Majang (less than 1% of my corpus), so an analysis that reduced an apparently trisyllabic root to disyllabic would be conforming to a broader pattern, suggesting that ibiDii- 'commit adultery' was originally a disyllabic root with an ɪ-/i- prefix, also ɪtɛyɛ- 'become mature' (though it is not certain that the final vowel is indeed part of the root).

The second line of evidence that these forms (at least some of them) contain a prefix is that most of them share the same negating suffix, a suffix which is usually unpredictable (explained in greater detail in Unseth 1989:120-122 and Unseth 1991). Almost all of the suspect forms take the -Vt suffix (Type 1) and three more take the -è suffix (Type 4). The fact that a group of Majang verbs take the same suffix suggests some shared characteristic, something more than chance. In this case, the common shared feature is the common archaic prefix.

	root	gloss	negated form
Type 1			
	ɪbañ-	'chase game animals'	ɪbàñèt
	ɪbiDii-	'commit adultery'	ɪbìDìt
	ɪbod-	'save'	ɪbòdèt
	ɪkaŋ-	'cross a river'	ɪkàŋèt
	ɪkom-	'count'	ɪkòmìt
	ɪlaar-	'extinguish'	ɪlààrèt
	ɪmɛy-	'honor'	ɪmèyèt
	ɪpaak-	'heat'	ɪpààkèt
	ɪpat-	'unroll a sleeping mat'	ɪpàtèt
	ɪpay-	'chase away'	ɪpàyèt
	ɪtɛyɛ-	'become mature'	ɪtèyèt
Type 4			
	ɪlaal-	'send in search of'	ɪlaalɛ
	ɪsɪɪs-	'repair'	ɪsɪɪsɛ
	ɪkeeB-	'quote'	ɪkeeBé

The third line of evidence for analyzing these verbs as possible (fossilized) examples of ɪ- causative prefixation is the semantics of these words, or at least some of them. That is, it is easy to imagine underlying intransitive verbs with causative meanings for several of these verbs.

ɪñaa-	'fill' could be interpreted as 'cause to be full'
ɪpay-	'chase away' could be interpreted 'cause to flee'
ɪkom-	'count' could be interpreted as 'cause to be numbered'
ɪbañ-	'chase game animals toward hunter' could be 'cause to flee'
ɪpat-	'unroll' could be interpreted as 'cause to be flat, open'
ɪkeeB-	'quote' could be interpreted as 'cause to remember' (there is a verb root koB- 'remember, think')
ɪlaal-	'send in search of', could be 'cause to seek' though the non-prefixed form laal- means 'split' (Vt).
ibiDii-	'commit adultery' could be interpreted as several things, but I suspect it is a euphemism or circumlocution, e.g. 'cause to spend some time'.
ɪsɪɪs-	'repair' could be interpreted as 'cause to be new, whole'

The verb ɪkaŋ 'cross a river' involves a person as the semantic patient, which could be considered as fully transitive. (It is interesting to compare this with a Mursi form for 'cross a river', given in section 3, below.)

The fourth line of evidence for considering at least four of the verbs as prefixed forms is the discovery of (possibly) cognate forms which do not have the initial vowel. The first case is clearest, the verb 'count':

Majang	ɪ-kom-
Me'en	kɔm
Murle	kɛɛp
Koegu	kom
Proto-Nilotic	kwɛm (Dimmendaal 1988)

A comparison of these forms for 'count' very strongly suggests that the Majang form has a fossilized causative prefix.

The next example involves two similar forms in Majang, not in some other language. The root ɪkeeB- 'quote' (without its initial vowel) is very similar to koB- 'remember, think'. The semantics in this case is very plausible, also.

Another good example of a cognate without the prefix is 'play/dance':

Majang	ɪbaal-	'play/dance'
Me'en	bul-	'play'
Murle	baalin	'dance ground' (-n often nominalizing suffix)

The fourth example is an external form that is not a verb, but seems a plausible cognate.

Majang	ɪpata-	'unroll sleeping mat'
Me'en	pata	'cow hide for sleeping on'

It is interesting to compare three of the four Me'en causative forms (Will 1991) with Majang.

Me'en		Majang	
form	gloss	form	gloss
ìdíbís	'fill'	ɪñaa-	'fill'
ìbáysí	'rescue'	ɪbod-	'rescue'
ìšášák	'make correct'	ɪsɪɪs-	'repair'

At least three of these Me'en words seem semantically similar to a Majang form: 'fill', 'make correct/repair' and 'rescue, save'. The two forms for 'rescue' share an initial bilabial stop, but in the absence of any known sound correspondence sets relating Me'en /ys/ to Majang /d/, we cannot assume the two forms are cognates. Also, there is at least a superficial phonological resemblance between the Me'en and Majang forms for the last pair.

It is interesting to note that Majang is almost an entirely suffixing language. Presently, the only productive prefix is un- in the imperative-jussive paradigm. Since Majang (like its ancestor Proto-Surmic) is VSO, standard typological assumptions would predict Majang to be a predominantly prefixing language. Instead, we find not only that it is overwhelmingly suffixing, but also that it has almost entirely lost a prefix that was found in its past.

3. Murle

In Murle, Southwest Surmic, Lyth (1971) listed a few verb forms with initial i-. The form ibä 'praise' seems to show an archiac causative when compared to bat- 'praise' from Will's Me'en data. The following Murle forms from Lyth may also contain a causative prefix:

iita	'put away for safety'
iriin	'decorate the body'
irik	'give in marriage'
itiiri	'lean against' (intransitive)

Jon Arensen told me of one Murle form that does not conjugate quite normally, suggesting the possibility of the influence of such an archaic prefix (p.c. 1992). The transitive verb 'raise (an animal or child)' has an initial vowel i- that is persistent in paradigms, even though it is not consistent with Murle paradigm patterns. A comparison of this with the verb 'be big' suggests that this initial vowel has a causative origin (though the -a suffix, sometimes indicating a separating function, complicates the issue).

idikira	'rear, raise'	kidikira	'I rear'
adikir	'be big'	kadikir	'I am big'

Arensen has, however, found a few examples of a causative suffix in Murle (p.c. 1993). This suffix is -z (preceded by a vowel, which is conditioned by the vowel of the verb root), as in awot 's/he drinks', awodoz 's/he waters'. There is a similar causative prefix found in Koegu, mentioned below.

4. Possible examples of *ɪ/*i- in other Surmic languages

In Didinga (Southwest Surmic), Driberg lists some verbs roots with initial i/ɪ, but Nicky de Jong (p.c. 1991) does not interpret any of the ones we discussed as containing a causative prefix, archaic or otherwise.

In Mursi (Mun), like Me'en a Southeast Surmic language, in the limited available data, I find at least two roots that may be open to a causative analysis, though this is admittedly speculative. Turton's presentation (1981) did not always specify the exact shape of the roots, so some segments are in parentheses, indicating that these may be part of the roots: ɪla(s)- 'be sick' (not clear if this takes the undergoer as grammatical subject or object) and irrɛO-(e)- 'cross a river'. Compare this with a Majang form which also appears to bear a prefix, ɪkaŋ- 'cross a river'.

In Hieda's data from Koegu (1991), (also known as Kwegu), a Southeast Surmic language, a few transitive verbs appear to have an initial i-, (though the exact morpheme boundaries are not clear). On semantic and morphological criteria, the following forms may possibly be interpreted as having an archaic causative prefix: iyanish- 'to marry, to take somebody to somewhere', ibaj- 'to distinguish', ilikimen- 'to see somebody off', (though I repeat that the morpheme boundaries are not certain). Hieda reports that Koegu now has a productive causative suffix -ishe (1992:148), which seems comparable to the Mursi -z mentioned above. (There are examples of Murle (and the DLM node of SWS) /z/ corresponding to SES /s/, such as 'heart', ML: zɛnɛz, KG: šen, so these causative suffixes can be safely assumed to be cognate.)

Further research on Surmic languages will inevitably turn up some more cases of archaic ɪ/i-.

5. Conclusions

This paper has presented several clear relics of a causative prefix *i/ɪ that was found in Proto-Surmic. In the present day languages, this prefix is preserved as an archaism, being productive in only a very few pairs of words. We have also discovered that Southern Surmic had a productive sibilant causative suffix.

Dimmendaal has shown a clear and repeated pattern of a causative prefix in Nilotic, "The form of this prefix varied between *ɪ and *i in the proto-language, depending on the vowel quality of the verbal root vowel" (Dimmendaal 1988:23). Dimmendaal (and others) have suggested that the closest linguistic relative to Proto-Nilotic was Proto-Surmic. The data here presented suggests the reconstruction of a causative suffix *ɪ/*i found in their common ancestor, Proto-Nilo-Surmic, another line of evidence establishing the close link between Nilotic and Surmic.

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Disentangling the Two Languages Called "Suri"

Peter Unseth[1]

1. The problem

For many years, those working in languages of eastern Sudan and western Ethiopia have seen the name "Suri" popping up in many places: Nalder used it in 1937 (cited in Haberland 1966:89), Lyth used it in 1947, Murdock in 1959 (cited in Bender 1975:31), also Haberland (1966:89), Tucker and Bryan (1966), Bender (1975), Ernesta Cerulli (1956), Conti Rossini, Hodson (1929), and others.[2]

However, the various scholars in the field do not always agree on what language(s) "Suri" refers to, nor does their data always match. Lyth described some of the customs and listed some locations of the "Suri" (1947), noting both similarities and differences between the "Suri" language and culture and that of the Tirma and Murle. Ernesta Cerulli did not seem to make a consistent distinction in her usage between "Suri" and "Surma"; she wrote "The name Surma... almost certainly refers to the same people [as the Suri]", and cited references that used "Surma" as a collective term for "several tribes in the area", including the Tirma. However, she went on to write about the "Suri" as a specific grouping, parallel to the Tirma (1956:38-50). At one point, she even referred to the Suri as being a different group than the Surma, citing reported differences in height (1956:41). She also reported that "Nalder maintains that the Tirma and Tid... are a branch of the Boma Plateau Suri" (1956:42).

Haberland, in an early comparison of "Oestliche" (Eastern) Surmic languages (though the "Southeast Surmic" grouping was not identified at the time) used the label "Suri" then cited several

[1] It is my pleasure to acknowledge the Institute of Ethiopian Studies and Institute of Language Studies of Addis Ababa University, under whom I worked in Surmic languages between 1982 and 1990. I would like to thank Mrs. Liz Storkey of Wycliffe Associates in the UK for sending me a photocopy of Lyth's (1947) article, and also Mrs. Vurnell Cobbey of the International Linguistic Center Library for sending me excerpts of an article. The published sources for the data are listed in the references. In addition, I used unpublished data from Jack Stauder for Zilmamu, Harvey Hoekstra for Olam, Harold Fleming for Tirma, Lionel Bender for Tirma and Bale and "Suri", Hans-Georg Will for Me'en, and Kwegu and Muguji data gathered by Bender, Ivor Strecker, and Jean Lydall. Bender, Osamu Hieda and Jon Arensen all kindly provided me copies of various of articles, their own and others. Jon Abbink provided much Suri data and read an earlier draft of this paper making a number of important comments and criticisms. Gerrit Dimmendaal also shared some of his preliminary insights after his field work in Surmic languages, but his work in his forthcoming book should far surpass the analyses presented here. To all of these, I am very grateful. The data from Majang and a language which its speakers called "Surma" is from my own field work, the Surma gathered a few kilometers west of Aman (about 7 kilometers west of Mizan Teferi), from a group of people who had come less than ten years previously from the Maji area.

Various sources of data used varying orthographical conventions. I have attempted to follow the original sources as closely as possible, but have taken the liberty of standardizing such transcriptions as ng' to ŋ. The linguistic forms cited are from sources of varying quality, anywhere from well studied data to simple survey elicitation. Tone has not been marked on any of the examples in this paper. This was motivated by several factors: it simplifies typesetting, most of the sources have no tones marked, much of the data is of a very preliminary nature, and tone does not appear to be crucial to these problems of higher level classification.

This article was written in 1992. I did minor editing in 1996, but without access to any language material or library. I presume that the forthcoming book "Surmic Languages and Cultures", edited by Gerrit Dimmendaal, will have much data on the Bale language and probably the other language sometimes called "Suri", presumably with more informed suggestions for labeling these languages. My purpose in writing this is not to describe any language, but to help untangle the confusing references to "Suri".

[2] Note that "Suri" is similar, but not to be confused with the label "Suro", as mentioned by Conti Rossini (1913). (His "Suro" are the Me'en, Shuro being another name for Me'en, still used by surrounding ethnic groups in reference to them.)

alternate names used by others, including "Kichepo". Then he listed four locations, including "Koma" within Ethiopia and near the Boma plateau (Sudan) (1966:89). Tucker & Bryan (1966) seemed to assume that "Suri" was quite closely related to Didinga and Murle. Bender once suggested that "Suri" was an alternative name for Tirma (1971:229). Later, however, he decided it was closely related to Bale, using the label "Suri-Bale" (1975:31), though in the same publication he still noted that it was closer to Mursi (1975:31-36). In another article, Bender used the label Suri in speaking of the "Suri-Mursi-Tirma-Tid-Chai cluster" (1976b:465). In the same volume, Bender seemed to equate "Suri" with Mursi, also saying "Suri are also known as Kichepo" (1976a:13). Muldrow wrote "Surma (Suri)... includes the varieties of Tirma, Mursi (Mun), and Tid (Chai)... The Surma also refer to themselves as 'Suri', though Richard Lyth... states rather definitely that the Suri are a separate tribe whose language has only a 30-40% relationship with Tirma. It is possible he was referring to the Zilmamu" (1976:605). Bender, writing in more detail, wrote "Suri includes at least the following people: the Mursi of the Omo valley...; the people living around the village of Lemu at the American Presbyterian Mission Surma Station, southwest of Maji; the Tirma and Tid (=Chai) of the Sudan border area west of Surma. About two hours' walk north of Lemu begins the country of the 'Zilmamu' or Bale. Lyth... reports that the Suri are a separate tribe from the Tirma, Zilmamu, and Murle, but in this he is now seen to be at least partly wrong" (1975:31). He went on to say that Mursi is "uniform with Suri" (1975:34) and that "Bale is so different (at least lexically) from Suri" (1975:34). Later, Bender listed the Surmic (he used the label "Surma") languages, with an entry "Suri (incl. Mursi)" (1982:2). Bender (1977:12,13) once suggested that there were two distinct languages called (by various people) "Suri". Turton, in describing the neighbors of the Mursi, mentioned "(in Ethiopia) the Suri and Bale" (1979:136). Tucker and Turton, in their list of "Surma" languages cite "Suri" as a separate language, locating it near Boma and Koma (1981:333, 334), apparently following Lyth (1947:107). Schadeberg (1981) related the Suri to Mursi in the same way as he related Didinga, Longarim, and Murle, using hyphens but listing separate populations in parentheses "Suri (15-20.000)-Mursi (5-6.000)". Dimmendaal mentioned Mursi and "closely related languages like Suri and Tirma" (1982:106, fn. 4). Ehret used the label Suri to include Mursi and Tirma (1982:20). Fleming spoke of "Suri, Tirma (plus Chai, Tid), Mursi" composing the "STM" node of Southeast Surmic (1983:533). Arensen gathered a word list from "the Kacipo, also known as Suri" (1989:67). He again spoke of them as "a Surma-speaking group called Kachepo (Suri) living further east of Boma", distinguishing them from "another Surma group called the Tirma" (1991:39,40). (Arensen changed from the spelling "Kacipo" to "Kachepo", so I will follow him by referring to the Kachepo consistently, except when quoting. He uses "Surma" to refer to the same larger grouping that I refer to as "Surmic".) I myself have also been confused on the identification of the "Suri", assuming that all references to Suri were to an SES language and I once indexed all Suri materials accordingly (Unseth 1990), (including material that I now know to belong to SWS).

Abbink wrote about "tribal" identity in southwest Ethiopia and discussed "the Tirma or Surma", using the word "Surma" to refer to a smaller group within the larger "Surmic" group, which others have called "Surma". Abbink said of the "'Surma', there are distinct territorial groups, including some hardly know ones (like the Bale and the Suri). It [Surma tribe] is thus certainly not a homogenous 'tribe', though all these Surma-speakers all share the [same]... mode of existence" (1991:8). Note that Abbink's article was arguing that ethnic labels and language labels do not always coincide and must be used carefully. That is, peoples who speak different languages may still have a very close cultural-political affinity and people who speak the same language may have different cultures and ethnic identities, a point which will come up much later in this paper. At this point, I will point out that the focus of this paper is on language, focusing on the two *languages* that have been called Suri, regardless of what ethnic labels are used.

Later, having both read the literature and doing field work, he sorted through the confusion and decided "'Suri' is an 'ethnic' self-name of Tirma and Chai, but also of Balé (or Baléthi) in the Sudan-Ethiopia border-area west of Jeba town. (The status of Balé-Kachepo-Zilmamo language still remains undetermined.)" (1992:1).

The use of the label Suri as an ethnic label is also found in the Ethiopian census, which reported 8,839 Suri and 8,412 Surma (Central 1991:47), though such a report cannot detail the specific locations of these people.

There are two patterns discernible in these references to "Suri". Some writers associate "Suri" with Mursi, Tirma and the STM node of Southeast Surmic. Others link "Suri" to Bale or Zilmamu of the ZB node of Southwestern Surmic. This paper will show that both patterns reflect a correct, but partial, identification of "Suri".

1.1 The available language data

First of all, I will summarize the small corpus of actual available linguistic data that comes from languages (sometimes) called "Suri". Tucker and Bryan presented a variety, but small amount, of "Suri" data, including some question words, pronouns, possessives, and a small word list. They identify their source as Lyth's "Some Notes on the Suri Tribe, cyclostyled" (1966:370), a document I have never seen. In addition, Lyth published an article about the Suri in 1947, describing their location and some customs, but in the article gave no word lists for comparison and only two morphological points.

Arensen has gathered a Swadesh word list of 100 words from a language called "Suri" or "Kacipo" (1989). He said they are "about 7,000 people who live on the eastern side of the Boma plateau... Their area borders on that of the Boma Murle" in Sudan.

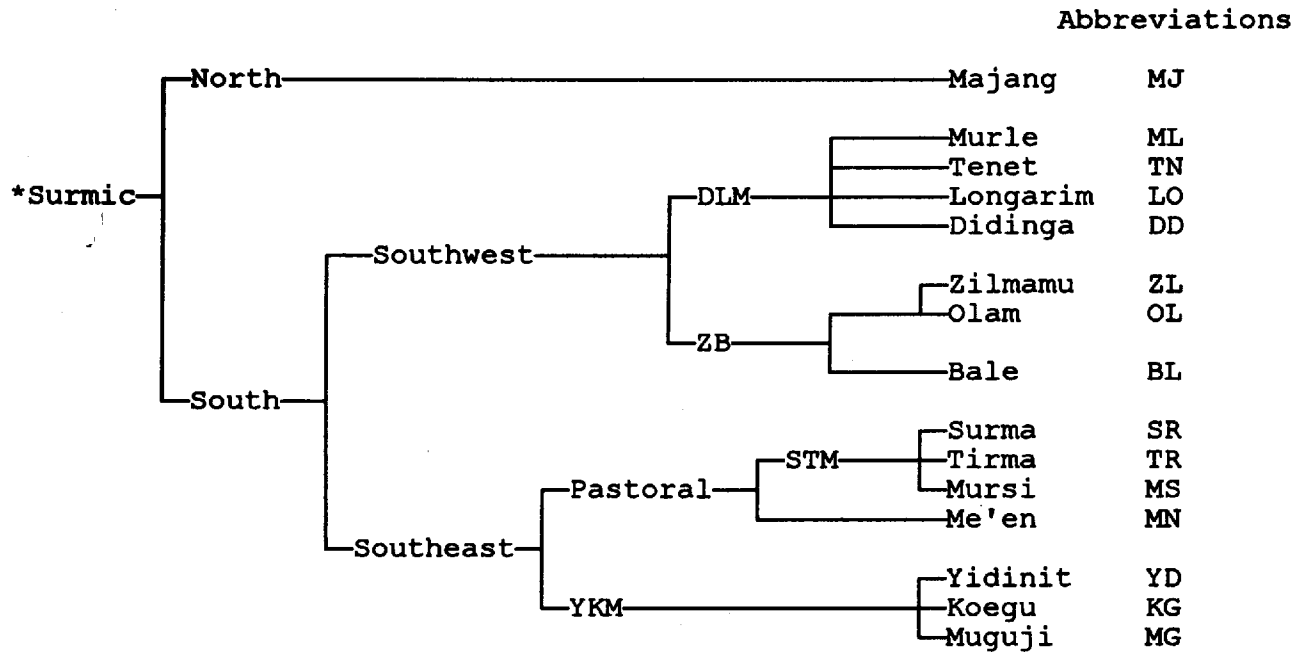
Bender has also gathered some "Suri" word lists in Ethiopia at "le:mu, village at Surma American Mission station, Kefa... According to local information (Don Mc Clure, Jr., mainly), the Suri number ca. 10-15,000 in Ethiopia, a few thousand in Sudan" (Bender ms.). (A small portion of this data was published in 1975.)

Jon Abbink has gathered several hundred Suri words from Dec. 1991 - Apr. 1992 at "Makara, one of the largest Chai-Suri villages in Maji-awraja". As far as I can determine, all the other written sources merely mention the Suri, but do not add any substantive data about their language(s).

1.2 Classification of the Surmic languages

Before proceeding further, I will present a framework for classification and comparison. All authors agree that all of the various "Suri" data are from Surmic (Surma) languages. There never seems to be any doubt on this matter. Classifying "Suri" requires a presentation of the internal structure of Surmic. The internal structure of Surmic has been established by Fleming, whose chart is given below, with a slight modification in labeling. The abbreviations on the right are those used throughout this paper to refer to the various languages.

Chart of Surmic Relationships
Adapted from Fleming 1983:533,554



2.0 Sorting the data as either Southwestern or Southeastern Surmic

Some of the "Suri" data seems to fit into the SWS (Southwestern) branch of Surmic, some in the SES (Southeastern) branch. Bender once used the label "Suri-Bale" (1975), but note that Bale and STM are from (what we now know to be) different nodes of the chart. It is important to remember that the struggles in resolving the identity of "Suri" were before Fleming's helpful classification of Surmic languages gave a framework for comparison (1983). In addition to Fleming's lexically based criteria, I have shown additional kinds of linguistic criteria that clearly separate SWS (Southwestern Surmic) from SES (Southeastern Surmic) (Unseth 1988). In addition, the possessive pronouns have been shown to have different patterns between SWS and SES (Unseth 1991:99). A comparison of the Suri data against these patterns shows that some of the data fits with SWS and some with SES. This leads to the conclusion that there are two kinds of "Suri", not merely dialects of a single language, but separate languages, from different halves of Southern Surmic.

2.1 Lexicon

A comparison of the brief word lists immediately shows that the various "Suri" word lists differ. For example, 'person' is ɛɛza in Arensen's list, but hiri in Bender's, 'bone' is ɛmɛ in Arensen's list but gige in Bender's. Even a casual comparison of the word lists leads one to suspect there is more than one language which has been identified as "Suri". It is noteworthy that Arensen's and Tucker & Bryan's word lists agree with each other.

Several words have been shown to be clear innovations by SES (Unseth 1988:156), including 'bone', 'hair', 'head', 'nose'. A comparison of these forms with the available "Suri" word lists shows that Arensen's matches the SWS pattern and Bender's word list matches the SES pattern. Unfortunately, Tucker & Bryan's list of 18 words does not include any of these established, diagnostic lexical innovations:

gloss	SWS		SES		Arensen	T&B	Bender
bone	ML:	amɛn	TR:	giga	ɛmɛ		gige
	ZL:	emenan	MG:	gice			(A) gigéy
	DD:	emen	SR:	gigi			
	LO:	amen	KG:	gici			
hair	ML:	iim	TR:	codɛ	iima		cɔɔre
	BL:	iima	MG:	ceraʃ			(A) chóóré
	LO:	imatot	KG:	c'érasi			
	DD:	imacit					
	ZL:	emeta					
head	ML:	ɔɔ	TR:	saba	ɔɔwa		thaba?
	BL:	oowa	MG:	ʃubo			(A) sábba
	DD:	o	SR:	saba			
	LO:	owa	KG:	ʃúbó			
nose	ML:	oŋec	TR:	giroŋ	uŋɛ		roŋ
	BL:	ʊnye	YD:	guro			(A) gíróŋ
	ZL:	oŋic	SR:	giroŋ			
	DD:	uŋec	KG:	kuruŋ			

The following vocabulary data is not claimed to show definite lexical "innovations" by SES, (which the earlier examples are claimed to be, based on comparison with Majang), but this data does reflect the SWS and SES general groupings. Where relevant, Majang forms are listed (in the SWS column), to show which set of forms are probably retentions. In this list, Tucker & Bryan's data finds several matches. Forms preceded by (A) are from a word list kindly shared with me by Jon Abbink.

gloss	SWS		SES		Arensen	T&B	Bender
snake	DD:	kukaat	TR:	kɔnɔ	koka		kuno
	BL:	kuka	MS:	kun			(A) kóno
	ZL:	kokia	MN:	kono			
	(MJ:	kooko)	SR:	kuno			
liver	ML:	nyɔɔ	TR:	tara	nyɔɔ		tarra
	ZL:	nyoyɛti	MS:	tarra			(A) tára
	LO:	inyo	MN:	tara			
	DD:	nyo					
how many?	ML:	ɪdhɔŋ	MN:	ʃɛʔɛn		edho	
	DD:	dhɔŋ					(A) íhi ɛné
	LO:	ɪdhɔŋ					
moon	ML:	nyɛlok	TR:	tagi	nyɔlɔ		tagi
	DD:	nyilok	MS:	taagi			(A) tági
	LO:	nyilok	KG:	tigeʃ			
	ZL:	nyiluk	MN:	taʔis			

cont'd overleaf ...

gloss	SWS		SES		Arensen	T&B	Bender
cloud	ML:	diizoc	MS:	ido	diiz		idɔ
	DD:	diz	TR:	iido			(A) í:du (fog)
	LO:	diz	KG:	ido			
	BL:	ido[3]					
bird	ML:	kibaalic	TR:	cuwai	kaalɛ	kiale	cwai
	BL:	kaalɛʔ	MS:	ʃwai			(A) shwaí
	DD:	kibalic	MN:	ʃoc			
	LO:	kibalic	SR:	ʃoway			
bite	ML:	adak	TR:	wak-aŋita	adak		aaŋi
	DD:	adak	SR:	aŋitu			(A) aŋittɔ
	LO:	adak	MS:	æŋido			
blood	ML:	biyi	SR:	ŋaba	beza		ŋaba
	DD:	biye	MN:	ŋaba			(A) ŋaba
	LO:	biyi	KG:	ŋiabo			
person	ML:	eet	TR:	hira	ɛɛza		hiri
	BL:	ɛɛʔ	MS:	hiri			(A) hírí
	ZL:	et	SR:	hir			
	DD:	et	KG:	hur			
	(MJ:	id-)					
foot/leg	ML:	zooc	TR:	jagari	soo	so	jagari
	DD:	zoc	MN:	jarec			(A) jágárí/
	BL:	sɔ	SR:	jaari			já:rí
	OL:	coi	KG:	jap			
	LO:	zoc					
small	ML:	kidic	TR:	acinyi	akite		ciŋi
	DD:	kidici	MN:	t'iini			(A) chíŋi
	ZL:	kidičo	SR:	acini			
	OL:	kidikɔ	KG:	diini			
horn	DD:	otɔ́	MS:	kèrrèè	oton	ɔtɔ	kɛrre
	LO:	oto	TR:	kerre			(A) kɛrre
	ML:	oton	MN:				
			SR:	kɛre			
red	ML:	meeri	MS:	gòlòŋì	margɛ		goloŋi
	BL:	margɛ	MN:	goloni			(A) gloŋi
	DD:	marik	SR:	goloni			

cont'd overleaf ...

[3] Such forms as this are exceptions to the general pattern of the Bale language data following SWS lexical patterns, but here conforming to SES patterns. Such words are presumed to be old loans from STM of SES into ZB of SWS, a point which is discussed further in section 4.

gloss	SWS		SES		Arensen	T&B	Bender
white[4]	ML:	vɔɔr	TR:	ahɔli	hɔre		hɔ̀lí
	DD:	ora	KG:	polceŋ			(A) holí
	BL:	hɔre	MS:	holi			
	LO:	voora	MN:	hɔli[5]			
			SR:	hooli			
sun	ML:	kɔr	TR:	suus	kɔr		su
	ZL:	koro	MN:				(A) sú
	DD:	kor	SR:	sus			
	LO:	kor	KG:	ʃuuʃi			
dog	ML:	oroz	TR:	roso	orsa		rɔ̀sɔ́
	DD:	kurza	SR:	roso			
	ZL:	oreʃ	MN:	rɔsɔ			
	OL:	orʃa					

For 'dog', note that all SWS forms have a vowel before the r, but in SES the vowel follows the r. The matter of voicing of the sibilant is discussed later in the paper, 3.1.

gloss	SWS		SES		Arensen	T&B	Bender
eat	ML:	ad-	MG:	aam-	ad-		-am
	BL:	-da-	MN:	am			
	ZL:	amʃi[3]	TR:	am-			
six	ML:	tórkónóm	MS:	illɛy			ile
	DD:	torkon	MN:	ile			íllɛ
	LO:	tokonom	KG:	elle			
	(MJ:	tuulaom)					

Ehret has cited 'six' as a loan into "Nuclear Surma", his term for what the above chart calls "STM" (1982:44) borrowed from Eastern Nilotic (which he says originally borrowed it from Lowland East Cushitic). This matches Eastern Nilotic forms, such as Maasai ile 'six'.

lion	BL:	muwe	MS:	ŋatun			ŋatuin
	ML:	maa	SR:	ŋatuɳ			ŋatúi
	DD:	maa	TR:	ŋatuɳ			
			MN:	ŋadun			

The form for 'lion' is a very good piece of evidence linking Bender's Suri data with SES. The Proto-Southern Surmic form was something with an initial m- and a non-front vowel, seen by a comparison of the SWS forms (e.g. muwe) with YKM moho. In contrast, the Pastoral group has adopted a Nilotic loan word of the approximate shape ŋatuɳ, pointed out by Dimmendaal (1982:106). He points out a "widespread Eastern Nilotic form is also ŋatuɳ". This Eastern Nilotic loan is not found in elsewhere in Surmic, but only in the Pastoral branch of SES.

[4] I must admit that I find this possible correspondence of SWS r to SES l exceptional. It does not fit the well established *l → r pattern. I have no explanation yet. However, it is a good example to show the patterning of Arensen's data with SWS and Bender's with SES.

[5] For Me'en, the form most comparable to the other SES forms is cited, whether it be from the Tishena or Bodi dialect, since Will has shown that both are one language, with a limited number of lexical and phonological differences (1991).

I must also admit that there are some words in Arensen's and Tucker & Bryan's word list that match SES patterns rather than SWS, (e.g. 'leopard' see discussion below). However, the majority of the vocabulary matched show a link between their data and SWS, rather than with SES. These few matches with SES are probably (old) loans, the results of contact. Fleming had earlier noted that "Bale has been in a heavy [lexical] interchange with Mursi" (1983:531), discovering a significant number of "borrowed words from old STM in Bale" (1983:550). I assume that the results of this borrowing are found in Zilmamu and the SWS "Suri" language, as well. (Below, it will be shown that the SWS Suri language is very closely related to Bale, probably they are two names for the same language.)

2.2 Numeral systems

It has been shown (Unseth 1988) that SWS languages have retained a quinary numeral system (base 5), adding lower numerals to "five" to form six through nine. SES languages, on the other hand, have a base ten system, with the numerals six through nine not formed by compounds. This is one of the distinguishing characteristics between SWS and SES.

The only available data on numeral systems from a language labeled as "Suri" is Bender's and Abbink's where the numerals from one to ten are included. They are clearly of the SES pattern. For example, in Bender's data, 'six' is ile, not a compound formed of haına 'five' and ɗɔne 'one'. So, this line of evidence also shows that Bender's and Abbink's data fit the SES pattern.

2.3 Shift of *l to r

The SES languages can also be diagnosed by their shift of certain instances of Southern Surmic *l → r (Unseth 1988:158). Again, this test allows us to see a difference in the various "Suri" data. For example, 'fish' in *SS had a form of the approximate shape *(k)ulug, but SES languages have a form more like urug. Those forms that have l are from an SWS language, but those forms that have r are from an SES language.

gloss	SWS		SES		Arensen	T&B	Bender
fish	ML:	kulugit	TR:	urugus-	ulugi	ulu	urgusi
	LO:	kulugoc	MS:	urgus-			(A) úrgúsi
	DD:	ulugoc	KG:	arte			
many	ML:	mɛɛlɛ	MN:	mɛri	ameeli		mèrí
	BL:	mɛle	MS:	mɛri			(A) mɛri
	DD:	melik	SR:	amɛri			
	LO:	melik					
night	ML:	baal	TR:	baar	baali		barr
	DD:	balin	MN:	bar			ba:rɔ
	LO:	balin	SR:	ɓilio (odd form)			

Ehret argues that this is a loan into Proto-Southern Surmic from a Cushitic language, (specifically Southern Cushitic), citing as an example K^{w}adza baliko (1982:38). This may or may not be correct, but the sound shift from *l to r is consistent.

gloss	SWS		SES		Arensen	T&B	Bender
ostrich	ML:	olom	MS:	rom		olomɛ	(A) róm
	LO:	kolom	MN:	rom			
	DD:	olomi					
tail	ML:	kul	TR:	kuro	kula		kura
	BL:	gula	MG:	kurr			(A) kúrɔ
	DD:	kul	SR:	kuro			
	LO:	kul	KG:	kuur			
urine	LO:	d-ɔlɔ	MG:	ʃoʔɔte			corra
	DD:	xula	MN:	ʃóruwa			(A) shórre
	BL:	ʃɔlɔ	KG:	ʃɔɔte			
elephant	BL:	ɔŋɔl	MN:	ŋor			ŋɔrɔ
	OL:	oŋal	MS:	ŋoro			(A) ŋórɔ
	ML:	aŋol	TR:	ŋoro			
	LO:	oŋol	YD:	noʔar			
			KG:	nuar			
body	ML:	ɛlɛ	MN:	réé		ɛɛlɛ	
			MS:	eri			erí
			TR:	eri			
			KG:	rua			

In the final example, SES forms have a shifted consonant, (but some have a semantic shift, as well, meaning 'skin').

It becomes clear that Arensen's and Tucker & Bryan's data is from an SWS language while Bender's word list is from an SES language.

2.4 Personal Pronouns

Bender and Tucker & Bryan give a complete set of Suri personal pronouns, Arensen only three. These forms are given below, together with sets of pronouns from other Southern Surmic languages. However, we must remember that there are nominative/absolutive case distinctions in personal pronouns in some of these languages, so that some differences may be less than they seem. Lino and de Jong (1989:83) give two sets of independent pronouns for Murle, Didinga, and Longarim. The Murle set (as representative of the DLM grouping) given in the chart below are those words that seem most similar to Bender's Suri and the SES forms (regardless of grammatical case), in an effort to compare the most comparable elements.

	Murle	Bale	Arensen	T&B	Bender	Mursi	Abbink	Me'en	Koegu
1s	aneeta	anda	anda	anda	aɲi	anyi	aɲi	aɲi	aan
2s	ineet	ʊnda	wunda	unda	aɲu	inye	iɲe	enu	iin
3s	nɔnɔ	nen/nɔ(ŋ)		nɔnɔ	nen/nɔŋ	noŋ	nen	nen	irun
1p	aget		agabuŋ	aga		age	aggé	eda	uao
2p	iget			uga		ige	igge:	edu	iyou
3p	nɔgɔ			nɔgɔ		yok	ŋagia	ɛdɛ	galgita-

Again we see that Arensen's and Tucker & Bryan's forms are similar and match with Bale of SWS, while Bender's forms and Abbink's forms most closely resemble SES.

2.5 Relative Particles

Tucker and Bryan give the Suri singular relative particle as ci (1966:379). This finds no match in SES, where we find forms such as Me'en de and Mursi a, but it matches SWS forms, e.g. Murle ci and Didinga ci. Again, we find evidence linking Tucker & Bryan's data with SWS.

2.6 Possessive pronouns

Surmic languages, like their Nilotic cousins, have a complex set of possessive pronouns that show the person and number of the possessor, as well as the number of the possessed. It has been shown (Unseth 1991:99) that SES languages have innovated a bit in possessive pronouns, not having a -k in the forms marking possession of a plural noun. Also, STM languages have lost a -g marking plural of the possessor. The possessives which Tucker and Bryan call "Suri" (Tucker & Bryan 1966:380) do not fit the SWS patterns, rather they appear to be SES, specifically from an STM language, (Unseth 1991:95). Within SWS we find two patterns. In DLM, we find a fuller form of the possessive pronouns, preserving the -g marking plural possessor and a final -k marking possession of plural nouns for at least the singular possessors, and an innovative use of long vowels to mark plural person possessing. In the ZB group of SWS, the limited available data suggests the possessive forms no longer maintain the number marking distinctions showing the number of the possessed.

Suri Possessive Pronouns (Tucker & Bryan 1966:380)
morpheme cuts are my own

Possessor	Singular Possessed	Plural Possessed
1 sg.	(a)+n+a +n+i	(a)+g+a +n+i
2 sg.	n+uu+n+i	g+uu+n+ɛ
3 sg.	ca+n+i +n+ɛ	g+i+nn+ɛ
1 pl.	(a)+n+a	(a)+g+a
2 pl.	n+o	g+u
3 pl.	n+i	g+i

For comparison, the Mursi possessive forms are given as a representative of SES. The YKM branch of SES has a much reduced and simplified set of possessives.

Mursi Possessive Pronouns (adapted from Turton 1981:340)

Possessor	Singular Possessed	Plural Possessed
1 sg.	n+aa+n+o	g+a+ŋ+o
2 sg.	n+u+n+u	g+ʊ+ŋ+u
3 sg.	n+ɛ+n+ee	g+ɛ+ŋ+ee
1 pl. (incl)	n+a+u	g+a+u
1 pl. (excl)	n+a+i	g+a+i
2 pl.	n+u+i	g+u+i
3 pl.	n+e+e	g+e+e

We see then that Tucker & Bryan's Suri possessive forms show diagnostic SES innovations, separating them from SWS, with a strong similarity to STM forms. However, the presence of the prefix ca- in the 3rd singular appears to be an SWS feature, e.g. Didinga (Tucker & Bryan 1966). It

is regrettable that I do not have access to Tucker and Bryan's original data, presumably all from Lyth. It would be important to check if he gathered all his data from the same "Suri" person or not. The possessives may represent a genuine loan from STM into an SWS language. We will see in section 4 that there are some lexical items that show that such borrowings have indeed taken place.

Bender's Suri data includes three possessive forms, for 1st, 2nd, and 3rd singular possessives. However, both SES and SWS forms for these are so similar that these cannot be definitely classified as showing a decisive affinity to SES or SWS.

2.7 Formation of genitives

The order of the nouns in genitive phrases in Proto-Surmic was clearly Head Noun-Genitive Noun. This is still the attested order in Majang (Unseth 1989:103), Murle (Arensen 1982:53), Me'en (Will 1989:138), Mursi (Turton & Bender 1976:547), and Koegu (Hieda 1992:140). Abbink's data is in striking contrast to this, showing the order Genitive-Head, an order not found in any published Surmic data. Abbink gives a few examples of genitive constructions in his word list (1992):

ŋóɾɔ	kèdɔ	'tooth of elephant' ('tusk')
elephant	tooth	
bo:ni	kabaré:	'fruit of the bo:ni tree' ('fig')
tree (sp.)	fruit	
dori	tutuk	'doorway'
house	mouth	
dori	jagaɾɛ	'house wall'
house	foot	

The only other evidence of this order in genitives in Surmic languages (that I know of) is one example I once elicited in my brief data gathering among the "Surma" near the town of Aman (just west of Mizan Teferi), I elicited genitives with both orders of nouns: head-genitive and genitive-head. (I suspected that there is a tonal marking on this, but I was interrupted in my work by an armed outsider.)

We see that these genitive examples from Abbink's Suri find a match only in this bit of data from another STM source. Abbink's Suri again matches an SES pattern (specifically within STM), not the SWS pattern.

3.0 Sub-classification of the two languages called "Suri"

Having shown a variety of evidence (lexicon, phonological shifts, numeral systems, pronoun sets, etc.), I conclude that Bender's "Suri" vocabulary is from an SES language, but the "Suri" vocabulary given by Tucker and Bryan (1966:375) and Arensen (1989) is definitely SWS.

The above lines of evidence have been concerned with classifying "Suri" as either an SWS or SES language. Having demonstrated that there are two languages that have been called Suri, I will present evidence to show which subgroups these languages fit into, which will further demonstrate the validity of the above conclusions.

3.1 Specifically ZB forms within SWS

Seeing that Arensen's and Tucker & Bryan's vocabulary lists are from an SWS language, we can now show that they belong to the ZB subgroup of SWS, rather than the DLM. This is in agreement with Bender's earlier recognition of "Suri" as related to Bale (1975:31). There is not yet adequate evidence to determine which forms in SWS are archaic and which are innovations. However, there is one correspondence set where we find enough evidence to posit one set as innovative, the other as archaic.

There is a z ~ s correspondence on a set of words between DLM and ZB, (with some variation on the point of articulation). SES data for 'dog', 'heart', 'hear', 'name', and 'hand' suggests that the voiceless forms are conservative. This correspondence can also be seen comparing DLM kazac and Kachepo kasa 'sand'.

gloss	DLM		ZB		Arensen	T&B	SES	
dog	ML:	oroz	ZL:	oreʃ	orsa		B's Suri:	rɔ̀sɔ́
	DD:	kuzur	BL:	orsa			SR:	roso
	LO:	kurza	OL:	orʃa				
heart	ML:	zɛnɛz	BL:	sini	sini			
	DD:	zinit					SR:	sini
	LO:	zinin					B's Suri:	siini
							KG:	ʃen
foot	ML:	zooc	BL:	sɔ	soo	so		
	DD:	zoc	OL:	coi				
	LO:	zoc	ZL:	ʃo				
name	ML:	zaar	BL:	sara	sara		SR:	sara
	DD:	zar					MG:	sarya
	LO:	zar					B's Suri:	sɛra
							(A)	sárà

Ehret (1982:38) argues that the set for 'name' represents an ancient loan from a Southern Cushitic language, comparable to Dahalo saare. Whether this can be substantiated or not, it is clear that all of the "Suri" data in question has an initial voiceless consonant, in contrast to the DLM voiced forms.

gloss	DLM		ZB	Arensen	T&B	SES	
hear	ML:	azii		asigɛ		MS:	ʃik-
	DD:	azi				(A)	-shíka
	LO:	azi					
hand	DLM	aziit	ZL aʃi			MN:	sit

The following sets of lexical data are presented as evidence of a general similarity linking Arensen's data with ZB rather than with DLM, without making any specific claims as to which form is conservative and which is innovative:

	DLM		ZB		Arensen	T&B
knee	ML:	kozoŋ	BL:	kʊndi	kundi	
	DD:	kozoŋ				
	LO:	kozoŋ				
bird	ML:	kibaalic	BL:	kaalɛʔ	kaalɛ	kiale
	DD:	kibalic				
	LO:	kibalic				
louse	ML:	inyitot	ZL:	enya	inya	
	DD:	inyatit	BL:	iŋya		
	LO:	inyatot				
red	ML:	meeri	BL:	margɛ	margɛ	
	DD:	marik				
	LO:	merik				
hand	ML:	aziit	BL:	aayi	ayii	
	DD:	aziit				
	LO:	aziit				

In both of the above sets of vocabulary, the available data from ZB languages matches with Arensen's and Tucker & Bryan's Suri data, cleaving to ZB and away from DLM.

Having shown that Arensen's data belongs in the ZB node of SWS, I now move a step further. The study of pronouns leads to a further step in the identification of Arensen's Suri data. Though there is very little data available from the ZB group, the available personal pronoun data shows a clear split between the Zilmamu and Olam data on one hand as opposed to Bale and Arensen's Suri on the other. (This is not to claim that Zilmamu and Olam are separate languages nor that the Bale data and Arensen's and Tucker & Bryan's data represent separate languages.) Arensen's Suri and the Bale, Olam, and Zilmamu data include very few personal pronouns, but a pattern is clear. Tucker & Bryan provided a fuller set of "Suri" pronouns (Tucker & Bryan 1966:378). The pronouns given by Tucker and Bryan may be a mix of two different case forms, nominative and absolutive. Since the Zilmamu and Olam pronouns so closely match the DLM forms, we can assume that the Bale forms (together with those given by Tucker and Bryan and Arensen) represent an innovation within SWS.

	DD	LO	ML	ZL	OL	BL	T&B	Arensen
1s	ŋaneta	aneta	aneeta	aneta	aneeta	anda	anda	anda
2s	ŋanita	anita	ineet	ineta	ɪneeta	ʊnda	unda	wunda
3s	inono	inono	nɔnɔ				nɔnɔ	
1p	ŋageta	ageta	aget				aga	agabuŋ
2p	ŋagita	agita	iget				uga	
3p	igogo	igogo	nɔgɔ				nɔgɔ	

It becomes clear that Arensen's and Tucker & Bryan's data very clearly match the innovative Bale forms, as opposed to the more archaic Zilmamu-Olam forms. Again, we see why Bender used the label "Suri-Bale", there being a very close match in pronouns. It may very well be that Bender's Bale data, Arensen's Kachepo, and Tucker & Bryan's Suri (except for Tucker & Bryan's possessive forms?) all represent one and the same language.

3.2 Specifically STM within SES

The SES Suri can be shown to fit into the STM subgrouping. Some lexical patterns are given below, showing that the Suri word lists of Bender and Abbink match STM data more than they do Me'en or

the YKM branch, which is exactly what we expect based on earlier statements by other linguists. (Where there is a gap in the Me'en data, that means that the Me'en form corresponds to none of the others under consideration, such as 'egg' mulác.)

gloss	STM		Me'en	YKM		Bender & Abbink	Other
person/man	MS:	hiri	me'en	KG:	huur	(B) hiri	
	SR:	hir		MG:	wurr	(A) hírí	
	TR:	hira					
'one'	MS:	ɗòònè	ko?nan	MG:	ki?im	(B) ɗone	
	SR:	ɗone		KG:	kium	(A) ɗone:	
	TR:	done					
'grass'	MS:	lænɳwí		MG:	iyaan	(B) laɳwi/laanjɔy	
	TR:	lanjɔi?		KG:	suču	(A) anjo	
	SR:	lanjoy					
'lion'	MS:	ŋatun	ŋadún	YD:	moho	(B) ŋatuin	DLM: maa
	SR:	ŋatuɳ		KG:	moho	(A) ŋatúi	
	TR:	atuɳ					
'egg'	MS:	bùrrái	mulác			(B) bʊrrai	Ari: muwqa
	TR:	ɓura?		KG:	moogu	(A) ɓúrra	Karo: muk?o
	SR:	ɓure					
	BL:	ɓùrá[3]					

Both the Me'en and YKM forms for 'egg' match Omotic forms.

'good'	MS:	cálì				(B) čalí
	TR:	acalli		KG:	suka	(A) chàllí
	SR:	aʃali				
mountain	MS:	kùtùn		MG:	kùrúg	(B) kutul
	TR:	kutilo				(A) kuttul
	SR:	kutun				

As well as the lexical evidence, the earlier possessive pronouns are a clear match to STM forms, rather than Me'en or YKM. Also, we saw above that the formation of the genitive in Abbink's data showed a link to STM, a different order in the genitive than in either Me'en or YKM.

3.3 Confirmation of Lyth's "Suri" as being SWS

Tucker and Bryan's Suri data was from Lyth, but I have not seen the original unpublished source. In his published article on the Suri, Lyth gave only two items of linguistic data, noting a first person k-prefix and the loss of initial a to form the imperative (1947:114), (though Tucker and Bryan clearly had access to something additional). The k- prefix in 1st person is found in SWS languages, e.g. Murle (Arensen 1982:83) and also in SES languages, e.g. Me'en (Will 1989:141) and Mursi (Turton and Bender 1976:550). Therefore, this piece of data is not useful in classifying Lyth's Suri as being either an SWS or SES language.

The mention of the loss of initial a in his Suri data is not as clear as we might prefer. However, we can find a probable clarification of it if we remember that this is meant to be a comparison with a similar loss of initial a in Murle. Lyth's description of Murle grammar tells us that the imperatives are the 2nd person forms of the subjunctive paradigm. In the 2nd person of the subjunctive, there is no initial a (1971:28), morpheme cuts not given:

die	1s	kakadak
	2s	daak
	3s	adai

A comparison with the limited available SES imperative data shows no similar process, rather imperatives are formed with suffixes, Me'en (Will 1989:141) and Mursi (Turton & Bender 1976:551). The "loss" (more correctly "absence"?) of initial a in the formation of imperatives, then, points to a link with SWS rather than with SES, (though admittedly this conclusion is based on very limited data).

The location that Lyth describes[6] suggests his "Suri" is an SWS language, being further west than any confirmed SES languages (though it is also possible that some of the more eastern locations that he mentions within Ethiopia may not be the same Suri that he has had direct contact with near Boma). Also, the fact that he observes "the Suri language has considerable affinity with that of the Murle" and that it sounds like Murle spoken with "mutilation" (1947:113) suggests it is an SWS language. If the Suri language he heard was SES, it is unlikely that it would have sounded enough like Murle even to warrant any such comparison. On the other hand, he also says "The sound of the Suri and the Murle language when spoken is entirely different, and the two languages are mutually unintelligible" (1947:114).

Lyth noted that "despite the [cultural] similarities... both tribes [Suri and Tirma] repudiate the statement that they ever were one tribe or have a common origin" (1947:108), though such claims are clearly not an absolute proof. The SES Suri are linguistically very close (if not identical) to the Tirma. The fact that Lyth's Suri felt no relation to the Tirma suggest that they were not the SES Suri, but are rather an SWS group, probably the same as Arensen's Kachepo.

Lyth did not give any word lists, but he did note "that from 30%-40% of Suri words have radical connections with their counterparts in the Tirma language" (1947:107). I will assume that this is approximately a measure of apparently cognate roots, since his text makes it clear that these are not identical forms. If Lyth's "Suri" had been an STM (or other SES) language, we would expect a much higher percentage of cognates with Tirma. For example, Bender found that his STM "Suri" data (which we have shown here to be an STM language) had 91% cognates with Tirma (1977:18). He found that Mursi (the best documented STM language) had 44% cognates with Bale. Assuming that Mursi is very close to Tirma (if not the same) and assuming that Bale is very close to the SWS Suri (Kachepo) (if not the same), this percentage is quite close to what we would expect between Kachepo and Tirma.[7] We see then that though Lyth did not give us any word list, his estimate of the cognate percentages strongly suggest that his "Suri" is an SWS language rather than an SES. (There is, of course, the possibility that Lyth may have been confused by the use of the label "Suri" and that some of the locations that he listed as Suri settlements may have been from the SES Suri group. However, the people from whom he gathered his word list spoke an SWS language.)

Bender counted only 56% cognates between Murle and Bale. Arensen, working under better conditions and with a more intimate knowledge of both the Murle language and the local situation, elicited a Kachepo word list that he counted as having 87% similarity with Murle (1989). Though

[6] The locations mentioned by Lyth include a place called "Koma" 35° 07'E, 06° 01'N, 10 miles into Ethiopia from the Sudan border, also at "Zulimamu" (=Zilmamu?) 10 miles northeast of Koma, at Boma in Sudan, and at Meyun 20 miles east-northeast of Boma (still within Sudan) (1947:107). The last two locations strongly suggest that these are the same as the Kachepo that Arensen found (1989:67, 1991:39,40).

[7] Arensen counted 64% cognate percentage between Kachepo and Tirma, significantly higher than Bender's or Lyth's figures would suggest. One possible reason for his higher cognate figure may be an ongoing lexical borrowing from STM into what he called Kachepo.

they may be sometimes called "Suri", it is clear that their speech has a much closer affinity to Murle, an SWS language, than to any STM language.

Based on (1) the evidence from their location, (2) the "loss" of initial a in the imperative, (3) the oral tradition disassociating themselves from the Tirma, and (4) the cognate percentages, Lyth's "Suri" can be identified as a group speaking an SWS language, rather than SES.

4.0 Lexical and cultural linkages between the two "Suri" languages

The two groups that have been referred to as "Suri" are geographically near to each other. Not surprisingly, then, there is evidence of contact between the two groups, both linguistic and cultural evidence.

4.1 Linguistic similarities

As Fleming had noted, there are a number of "borrowed words from old STM in Bale" (1983:550). "Bale has been in a heavy exchange with Mursi" (1983:531). It is interesting to note that these are found not just in Bale, but in the ZB node generally. Such STM loans can also be found in Arensen's Kachepo, (which is possibly the same language as Bale). There are also some forms which cannot be definitely classified as loans *from* STM *into* Bale. That is, there are some forms found in both Bale (and Kachepo) and in STM, but there is no clear evidence of the direction of borrowing, since these forms have not yet been traced to either Proto-SWS or Proto-SES. Some such forms are listed below. Since some of these are found in both varieties of "Suri", confusing the matter of classification, it is important to separate these from the quantity and quality of data which clearly distinguishes two separate languages in the "Suri" data. The following vocabulary shows some cases where ZB forms match STM forms (but not DLM forms), strongly suggesting that they are the result of contact.

Bale and STM similarities

			STM		Arensen	T&B	Bender
leopard	BL:	ʃarr	MS:	car		car	ʃarr
	ZL:	kelaŋ	TR:	čar			
	OL:	kɛɛlaŋ					
	ML:	kelaŋ					
	LO:	kelaŋ					
	DD:	kelaŋ					
	KG:	kárúŋ					

It appears that the original root of this word was something like *kVl-. SES regularly shifted *l → r (Unseth 1988), which is illustrated in the Koegu form. The STM languages seem to have fronted the consonant, also. So, the Bale form for 'leopard' is actually related to the SWS root for leopard, but with a form like that found STM languages, viz. fronted consonant, low vowel, /r/ rather than /l/. That is, the Bale form given here is borrowed from an STM source.

			STM	Arensen	T&B	Bender
chicken	BL:	kou	MS:		kou	(B) kwobi
	MN:	kobút	TR:			(A) kóbi
	ML:	toloc				
	DD:	tuhuluc				
	LO:	tuuluc				

cont'd overleaf ...

			STM		Arensen	T&B	Bender
child	BL	eeru	TR:	erro		er-	(A) eri
	DD:	dole					
	LO:	dooli					
	BL:	dole					
crocodile	OL:	ŋaaŋ[3]	MS:	kiŋaŋ[3]		kiŋaŋ	
	BL:	kiŋaŋ[3]	MN:	gur			(A) kiŋá
	LO:	kugul					
	ML:	agul					
	MJ:	ugul					

Dimmendaal has pointed out "crocodile" as a Nilotic loan into Surmic languages (1982:106). It appears that this loan is limited to the STM and ZB groups. Clearly, Bale and Olam, both SWS languages, have borrowed the Nilotic word for 'crocodile', as have STM. I suspect STM borrowed it first, then Bale and Olam borrowed it from STM.

The matter of possessive pronouns has been shown earlier as a surprising and close match between Tucker and Bryan's Suri and STM, though this is not reflected in the other available ZB possessive forms. Though I suspect these Suri forms may have been gathered from SES Suri speakers, it is also conceivable that they have been borrowed from STM. If it turns out that Tucker and Bryan's possessives are from the same Suri as their lexicon, then these may also represent a borrowing from STM into SWS.

4.2 Cultural similarities

There has long been close contact, interaction, culture borrowing among ethnic groups in the area. For example, Arensen says though "the Murle consider themselves to be a separate people, they are in fact a mixture of various peoples and their history of contact with other peoples has had strong influences on who the Murle people are today" (1991:25,26). Other examples of close contact, mixing, absorption of groups of people into other ethnic groups, and even deliberate shift of ethnic identification among Surmic peoples are known, (Cerulli 1956:41, Tornay 1981, Dimmendaal 1982, Turton 1979).

Examples of cultural borrowings include age sets found among Murle and Lyth's "Suri" (1947:110), but also in many, many groups in the general area e.g., East Cushitic Boraana, East Nilotic Turkana, Surmic Mursi, etc.

Of more limited distribution, and therefore of more interest for the present study is the presence of ritualized stick fighting, which is found among the Mursi, Kachepo (Arensen, p.c.), Lyth's "Suri" (1947:112), the Surma (an SES group) (Beckwith and Fisher 1990:250ff and 1991), and Abbink's Suri.

Also, Lyth's "Suri" practised body painting with clay (1947:112 and facing photos), producing patterns which are strikingly similar to the SES Surma, as seen in the works of Beckwith and Fisher (1990:278-285 and 1991). Jon Arensen, in conversation, reported that this is also done in some form by the Murle and Toposa, though it is not clear how similar the patterns are. It is also done by the nearby Omotic speaking Karo (Beckwith and Fisher 1990:310-318), but with clearly different patterns than those shown by Lyth and those found among the Surma by Beckwith and Fisher.

Lyth also noticed that "In appearance and customs the Suri are similar to the Tirma... (both for instance, affecting the stretched lower lip and ear lobes)", such practices have been documented

among the (presumably) SES "Suri" (Bender 1975:32) and photographed among the "Suri", by Lyth (1947), among the Surma by Beckwith and Fisher (1990:270-277 and 1991).

Lyth spoke of intermarriage between his "Suri" and the Tirma (1947:107). Arensen described the Tirma as being mobile, "formerly they crossed and recrossed the Ethiopia-Sudan border" (1989:67). As we remember that the Tirma are linguistically very near to the other Suri (maybe even the same?), all of this is strongly suggestive of significant contact between the speakers of the two "Suri" languages.

In this context of geographical proximity, frequent contact, and cultural borrowings, such linguistic borrowings as mentioned above are not surprising.

5.0 Conclusions

Though my title set the goal of disentangling the languages called "Suri", I have realized that it is not possible completely to disentangle them. We can show that there are two languages that people have referred to as "Suri". There is one Suri language that is part of SWS, closely related to Bale. And there is another Suri language that is part of SES, closely related to Mursi.

On the other hand, we have seen that there are a number of linguistic forms and culture traits shared by both of these languages that indicate a heavy degree of contact between them (and their ancestors) at some point(s) in their history.

The classification and study of Surmic cultures and languages cannot be done without a constant awareness of their history of migrations, ethnic assimilations, and contacts.

I now propose labels to keep these two languages distinct. I suggest we follow Arensen (1989) and adopt the label "Kachepo" for the SWS "Suri", especially since he says that it is a self-name. (If further field research shows Bale to be the same language as Arensen's data, that name may survive, instead.) For the SES "Suri", some people give the self-name "Surma", though others apparently give the name "Suri" or "Tirma" for what appears to be much the same language. (Bender has also suggested that Mursi or Tirma are the same language as this "Suri". If this is confirmed to be true, then this "Surma" label may also prove redundant.) For the SES "Suri", I suggest using the label "Surma" or "STM Suri". Anyone writing on a language which has been called "Suri" would be wise to explain clearly which language it is, whatever label the author may choose to use.

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Interrogatives in Surmic Languages and Greenberg's Universals

Jonathan Arensen, Nicky de Jong, Scott Randal, Peter Unseth[1]

The present article presents data from five Surmic languages (Didinga, Longarim, Murle, Tennet, Majang), that are VSO and have interrogative words in sentence final position in questions, contrary to Greenberg's prediction in Universal 12.[2] Greenberg's Universal 9 (positing a relationship between the presence of postpositions and sentence final interrogative words) is proposed as a possible explanation for this violation.

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Each of the various authors has been responsible for the data on certain languages. Data that is not credited as from a published source is from the authors' field work. The authors and the languages for which they contributed the data are as follows:

Arensen	Murle, with Idris Nalos, John Atiel, and John Kajac
de Jong	Didinga, with Anthony Lobalu Jino and Lino Locek Lokonobei
	Longarim, with Rosa Nakwar Peter
Randal	Tennet, with Karlo Kolong and Severino Maira
Unseth	Majang, with many Majang friends, especially Debbebe Bedi

Some of the Muguji data was gathered by Bender, Jean Lydall, and Ivo Strecker. Surma data is from Klaus Wedekind and Unseth. Hans-Georg Will kindly provided a draft copy of his Me'en-English Dictionary. We would like to thank Constance Kutsch Lojenga for her helpful discussion of an early stage of this paper.

Some of the examples have not been broken into each individual morpheme, but all morphemes relevant to the discussion are clearly marked. The following abbreviations are used in the text:

COP	copula	INTR	intransitive	REL	relator
DEM	demonstrative	LOC	locative	SQ	sequential
DT	dative	NOM	nominative	SR	switch-reference
FUT	future	NP	near past		
GEN	genitive	PL	plural		

Person and number marking is as illustrated below:
1s first person singular, 1sO first person singular object
3p third person plural

[2] Violations of Greenberg's Universal 12 were first brought to our attention by Glenn Davis working on Murle and Janet Leitch working on Majang, in a Typology class at the Summer Institute of Linguistics at the University of North Dakota, under Des Derbyshire. We would like to thank Davis, Leitch, and Derbyshire for their help and for encouraging us to follow up on their work.

As we present counter-examples to Greenberg's hypotheses, it is important to remind readers that Greenberg himself stressed the preliminary nature of his work, beginning his article "The tentative nature of the conclusions set forth here should be evident to the reader". A few counter-examples do not negate the fact the Greenberg had discovered a very broad pattern, whose explanation is still not fully understood. Also, we argue that the violation of Universal 12 in these Surmic languages is actually a result of the application Greenberg's Universal 9. The interaction and relative priority of various Universals in relation to each other is still an unexplored field.

In his pioneering article "Some Universals of Grammar with Particular Reference to the Order of Meaningful Elements", Greenberg posited Universal 12 "If a language has dominant order VSO in declarative sentences, it always puts interrogative words ... first in interrogative word questions" (1966:111). In other words, no VSO languages will have interrogative words sentence finally in interrogative word questions. This absolute pattern of having interrogative words first in VSO languages is merely an extreme case of "the predilection among many languages for placing QWs [question words] at the beginning of the sentence, regardless of basic order type" (Ultan 1978:222,223). Ultan's study of interrogatives, however, covering a wide variety of languages, found two VSO languages (Samoan and Sango) that have interrogative words in non-initial position (1978:231, fn. 3), but in these two cases, the position of the interrogative words is also non-final, a point that will later be seen as significant. Ultan did not find any VSO languages with question words sentence finally (1978:236).

As far as we know, the only previous documented exception to Universal 12 so far is Nandi, a Nilotic language, recently documented as an exception by Creider (1989:140). However, the available descriptions of Nandi do not make it clear to us if *all* question words are found in the same position as the corresponding NP or whether some are found in other positions, possibly specified in relation to the clause or sentence. Creider wrote "Nandi allows no wh- movement but does have in situ question words in both subjects and objects" (1989:98). "The question word must remain in the same position a non-interrogative constituent would occupy in a parallel declarative clause" (Creider and Creider 1989:142).

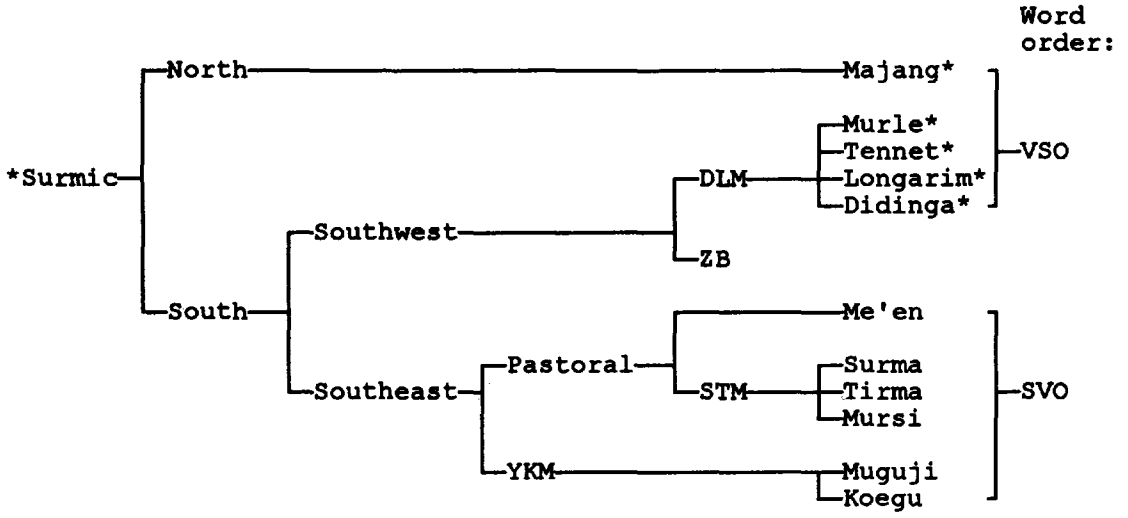
Much of the data showing that these Surmic languages do not conform to Universal 12 is not new, but can be found in published sources that have been available for some time. Tucker on Murle (1952), and Cerulli on Majang (1948) were both in print when Greenberg first formed his hypotheses, although they were probably too brief to have attracted Greenberg's attention as useful for his wide-ranging typological study. However, Driberg's article on Didinga (1931) was apparently the original source for Greenberg's Didinga data, but the data does not appear to be correctly interpreted by Greenberg (more on this below). Examples are cited from these sources to validate our claims. Where later, corroborating published evidence is available on these languages, that data is cited, also. In almost all cases the authors, in consultation with native speakers of the various languages, would prefer to edit these previously published examples (changing segments, word breaks, glosses, etc.), but since the purpose in quoting these is simply to show that the present authors' conclusions are substantiated by these previously published sources, the earlier sources are quoted verbatim.

In addition to these previous sources, the authors present many examples from their own research to substantiate and illustrate their claims regarding word order and the position of question markers. Many of these examples are from natural texts, so some of the sentences will seem strange without their contexts.

The Surmic languages (also called "Surma" and formerly "Didinga-Murle") are a group of approximately 12 Eastern Sudanic languages spoken in southwestern Ethiopia and southeastern Sudan. The following chart shows the higher level subgroupings within Surmic, as well as the relative positions of the languages cited in this article. (There are other Surmic languages which are not included in this chart.)

Chart of Surmic Relationships

Adapted from the classification of Fleming 1983:533,554



Those languages marked with asterisks in the chart are the primary focus of this article. There is, unfortunately, no syntactic data available for any language of the "ZB" grouping.

1 VSO word order

First of all, there is clear, solid evidence that at least the five Surmic languages presently under discussion have VSO as their basic order in simple clauses. Some examples are given below to show the basic word order in these languages.

Majang

Cerulli correctly noted that Majang has basic VSO order, "l'ordine della frase: verbo + soggetto + oggetto" (1948:164), but did not provide any clear examples. This word order has since been documented more clearly (Unseth 1989:108). In the Majang examples, capital consonants are used to indicate implosive stops.

Damko	daaki	taar	a	sakoye
ate	Daaki	meat	and	tuber

'Daaki ate meat and tuber.'

lɛ +koo	ɪpay	DuŋeD	domon	jɛt
SQ + FUT	chase	hyena	leopard	very

'Then hyena chases leopard very much.'

lak +i	agool	taDapu	a	joowonak	a	yɛrom	añti	omalti
have + 3s	Agool	ashes	&	coffee-hulls	&	blood	thing	each

'Agool had ashes, coffee hulls, and blood, each in a separate thing.'

Murle

Tucker and Bryan noted that Murle had VSO order (1966:389), a point which has been corroborated by Lyth (1971:47) and Arensen (1982:116).

ɛdak	kɛ́laŋɛta	taŋ	(Tucker 1952:107)
ate	leopards	cow	

'The leopards ate a cow.'

akat	murlenti	kumen	(Tucker and Bryan 1966:389)
spear	Murle	Kum	

'A Murle (person) spears a Kum (person).'

... ma	avɔi	takirnya	nici	kuwa	o	kiziwanetu e	dook ...	(Miller 1986:132)
and	took	warden	this	skin	of	buffalo	all	

' ... and the game warden took all of the buffalo skins ... '

adak	ma	et	(Lyth 1971:47)
eat	lion	man	

'The lion eats a man.'

agam	dɔl	kuluk	ci	kidicik	(Arensen 1982:102)
catch	children	fish	REL	small	

'The children catch small fish.'

Tennet

There has been some disagreement as to whether Tennet and Murle are separate languages (Bender 1977:12 and Dimmendaal 1983), but these opinions were based on limited data. Now, with more data and field work, it is believed that there is enough evidence of phonological and lexical difference to consider Tennet as a distinct language from Murle. The examples below show that Tennet is also VSO.

ányáha	ạtịdíc	lóg̣ótte̜	tịịn	bọ́ọ́rẹ́
bring	later	young-man	cows	kraal

'The young man will bring the cows to the kraal.'

ídímtá	ol	mọnyọ́mịjí	tọrkọ́nọ́m
take	people	Monyomiji	six

'The people selected six of the Monyomiji.'

ạ́gạ́m	zị	ulúmê	ạzít	cí	ẹ́ẹ́t	nẹ́cộ
grab	so	ostrich	hand	REL	man	DEM

'So the ostrich caught this man's hand.'

ídímá	zị	mạ́nyụ́dịi	zịgịc	nẹ́k	ạddịkịrẹ́	ongól	+ wa + ne	ké
take	so	squirrel	ticks	DEM	big	elephant	+ PL + LOC	back-reference

'So the squirrel took those big ticks from the elephants.'

Longarim (Narim or Boya)

Tucker and Bryan noted that Longarim had VSO order (1966:389), a point which has been corroborated by the data of Lino and de Jong (1989).

apucan ŋa ijo (Lino and de Jong 1989:88)
wipe woman pot
'The woman is wiping a pot.'

ɒŋɒlkɒ eti ɒ cini (Lino and de Jong 1989:87)
scratch man head his
'The man is scratching his head.'

Didinga

Driberg noted that Didinga had VSO order (1931:153), a point which has been corroborated by Tucker and Bryan (1966:389) and later field work by Lino and de Jong (1989).

igoriθ et umwani ten ... (Driberg 1931:155)
stole person certain cattle
'A certain person stole the cattle ... '

atam lorogila toxolunya othoreta buk (Driberg 1931:155)
catch merekat chickens dogs also
'The merekat catches both chickens and dogs.'

uhud lotaparimoi merti ... (Driberg 1931:154)
drank Lotaparimoi beer
'Lotaparimoi drank beer ... '

apak ɛɛti rriimanit (Lino and de Jong 1989:89)
split man wood
'A man is splitting wood.'

aanyik ɛɛti doholeec kuura
give man child ball
'A man gives a ball to a child.'

Since these VSO languages are on both sides of the north - south dichotomistic division within Surmic, (and there is no evidence of any non-VSO languages in Northern or Southwestern Surmic), VSO word order can be confidently reconstructed for Proto-Surmic. In contrast, one of the distinctives of Southeastern Surmic languages as a group is their common innovative SVO word order (Unseth 1988:155).

Though VSO is the basic order in these languages, there are also other variations. For example, in Murle subjects which are modified with relative clauses are often fronted ahead of the verb (Arensen 1982:52,53), and a similar shift of relative clauses ahead of verbs has been noted in Majang and Tennet. The same can be true in Didinga, though this can also be due to matters of emphasis. Also, in Murle, Didinga, Tennet, and Longarim certain experiential constructions are generally VOS, such as:

Murle

adak eet magiz
eats man hunger
'Hunger eats the man.' (Idiomatically, 'The man is hungry.')

aruk eet kɔr
beat man sun
'The sun beats the man.' (Idiomatically, 'The man is thirsty.')

Didinga

adak eet magizi
eat man hunger
'Hunger eats the man.' (Idiomatically, 'The man is hungry.')

Tennet

áúd +da aŋéta lájjó
drink+1sO me cold
'Cold is drinking me.' (Idiomatically, 'I am feeling cold.')

áúce aŋéta kééng
hurt me stomach
'My stomach is hurting me.'

Longarim

ɛrekca aneţa gɔl (Tucker & Bryan 1966:389)
forgot me road
'Forgot me the road/I forgot the road.'

It is important to note in the Longarim example that the 1st person pronoun is an object form, not subject. In Murle, Didinga, and Tennet, the corresponding verb 'forget' (or perhaps, 'escape the mind of') behaves the same way.

In another example of SVO word order, Majang subjects are often fronted when introduced with the switch-reference (SR) conjunction ma.

ma ɛmesa toona kɛgɛgɛ kiwu
SR mother child grind porridge
'The child's mother was grinding porridge.'

Murle also fronts subjects of negated declarative sentences (Arensen 1982:52), as does Longarim, etc. However, these alternative word orders can best be derived from a basic VSO order, rather than trying to derive the many VSO examples from some other underlying order. This fits Greenberg's Universal 6, "All languages with dominant VSO order have SVO as an alternative" (1966:110).

2 Interrogative words non-initially

Greenberg's Universal 12 predicted that VSO languages would "always" have interrogative words sentence initially. However, all Surmic languages (for which data is available) use interrogative words at the *end* of content questions. This includes the VSO languages of Southwestern and Northern and also the SVO languages of Southeastern Surmic. This does not mean there are never interrogative words in non-final position, but finally is the usual position for question words. Greenberg's hypothesis was that in VSO languages, interrogative words "always" occur in initial position, so this is adequate to prove an exception to the proposed universal. It is important to note that these interrogative words do not occur simply post-verbally or in some other non-initial position; rather they generally occur sentence finally. The significance of this point will be discussed below in section 3.

Considering only the data, for the moment, and setting aside questions of universals, it is interesting to note that most interrogative word questions in these languages replace an adverbial phrase, a phrase which would typically follow the verb, subject and object, anyway. Viewed from only this angle, the sentence final position of these interrogative words is not unusual.

Examples are given below to show the sentence final position of interrogative words. Examples are included from the SVO Southeastern Surmic languages to show that interrogative words are found in sentence final position in all other Surmic languages, as well (a point relevant to the discussion of postpositions in section 3 and also in reconstructing the position of interrogative words in Proto-Surmic, below).

In comparing these question sentences, at least two things are noteworthy. First, though these languages have all preserved the common sentence final position for interrogative words, the interrogative words themselves have very little phonetic resemblance in the present form of these languages. Secondly, a number of the transitive questions have OV order, a point that should be investigated in the future.

Majang

lákin tómoka egér (Cerulli 1948:140)
have children how-many?
'How many children do you (sg.) have?'

rer + ko ale woDu (Cerulli 1948:140)
die + NP day who?
'Who died yesterday?'

ma + koo + t + a daakɛ a ɪndi wooD
and + FUT + 1sO + DT happen as mother who?
'And who will be my mother for me?'

jarti + naak Dami jɪk Note: OV order
woman + my ate what?
'What ate my woman?'

kɛtɛko kɛɛn wo +g
cut trees which+PL
'Which trees did he cut?'

a +reer+ii a iin ɛk
SQ+run +1p and you how?
'We will run, and how will you do?'

rɛr+ko taŋ wok
die+NP cow whose?
'Whose cow died?'

maj+ɪr toomo +goon+ɛ jɪkun
thin+3p children+your +NOM what?
'Why are your children thin?'

There is at least one type of interrogative sentence in Majang that does not have the interrogative word at the absolute end of the sentence. If a question involves a location marked with a locative postposition, the locative case marking will be affixed to the question word and the postposition will take its usual place after the word marked with the locative case marker. Since the postposition is closely related to the case marking which is affixed to the interrogative word, the fact that the question word is not absolutely sentence final does not seem to be a significant exception to the general pattern of interrogative words finally.

maakɛlɛ jik +oy tak
maize what?+LOC in
'What is the maize in?'

Murle

aʈókcuŋ ña (Tucker 1952:108)
beat-you why?
'Why did he beat you?'

ányi ɛða iðɔk (Tucker and Bryan 1966:386)
have goats how-many?
'How many goats have you?'

kɛɛt cakuŋa ɛdɛti jaŋ (Lyth 1971:49)
tree coming cut which?
'Which is the tree he is coming to cut?'

bilija agamit niigi kuluk ci meelik ŋadaaŋ (Arensen 1982:115)
night catch they fish REL many where?
'Where did they catch many fish last night?'

ma kavɔ dim zɛɛ been tammu arum tammu ŋɛnɛ (Arensen 1982:119)
if we-go disappear on toward heaven arrive heaven who?
"If we fly into the sky, who will arrive in heaven first?"

owodɛ taŋ liil +a tɛ waŋa
drink cow river+LOC INTR when?
'When did the cow drink at the river?'

aruk yo niini maa ku
kill INTR he lion how?
'How does he kill a lion?'

Interrogative words in Murle can come at the end of a clause, but in an emphatic question the same question word can appear both initially and finally in the same sentence. One clear exception to the pattern of sentence final questions words in Murle is that the question word ŋɛnɛ 'who?' occurs in the normal subject and object slots, rather than at the end of the clause (Arensen 1982:115). In the following example taken from Lyth (1971:50), retranscribed by Arensen, it is interesting to note that the question word is initial in the relative clause construction.

ŋɛnɛ ci ŋaan kodom dila
who? REL not-yet take spear
'Who has not yet taken his spear?'

It is possible to interpret such examples as containing a cleft construction, e.g. 'Who is it that has not yet taken his spear?'. Similar constructions are also found in Didinga, Tennet, and Majang, where clefting can give a sentence initial question word. Clefting, then, is one way that some interrogative sentences in these languages avoid having a sentence final question word. It is interesting to note that in a cross linguistic study, Harries-Delisle concluded that certain types of "questions ... are in fact derived from underlying cleft sentences" (1978:479).

Miller gives a single example where a vocative follows an interrogative word, so the question word is not exactly final. However, the vocative is not part of the clause, rather a stylistic embellishment in this story.

kadaŋɔ naa lɔgɔze (Miller 1986:126)
we-argue why gentlemen
'Why do we argue, gentlemen?'

The pattern of sentence final question words is strong, though it is not absolute. Some rhetorical questions, functioning as strong rebukes, front the question word, as seen in the following example.

naa wanbaale alaŋ arooŋ tonayan wɛrɛgɛ (Miller 1986:123)
why? before not you-want to-send-me letter
'Why didn't you send me a letter before?'

In this example, the interrogative word is fronted for emphasis, fronting being common in Murle.

Tennet

In Tennet, also, question words usually come sentence finally.

aran +ná nikó nya
laugh+1sO like-this why?
'Why are you laughing at me like this?'

ányáha atidíc lógóttę tiin izǫng
bring later young-man cows how-many?
'How many cows will the young man bring?'

áúde etté tąng liílá vongá
drink NP cow river when?
'When did the cow drink at the river?'

ógin tíína ngá báál (Note the time adverb following the question word.)
sleep cows where? night
'Where do the cows sleep at night?'

ávê inná ngá wązín dǫ́ǫk (Again, the time adverb follows the question word)
be you where? day all
'Where were you all day?'

ngáá kamúdâ ngá Note: OV order
woman I-get where? Fronting the object is a discourse strategy.
'Where will I get a wife?' This sentence is not acceptable in isolation.

ákáti íccá enné máá kú
kill can he lion how?
'How can he kill a lion?'

However, as in Murle, the question word may appear initially in a relative clause clefting construction.[3]

ngene cí adíc ányâ tiin bǫǫ́ré
who? REL later bring cows kraal
'Who will bring the cows to the kraal?'

Longarim

áyákkii ęta iðɔŋ (Tucker & Bryan 1966:391)
have-you goats how-many?
'How many goats do you have?'

áðar cugúník ŋene (Tucker & Bryan 1966:390)
name your who?
'What is your name?'

[3] While these relative clause constructions appear to be lacking a main verb (in fact, the only overt constituent in the main clause is a question word), it is useful to note first, that the question word appears in its accusative form, and second, that Tennet has a stative construction that may consist simply of two nouns in the accusative form. The fact that the main clause resembles a stative construction further supports the type of alternative translation proposed in the discussion of Murle, above: 'Who (is it) that will bring the cows to the kraal?'

aʈuyú gu +yá ña (Tucker & Bryan 1966:377)
sit fire + LOC why?
'Why do you sit by the fire?'

alug tɟna uguk vaŋan
migrate cows your(PL) when?
'When did your cows migrate from here?'

iryokcu te bio dyati +a kɟ ŋɛnɛ
went-with NP before vegetable + for with who?
'With whom did you go for the vegetable?'

anyi te eti cɟ nyabolonu moliʈ cɟ anine
give + you NP man REL debt calf REL what?
'What kind of calf did the debtor give you?'

Didinga

atiyu nik gwoy + a ini (Driberg 1931:156)
sit you fire + LOC why?
'Why are you sitting by the fire?'

axuxi ele ina (Driberg 1931:154)
hurt body where?
'Where are you in pain?'

atabju nik ne (Driberg 1931:153)
want you(PL) what?
'What do you (PL) want?'

anyakane niŋawan (Driberg 1931:155)
he-bring when?
'When did he bring it?'

añakini etha thoŋ (Tucker and Bryan 1966:386)
have-you goats how many?
'How many goats do you (sg.) have?'

ece + beeh + i occa ggoon + u hɛɛt inni
tie + to + you may friend + your tree why?
'Why did you tie your friend to a tree?'

ɒkɒ hatɟ nii akati mana cunni hatɟ + ŋaan
go FUT you dig garden your FUT + when?
'When will you dig your garden?'

ɟin gɒɒŋ tɟina cɟg ttihɛɛttag zɒŋ
is usually cows of marrying how-many?
'How many cows are usually needed for marrying?'

haj zzaar cugunnig ŋanj
we-call name your who?
'What is your name?'

As with Murle, in Didinga, "who?" or "what?", when referring to the subject or object, can come sentence initially, especially when emphasized:

neegi habuu, nee cj acini ho Emphatic
what? chief what? REL you-see so
'What, chief, do you see?'

adjmani neegi hɒrggɐɐn+a Non-emphatic
you-do what? middle +LOC
'What do you do in the meantime?'

Again, in a manner similar to the Murle pattern shown above, a question word can be fronted when a rhetorical question is used as a rebuke:

inni dhuheek ljjbbjra caannj tuu ho
why? you.throw needle my away so
'Why did you throw my needle away?!'

This sentence is marked in two ways. First, the question word is fronted. Secondly, the perfective aspect of the verb is used, instead of the imperfective which occurs in a real question.

In contrast to the VSO word order of the languages of Southwestern Surmic and Majang, the languages of Southeast Surmic are all SVO (Unseth 1988:155). In these languages, also, question words are usually in sentence final position. Though the change from VSO to SVO makes them no longer exceptions to Universal 12, again the fact that the question words are not merely non-initial but final is significant, a topic addressed in section 3, below.

Me'en

mende nis ŋɔroɔ anin (Will 1990:4) Note: OV order
corpse kill eleph. who?
'Who killed the elephant?'

nen kun i:de (Will 1989:146)
he come where?
'Where does he come from?'

ri?isɛnɔ kiyaŋ (Will 1990:94)
you.fear why?
'Why are you afraid?'

tuma na hak minen (Will 1990:125)
rain FUT fall when?
'When will it rain?'

Surma

keo kedu noy — Note: OV order
tree cut who?
'who cut the tree?'

kuni miŋa
came when
'when did s/he come?'

ŋanda adoriya nini — (Wedekind, ms.)
this house whose?
'Whose house is this?'

ŋa rumɪba waga a?isoŋ — (Wedekind, ms.)
this clothing price how-much
'What is the price of this clothing?'

Mursi

buna hin noi — (Turton & Bender 1976:542) Note: OV order
coffee want who?
'Who wants coffee?'

šuunu re minaŋ — (Turton & Bender 1976:551)
father die when?
'When did your father die?'

seni ɛɛnɛŋ — (Turton 1981:341)
say what?
'What did you say?'

a báánunu? iñe béméθi ɔŋ — (Turton 1981:346) Note: OV order
? yours it? you-do what?
'What did you do to make it yours?'

sara gʊñu a nɛŋ — (Turton 1981:341)
name your COP what? — (The word glossed 'what?' is probably 'who?')
'What is your name?'

gwi bɛlɛθɛn nɛŋ — (Turton 1981:336) Note: OV order
garden divide for-whom?
'For whom do you divide the garden?'

Muguji

apala ka?o — (Bender, Lydall and Strecker ms.)
cloth which?
'which cloth?'

Koegu

muuda oshi apala o (Hieda 1992:153)
Muuda want clothes what?
'What clothes did Muuda want?'

oisho mataa nin (Hieda 1992:153)
coffee drank who?
'Who drank coffee?'

muuda oisho mataa aamiŋ (Hieda 1992:153)
Muuda drank coffee when?
'When did Muuda drink coffee?'

With interrogative words appearing sentence finally in all these Surmic languages, they can be assumed to have been such in Proto-Surmic, also. We see then that Proto-Surmic can be reconstructed as having VSO order and sentence final question words.

3 Postpositions

All present Surmic languages use postpositions. Greenberg proposed in his Universal 9, "With well more than chance frequency, when question particles or affixes are specified in position by reference to the sentence as a whole, ... such elements are found ... , if final, in postpositional" languages (1966:110). If "particles" can be interpreted as including these interrogative words, then we have a possible explanation for why these VSO Surmic languages have their interrogative words sentence finally. That is, the presence of postpositions creates a pressure to put question words sentence finally. However, as a result of conforming to Universal 9 (having interrogative words sentence finally) these languages are exceptions to Universal 12. A few examples of the use of postpositions in these VSO languages are given below:

Majang

Cerulli first mentioned the use of "postposizione" in Majang (1948:147), but did not give any satisfactory examples.

gode markos + uk goy + so
house Markos + GEN past + DEM (so is the far demonstrative)
'beyond Markos' house '

dokuDe eet a yaket kɔɔr
sit I and Yaket middle
'Sit down between me and Yaket.'

Boŋk + áá + ko kɪlt gotarey + e tak
take + 1s + NP mouse granary + LOC in
'I took a mouse from out of the granary.'

ar tááwá + naak + é kúrkúm amD + so
be field + my + NOM hill belly + DEM (so is the far demonstrative)
'My field is below that hill.'

gode + naak + e gode danel + ɪk taamek + ɛ
house + my + NOM house Daniel + GEN face + LOC
'My house is in front of Daniel's house.'

Bokot + aa + ko kooko gop + e kɛnt + ɛ
kill + 1s + NP snake road + LOC edge + LOC
'I killed a snake at the side of the road.'

ɪbaali danel keet dir + e[4]
play Daniel tree foot + LOC
'Daniel is playing at the foot of the tree.'

The SWS languages all have postpositions, though the literature has used the word "prepositions", even when the accompanying examples show postpositions (Tucker and Bryan 1966:377 and Lyth 1971:43). Apparently Greenberg (1966) and Hawkins (1983), both of whom included Didinga as part of their sample, uncritically noted the use of the word "preposition" in the published descriptions, classifying Didinga as a language with prepositions. The following examples confirm that that these languages do indeed have postpositions.

Murle

arɛk kɛɛt taden + a (Lyth 1971:9)
put tree on/over + LOC
'Put in up in the tree.'

abil maa kɛɛn loot + a (Arensen 1982:57)
stand lion trees under + LOC
'The lion stands under the trees.'

Tennet[5]

dimá udúc íjj + â écitó
take calabash pot + LOC inside
'Take the calabash that is in the pot.'

úmúdá ulúmé ele ông ngínaatí kéét + á vúrt + â
find ostrich herself lying there tree + LOC end + LOC
'They found ostrich herself lying under a tree.'

[4] The form keet is a result of kɛɛt 'tree' with e the locative suffix, a phonological assimilation first unravelled by Bender (1983:147, fn. 2).

[5] The question of whether Tennet should be considered prepositional or postpositional is debatable, however, since most of its postpositions behave like nouns, and since it also has at least two prepositions, which do not behave like nouns (A. Randal, forthcoming).

ókkó	zi	ácín	gótón +i	ólla	áve	céézz	orgén +a	ngínaatu
go	so	he-see	brother + his	simply	be	house	middle + LOC	here

'He went and found his brother in the center of the house.'

Longarim

avi	oruð	deger +á	tɔ	(Tucker & Bryan 1966:386)
is	dog	granary + LOC	under	

'A dog is under the granary.'

Didinga

ai	othori	erag +a	urut + a	(Driberg 1931:156)
is	dog	granary + LOC	end + LOC	

'A dog is under the granary.'

muúr + á	kújén	taŋŋ + a	kújén	(Odden 1983:169)
hill + LOC	on	cow + LOC	on	
'on the hill'		'on the cow'		

biyy +a	gɒlla	heet + a	bahuuc + a
stone + LOC	behind	tree + LOC	back + LOC
'behind the stone'		'behind the tree'	

The following examples are from SVO Surmic languages to show that postpositions are found in these also.

Me'en

kes +o	teek	(Will 1989:133)
house + LOC	in(to)	

'in(to) the house'

kes +o	tunto	(Will 1989:133)
house + LOC	on	

'on the house'

k?urša	ii	patage	Buwɔ	(Will 1990:28)
money	be	hide	under	

'The money is under the hide.'

Surma

alli	tundo	ju	toy	dori	tundo
stool	on	pot	in	house	on
'on a stool'		'in a pot'		'on the house'	

Mursi

ali bai (Turton & Bender 1976:543)
stool under
'under a stool'

dori +tutu +o (Turton & Bender 1976:543)
house + mouth + LOC
'in front of a house'

dori +tui (Turton & Bender 1976:543)
house + in
'in the house'

dori +tuno (Turton & Bender 1976:543)
house + on
'on the house'

Muguji

ɛruŋ aniba guwar kien (Bender & Strecker ms.)
man is path on
'A man is on the path.'

toʔo tuuŋ (Bender & Strecker ms.)
house inside
'inside the house'

Koegu

toʔo tu'oŋ (Hieda 1992:136)
house in
'inside the house'

The discovery of postpositions in VSO languages is a typological surprise. Greenberg predicted it would not happen (1966:110), and so did Heine (1976:31,34). However, following Hawkins (1983:68), it is only the discovery of something that is possible, but highly marked.

4 Conclusion

It has been shown that Didinga, Longarim, Murle, Tennet, and Majang are all VSO and therefore Proto-Surmic can also be reconstructed as having been VSO. Furthermore, it has been shown that these five languages generally have interrogative words sentence finally and therefore this must have been the case for Proto-Surmic, too. Therefore, it can be assumed that Proto-Surmic itself must have been VSO and generally had interrogative words sentence finally. So, not only Didinga, Longarim, Murle, Tennet, and Majang, are exceptions to Greenberg's Universal 12, but Proto-Surmic must have been an exception to Universal 12, also. This exception to Universal 12, then, has endured a very long time.

All Surmic languages have postpositions, both those that are VSO and those that are now SVO. Though these five VSO languages do not conform to Greenberg's Universal 12, they all do conform to Greenberg's Universal 9, which predicts that languages with postpositions will have sentence final question markers (1966:110). The position of question markers sentence finally, then, may be inconsistent with VSO order, but it is consistent with the presence of postpositions. However, the presence of postpositions in all of these VSO Surmic languages is a violation of Greenberg's Universal 3, that VSO languages do not have postpositions. The VSO Surmic languages, then, are exceptions to Greenberg's Universal 12 and Universal 3, but not Universal 9. If these languages did not have VSO order, they would violate neither Universal 3 nor Universal 12. The present data would support the hypothesis that the presence of postpositions is more important than basic VSO word order in governing typologically conditioned factors (Hawkins 1983:116).

The Southeastern Surmic languages are SVO, e.g. Me'en and Mursi, and are not exceptions to Greenberg's Universal 3 or Universal 12 because of this word order shift. It may be that the change of Proto-SES from VSO to SVO was caused (at least in part) by typological pressures. However, those Surmic languages which have retained VSO order have maintained their typologically anomalous structures a very long time.

Greenberg's Universal 12 has faced very few exceptions for over 30 years. This small group of exceptions from Surmic in no way nullifies Greenberg's original insight. However, it does demonstrate that Universal 12 describes only a strong statistical tendency, not an absolute restriction. The fact that these Surmic languages have more than one unusual typological trait undoubtedly adds to the complexity of interaction among typological parameters.

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The Pronouns of Banda-Tangbago of Sudan[1]

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0. Introduction

The Banda languages and dialects are spoken in the Central African Republic (CAR), Zaire, and Sudan. They comprise a sub-branch of what are now commonly called the Ubangi languages, which in turn comprise the Eastern branch of Greenberg's (1970) Adamawa-Eastern family of the Niger-Congo stock of languages. Tangbago is a dialect of the Central group of the Banda sub-branch, and has speakers in both CAR and Sudan. Data for this paper were gathered in 1982 in the Sudanese town of Sopo.

The following is a description of the pronouns of Sudanese Tangbago, including ten personal pronouns which are differentiated according to animacy, person, and plurality. These occur in seven allomorphic sets, which correspond to what could be termed "cases" realizing different semantic functions. Also described are the interrogatives and certain other miscellaneous pronouns, as well as the same-subject pronoun which replaces the normal subject pronoun under certain circumstances within narrative discourse.

Chart of Personal Pronouns

	1	2	3	4	5	6	7
3–IN	ə́	ə́	ø	tə̀	**	nə̀	**
3S–AN	sə̀	ə̀sə̀	sə̀	sə̀	sə̄	yē	nə̀
3P–AN	ə̀njē	ə̀njē	ə̀njē	ə̀njē	ə̀njē	ə̀njē	ə̀njē
3S–LOG	ə̀nē	ə̀nē	ə̀nē	ə̀nē	*	ə̀nē	ə̀nē
3P–LOG	ānē	ānē	ānē	ānē	*	ānē	ānē
2S–AN	bə̀	ə̀bə̀	bə̀	bə̀	*	sə̀	sə̀
2P–AN	yē	ə̄ʔē	ʔē	ʔē	*	ʔē	ʔē
1+2–AN	ʔà`	ə̀sə́	ə̀sə́	ə̀sə́	*	ə̀sə́	ə̀sə́
1P–AN	ʔā	āʔā	ʔā	ʔā	ʔā	ʔā	ʔā
1S–AN	mə̄	ə̄mə̄	mə̄	mə̄	mə̄	mə̄	mə̄
	subj of vb	indep	obj of vb	obj of prep-1	indir voc	obj of prep-2, Gen	Kin

List of Abbreviations

* = unattested
** = impossible due to pragmatic restrictions
1 = first person
2 = second person
3 = third person
AN = animate
FOC focus
Gen = genitive (general)
IMPF = imperfective aspect
IN = inanimate
Indep = Independent
Indir = Indirect
Kin = genitive (kinship)
ø = zero morpheme
obj = object
P = plural
prep-1 = class 1 preposition
prep-2 = class 2 preposition
PROG = progressive aspect
RECP = reciprocal
REFL = reflexive
S = singular
SS = same-subject pronoun
subj = subject
vb = verb

[1] Presented at the 20th Annual Conference on African Linguistics, 19-22 April, 1989.

1. The Personal Pronouns

The ten personal pronouns are differentiated according to animacy, person, and plurality (see chart on page 91). There are two categories of animacy: "animate" and "inanimate". "Animate" includes humans and animals; "inanimate" includes everything else.

1.1. The Inanimate Pronoun (3-IN)

Due to pragmatic restrictions, the inanimate pronoun occurs only in the third person; i.e., for an inanimate object to be treated as Communicator or Audience involves personification and a switch to animate pronouns.

Plurality is also insignificant in Tangbago of Sudan, the same pronoun serving for both singular and plural. This is in contrast with the Linda dialect of the Central African Republic, in which the 3P-IN pronoun differs from the 3S-IN one (Cloarec-Heiss, 1986:71).

(1) **ə́ ngə́lə̀ ké**
3-IN finish already
It is finished.

(2) **... ə́ tə́rə̀ sə́lə́ yē də̀ tə̀**
SS stab inside 3S-AN with **3-IN**
...and he stabbed him with it.

(3) **ə́ lə̀ vōkə̀**
3-IN be[plural] ¿how.many?
How many are they?

1.2. The Animate Pronouns

For the animate pronouns, there are three categories of person: "first", which refers to the (singular) Communicator; "second", which refers to the (singular) Audience; and "third", which refers to a referent other than the Communicator or the Audience. There are also two categories of plurality: "singular" and "plural". These categories of person and plurality are realized in various combinations by the nine animate pronouns, as illustrated below:

1.2.1. Third Person Singular (3S-AN) :

(4) **sə̀ yí áná yē**
3S-AN stretch arm **3S-AN**
She stretched out her arm.

(5) **yándá yú sə̀**
Yândâ ask **3S-AN**
Yândâ asked him.

1.2.2. Third Person Plural (3P-AN) :

This pronoun is used for two or more referents other than the Communicator or the Audience:

(6) **ə̀njē pú sə̀ ə́nnnə́ tə̀rə̀**
3P-AN seek 3S-AN long.time in.vain
They searched long for him in vain.

(7) **sə̀ tákpà ə̀njē má tə́ mbíngú**
3S-AN meet **3P-AN** at in Mbîngû
He met them at Mbîngû.

Since Tangbago has no passive construction, the set 1 3P-AN form (see 2.1) is also used as an "impersonal they" with a singular verb when the agent is not named:

(8) **ànjē sə́ yù àgbòlò**
3P-AN be[singular] bathe child
The child is being bathed.

1.2.3. Third Person Logophoric (3S-LOG and 3P-LOG) :

In addition to the above third person animate pronouns, there are also two third person animate logophoric pronouns which are used in indirect quotations to indicate co-reference between the quoted Communicator and the same referent within the quotation:

(9) **sə̀ pā ànē sə́ gù tə̀**
3S-AN say **3S-LOG** be come PROG
He$_a$ said that he$_a$ was coming.

(10) **ànjē pā ānē zɨ́ ké**
3P-AN say **3P-LOG** eat already
They$_a$ said that they$_a$ had eaten it already.

Since the quoted Communicator is referring to himself, the logophoric pronoun corresponds to a first person pronoun in a direct quotation:

(11) **sə̀ pā mə̄ sə́ gù tə̀**
3S-AN say **1S-AN** be come PROG
He said, "I'm coming."

(12) **ànjē pā ʔā zɨ́ ké**
3P-AN say **1P-AN** eat already
They said, "We have eaten it already."

If the Communicator were referring to someone other than himself, examples (9) and (10) would read:

(13) **sə̀ pā sə̀ sə́ gù tə̀**
3S-AN say **3S-AN** be come PROG
He$_a$ said that he$_b$ was coming.

(14) **ànjē pā ànjē zɨ́ ké**
3P-AN say **3P-AN** eat already
They$_a$ said that they$_b$ had already eaten it.

1.2.4. Second Person Singular (2S-AN) :

(15) **bə̀ sə́ pàrà yōkɔ̀**
2S-AN be seek ¿what?
What are you looking for?

(16) **àkɔ̄ sə̀ dúrù kə́ wò bə̀**
husband 2S-AN want to kill **2S-AN**
Your husband wants to kill you.

1.2.5. Second Person Plural (2P-AN) :

This pronoun is used for an Audience of two or more animate referents.

(17) **yē zā yābùrù nə̀ gùtə̀**
2P-AN take goat the coming
Bring the goat!

(18) **ʔà` də̀ ʔē tɔ́ ákɔ́ nà**
1+2-AN with **2P-AN** throw gambling.device ¿okay?
I'll gamble with you, okay?

1.2.6. First Person Plural Inclusive (1+2-AN) :

This pronoun includes the Communicator and the Audience, either of which may optionally be plural.

(19) **ʔà` nā ə́ jī ngāšá**
1+2-AN go SS dig ngäshâ
Let's go dig up ngäshâ tubers.

(20) **àlɔ̀ má ngbàngà də̀ àbá ə̀sɔ́ də̀ ə̀yīlàngú**
sun make court.case with father **1+2-AN** be God
The sun took God our Father to court.

1.2.7. First Person Plural Exclusive (1P-AN) :

This pronoun is used for the Communicator plus at least one other animate referent other than the Audience.

(21) **ə̀njē wú ʔā**
3P-AN see **1P-AN**
They saw us.

(22) **àbá ʔā cú ké**
father **1P-AN** die already
Our father has died.

1.2.8. First Person Singular (1S-AN) :

(23) **mə̄ sə́ gù tə̀**
1S-AN be come PROG
I am coming right back.

(24) **àbá mə̄ čú ké**
father **1S-AN** die already
My father has died.

1.2.9. Accompaniment :

Notice that Banda uses plural pronouns in Accompaniment constructions where English uses singular pronouns:

(25) **ʔà` də̀ ʔē tɔ̄ ákɔ́ nà**
1+2-AN with 2P-AN throw gambling.device ¿okay?
I will gamble with you, okay?

(26) **ə̀njē ʔíà fó də̀ yándá**
3P-AN rise up with Yândâ
He got up with Yândâ.

2. The Personal Pronoun Sets

There are seven pronoun sets as shown in the chart on page 91. Each set corresponds to what could be termed a "case". Most of the pronouns have identical forms in several of the sets, but every set is differentiated from the others by at least one form.

2.1. Set One

Set 1 pronouns fill the "subject" slot of the clause, which is before the verb (Tangbago is a SVO language) :

(27) **sə̀ ná má ndə́ ə̀tèrə̀**
3S-AN go at at.place.of Etehre
He went to Etehre's place.

(28) **ʔà` wú sə̀ mâmbɨ́**
1+2-AN see 3S-AN earlier
We saw him earlier today.

When a Set 1 pronoun is followed by the imperfective aspect morpheme ə́, a fusion takes place in which both the final tone of the pronoun and the segment ə of the aspect particle elide, leaving the high tone of the aspect marker to fall on the vowel of the pronoun, and in the case of the 1+2-AN pronoun, combining with the remaining low tone to form a rising tone. Thus,

sə̀ + ə́ → sə + ´ → sə́ and
ʔà` + ə́ → ʔà + ´ → ʔǎ.

(29) **sə́ zà bə̀ tɨ̄ nə̄**
3S-AN+IMPF leave 2S-AN alone not
He will never leave you.

(30) **ʔǎ wù sə̀ nə̄**
1+2-AN+IMPF see 3S-AN not
We won't see him.

2.2. Set Two

Set 2 pronouns are often called "independent". Set 2 is employed when the pronoun is a complete utterance, for a vocative, for emphasis, or to realize something Named or Identified:

(31) **ə̄mə̄**
1S-AN
Me?

(32) **ə̀bə̀, gù wǎmə̄**
2S-AN come hither
You, come here!

(33) **bə́ nà ndə́ yōkɔ̀, dākà, ə̄mə̄ mə̄ nā̄**
2S-AN+IMPF go for what remain 1S-AN 1S-AN go
Why are you going? Stay here; I'll go.

(34) **ə̄mə̄ də́ pángú**
1S-AN be Pângû
I am Pângû.

(35) **ɔ́ dɔ́ ɔ̀ngbɪ̀rɪ̀ dɔ́ nɔ̄**
3-IN be salt be not
It's not salt.

2.3. Set Three

Set 3 pronouns fill the "object" slot of the clause, which follows the verb:

(36) **mbàlà wó sɔ̀**
elephant kill 3S-AN
An elephant killed him.

(37) **ɔ̀njɛ̄ zɪ́ ø ké**
3P-AN eat 3-IN already
They have eaten it.

When followed by the same-subject pronoun ɔ́ (section 3), a fusion takes place which is like that described in 2.1:

(38) **ɔ̀kù nɔ́ mɔ̄ kà mɔ́ kà**
sore of 1S-AN hurt 1S-AN+SS hurt
My sore hurts me.

2.4 Set Four

Pronouns which are objects of prepositions are taken from Sets 4 and 6. Set 4 pronouns are used with a small class of prepositions which realize semantic Accompaniment, Instrument, Beneficiary, Recipient, Reason and Comparison:

(39) **ʔā́ ná dɔ̀ sɔ̀**
1P-AN go with 3S-AN
I went with him.

(40) **... ɔ́ tɔ́rɔ̀ sɔ́lɔ́ yɛ̄ dɔ̀ tɔ̀**
SS stab inside 3S-AN with 3-IN
...and he stabbed him with it.

(41) **nà, ɔ́ yɔ̄ lɔ́bà fɪ̄ mɔ̄**
go SS buy cloth to 1S-AN
Go buy me some cloth!

(42) **... ɔ́ zá ɔ̀ nɔ́ bàngá nɔ̀ sɔ́mɔ̀ fɪ̄ sɔ̀**
SS give that of friend 3S-AN that to 3S-AN
...and gave his friend his.

(43) **mɔ̄ gú lɔ́ ɔ̄gō šéyɛ̄ bɔ̀rɔ̀ sɔ̀**
1S-AN come in land this on.account.of 3S-AN
I came to this land on account of him.

(44) **ɔ̀kɔ̄ mɔ̄ mâmbɪ́ á·sɔ́ māndà bɔ̀ yɛ̄ nɔ̄**
husband 1S-AN earlier not·be like 2S-AN that not
Earlier today my husband wasn't like you!

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ʔà` + ə́ → ʔà + ´ → ʔă.

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He will never leave you.

(30) **ʔă wù sə̀ nə̄**
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2S-AN+IMPF go for what remain 1S-AN 1S-AN go
Why are you going? Stay here; I'll go.

(34) **ə̄mə̄ də́ pángú**
1S-AN be Pângû
I am Pângû.

(35) **ɔ́ dɔ́ ɔ̀ngbɪ̀rɪ̀ dɔ́ nɔ̄**
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An elephant killed him.

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They have eaten it.

When followed by the same-subject pronoun ɔ́ (section 3), a fusion takes place which is like that described in 2.1:

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sore of 1S-AN hurt 1S-AN+SS hurt
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I went with him.

(40) **... ɔ́ tɔ́rɔ̀ sɔ́lɔ́ yɛ̄ dɔ̀ tɔ̀**
SS stab inside 3S-AN with 3-IN
...and he stabbed him with it.

(41) **nà, ɔ́ yɔ̄ lɔ́bà fɪ̄ mɔ̄**
go SS buy cloth to 1S-AN
Go buy me some cloth!

(42) **... ɔ́ zá ɔ̀ nɔ́ bàngá nɔ̀ sɔ́mɔ̀ fɪ̄ sɔ̀**
SS give that of friend 3S-AN that to 3S-AN
...and gave his friend his.

(43) **mɔ̄ gú lɔ́ ɔ̄gō šéyɛ̄ bɔ̀rɔ̀ sɔ̀**
1S-AN come in land this on.account.of 3S-AN
I came to this land on account of him.

(44) **ɔ̀kɔ̄ mɔ̄ mâmbɪ́ á·sɔ́ māndà bɔ̀ yɛ̄ nɔ̄**
husband 1S-AN earlier not·be like 2S-AN that not
Earlier today my husband wasn't like you!

2.5. Set Five

Set 5 is used for indirect speech vocatives; i.e., vocatives in reported speech. They always occur in the phrase: **ə̀ də́... yē**, approximated by the English phrase 'as for...'. For example, supposing Referent A says to Referent B:

(45) **pángú, ʔà nā ndə́ ə̀njē**
Pângû 1+2-AN go at.place.of 3P-AN
Pângû$_b$, let's$_{a,b}$ go after them$_c$

Then if Referent B reports it to Referent D, he will say:

(46) **sə̀ pā, ə̀ də́ mə̄ yē, ʔā nà ndə́ ə̀njē**
3S-AN say PRT be 1S-AN that 1P-AN go at.place.of them
He$_a$ said that, as for me$_b$, we$_{a,b}$ should go after them$_c$

Some other examples:

(47) **sə̀ pā, ə̀ də́ mə̄ yē, àbá mə̄ ə̀ də́ ngàvìlî**
3S-AN say PRT be 1S-AN that father 1S-AN FOC be Ngavihlî
He said that, as for me, my father was Ngavihlî. [in direct speech: *He said, "Pângû, your father is Ngavihlî".*]

(48) **sə̀ pà dē, ə̀ də́ sə̄ yē, sə̀ nà, ə́ yù tə́ yē**
3S-AN say PRT be 3S-AN that 3S-AN go SS bathe REFL 3S-AN
She said that, as for him, he should go bathe himself. [in direct speech: *She said, "Pângû, you should go bathe yourself."*]

2.6. Set Six

Set 6 pronouns can be objects of prepositions (as mentioned in 2.4) or be used in "genitive" constructions. The former are discussed in 2.6.1, and the latter in 2.6.2. Reflexivity and reciprocality are discussed in 2.6.3.

2.6.1. Set 6 Pronouns as Objects of Prepositions

The class of prepositions that take Set 6 pronouns is much larger than the one discussed in 2.4. Most of these are derived from nouns and realize semantic spatio-temporal locationals such as "before, behind, on, after," etc. But some realize other semantic functions. In particular, the preposition **nə́** 'of', occurring in noun phrases, realizes such semantic functions as Ownership, Dependency, and Responsibility.

(49) **ə̄cī yē**
in.front.of 3S-AN
in front of him

(50) **bìdí yē**
behind 3S-AN
behind him

(51) **pá nə̀**
on 3-IN
on it

(52) **lə́ nə̀**
in 3-IN
in it

(53) **àndà nə́ yē**
hut of 3S-AN
his hut

(54) **kàngà nə́ mə̄**
slave of 1S-AN
my slave

(55) **ə̀gbòlò nə́ sə̀**
child of 2S-AN
your child (dependent)

(56) **làgō nə́ yē**
village of 3S-AN
his village

(57) **wālā nə́ yē**
lie of 3S-AN
his lies

2.6.2. Set 6 Pronouns in Genitive Constructions

Set 6 pronouns are also used in genitive constructions which realize such semantic functions as Material Composition, Partitive Relationships, Events, etc.:

(58) **àlà mə̄**
eye 1S-AN
my eyes

(59) **kòngúá yē**
scale 3S-AN
its scales [the fish's scales]

(60) **kòngúá nə̀**
scale 3-IN
its bark [the tree's bark]

(61) **ə́gúrú nə̀**
middle 3-IN
the middle of it

(62) **kə́nà yē**
going 3S-AN
his going

(63) **àwà yē**
fear 3S-AN
fear of him

(64) **mālā yē**
wedding 3S-AN
her wedding

(65) **āwā yē**
path 3S-AN
his path [the path which he took]

(66) **ə́ndə́ yē**
track 3S-AN
his tracks [the tracks which he made]

(67) **ə̄ʔīrī yē**
name 3S-AN
his name

2.6.3. Reflexivity and Reciprocality

The preposition **tə́** is used with Set 6 pronouns to express reflexivity and reciprocality:

(68) **mə̄ sə́ nà kə́ yù tə́ mə̄**
1S-AN be go to bathe REFL 1S-AN
I am going to bathe myself.

(69) **ənjē yí tə́ ənjē**
3P-AN love RECP 3P-AN
They loved each other.

2.7. Set Seven

Set 7 pronouns are used in genitive constructions which realize Kinship and other Social Relationships:

(70) **àbá mə̄**
father 1S-AN
my father

(71) **ndākpá nə̀**
child 3S-AN
his child (kin)

(72) **āngá sə̀**
friend 2S-AN
your friend

(73) **ālàwō mə̄**
wives 1S-AN
my wives

No proximative/obviative distinction has been found in the third person pronouns of Sets 6 and 7. Thus, the following clause could mean either *He$_a$ beat his$_a$ friend,* or *He$_a$ beat his$_b$ friend:*

(74) **sə̀ dá āngá nə̀**
3S-AN beat friend 3S-AN

3. The Same-Subject Pronoun ə́ (SS)

This pronoun is used in narratives in place of an animate Set 1 pronoun when the subject is the same as that of the previous independent clause or main clause on the story line (in the following examples, sentences and independent clauses are separated by semicolons, and dependent clauses are separated from their main clauses by commas) :

(75) **ə̀njē ʔíà fó; ə́ ná; ə́ ló**
3P-AN rise up SS go SS sleep
They got up; then they went; then they slept.

(76) **mə̄ ʔíà fó; ə́ tá ráwá; ə́ rɨ̂**
1S-AN rise up SS shout noise SS jump
I got up; then I shouted; then I jumped.

(77) **ə̀lí nə̀ bə̀ ná; ə́ sə́ lə́ àšɔ̀; ə́ zá wándà fɨ̄ àbá nə̀**
first one 2S-AN go SS be in ground SS put greeting to father 3S-AN
First you go; then you sit on the ground; and then you greet her father.

A new subject requires a noun, a noun phrase, or a Set 1 pronoun:

(78) **bàngá nə̀ sə́mə̀ gú; ə́ zá āngā; ə́ sə́ lə́ nə̀ mbə́dé;**
friend 3S-AN **that** go.back SS take gourd there be in 3-IN **peanut.butter**

sə̀ gú; ə́ vó mbə́dé sə́mə̀...
3S-AN go.back SS scoop.out peanut.butter that

That friend of his went back; he took a gourd; there was peanut butter in it; he went back; he scooped out that peanut butter...

ə́ does not replace Set 1 pronouns in subordinate clauses, since such clauses are off the story line:

(79) **bàngá nə̀ sə́mə̀ ʔíà fó; ə́ ʔérə́ šé; ə́ wú bāwā sə́mə̀ ké;**
friend 3S-AN that rise up SS look around SS see python that already

mbāmbā sə̀ á·ʔé bàngá nə̀ sə́mə̀ kánə́ pā ndə́ nə̀ fɨ̄
before 3S-AN not·see friend 3S-AN that in.order.to say about 3-IN to

sə̀ nə̄, tàràlē ə́ ʔíà fó; ə́ súá ārə̄ lə́ nə̀; ə́ kpé ənnnə́...
3S-AN not immediately SS rise up SS break run in 3-IN SS flee long.time

That friend$_a$ of his$_b$ rose up; he$_a$ looked around; he$_a$ saw that python; before he$_a$ told that friend$_b$ of his$_a$ about it, immediately he$_a$ got up; he$_a$ broke into a run; he$_a$ fled for a long time...

Many switch-reference systems use a special marker to indicate a change in subject on the story line. This system differs in that it uses the special marker (in this case, the same-subject pronoun) to indicate the absence of such a change in subject.

4. The Interrogative Pronouns

There are six interrogatives in Banda-Tangbago, expressing '¿who?', '¿what?', '¿where?', '¿when?', '¿how?', and '¿how many?'. Of these six, the last four are considered adverbs; therefore, only the first two are treated here.

4.1. àdè '¿who?'

(80) **àdè kə̀ sə́mə̀ à**
¿who? FOC that QUERY
Who is that?

àdè has a plural form **ãdè**:

(81) **ãdè kə̀ lə́mə̀ à**
¿who? FOC those QUERY
Who are those?

àdè also takes the form **dè** when it is the complement of the identificational verb **də** and when it is the object of the preposition **nə́**:

(82) **ə̀bə̀ də́ dè**
2S-AN be **¿who?**
Who are you?

(83) **ə̀ nə́ dè kə̀ sə́mə̀ à**
that of **¿whom?** FOC that QUERY
Whose is that?

4.2. yōkɔ̀ '¿what?'

(84) **yōkɔ̀ kə̀ də́ bə̀ mâ mə̀ à**
¿what? FOC be 2S-AN do that QUERY
What did you do?

(85) **bə̀ sə́ nà ndə́ yōkɔ̀**
2S-AN be go for **¿what?**
What are you going for? / Why are you going?

(86) **bə̀ zá kīndī tī̃ bə̀rə̀ yōkɔ̀**
2S-AN leave field alone on.account.of **¿what?**
Why (on account of what) did you leave the field alone?

5. Miscellaneous Pronouns

There are six miscellaneous pronouns as illustrated below:

5.1. ə́ 'there' (empty pronoun)

This pronoun is used to fill the normal subject slot of the clause when the subject is postposed to the end of the clause (this could alternatively be analysed as another use of the Set 1 3-IN pronoun).

(87) **ə́ sə́ lə́ nə̀ mbə́dé**
there be in 3S-IN paste
There was paste in it (= paste was in it).

(88) **ɔ́ sɔ́ ndɔ́ mɔ̄ ngápó**
there be for 1S-AN hoe
I have a hoe (literally: there is for me a hoe).

5.2. nɔ̀ 'one' (noun substitute)

This pronoun is used to replace a noun with modifiers preceding the central slot in the noun phrase. As a noun phrase level pronoun, it contrasts with the Set 6 3-IN pronoun, which is a clause level pronoun.

(89) **kɔ́wò ɔ̀bɔ́ nɔ̀ kɔ̀ tágó nɔ̄**
killing another **one** FOC be.not not
There was no killing of another one.

(90) **bàlē nɔ̀ dákà**
one **one** remains
One [goat] remains.

(91) **mɔ̄ sɔ́ pɔ̀ dɔ̀ ɔ̀ngɨ̀ nɔ̀**
1S-AN be yet like small **one**
I was still small (I was still like a small one).

5.3. ɔ̀nɔ̄ 'one' (noun substitute)

This pronoun is used to replace a noun with a demonstrative adjective following the central slot in the noun phrase:

(92) **ɔ̀nɔ̄ šéyē**
one this
this one

5.4. ɔ̀ 'that' (noun substitute)

ɔ̀ is used to replace a noun with a prepositional phrase or relative clause following the central slot in the noun phrase:

(93) **sɔ̀ gú, ɔ́ vó mbɔ́dé sɔ́mɔ̀, ɔ́ zá ɔ̀ nɔ́ yē, ɔ́ zá**
3S-AN come SS scoop paste that SS put **that** of 3S-AN SSput

ɔ̀ nɔ́ bàngá nɔ̀ sɔ́mɔ̀ fī sɔ̀
that of friend 3S-AN that to 3S-AN

He went and scooped out the paste; he took his own [that of himself], then he gave his friend his [he gave that of his friend to him].

(94) **ɔ̀ nɔ̄ sɔ́ ndɔ́ mɔ̄ ngɔ́lɔ̀ ké**
that which be with 1S-AN finish already
What I had, has finished (I am at the end of my rope/tether).

There is a plural form of this pronoun in Banda-Linda (Cloarec-Heiss, 1986:232), but not in Tangbago.

5.5. The Demonstrative Pronouns

There are four demonstrative pronouns, which are identical in form to the demonstrative adjectives in their expanded form (which is the most common form). They are:

šéyē	'this'	**lɔ́yē**	'these'
sɔ́mɔ̀	'that'	**lɔ́mɔ̀**	'those'

These are composed of the existential verb sə ~ lə plus the basic form of the demonstratives yə̄ 'this' and mə̀ 'that' (sə is the singular form of the verb, and lə is the plural form).

(95) **ótɔ́ nə̀ ə̀ dɔ́ sə́mə̀**
whole 3S-IN FOC be that
That's all (that is the whole of it).

(96) **yōkɔ̀ kə̀ šéyē**
¿what? FOC this
What is this?

5.6. nɔ́ ~ nə̄ 'which' (relative pronoun)

The normal form of the relative pronoun is nɔ́:

(97) **sə̀ wú ābā sə́mə̀ nɔ́ vōmā sɔ́ kɔ́ zɨ̀ tə̀ mə̀**
3S-AN see mush that which Fly be PROG eat PROG that
He saw that mush which Fly was eating.

But when the relative clause follows the pronoun ə̀ (5.4), the form is nə̄:

(98) **ə̀ nə̄ sɔ́ ndɔ́ mə̄ ngɔ́lɔ̀ ké**
that which be with 1S-AN finish already
What I had, has finished (I am at the end of my rope/tether).

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OV WORD ORDER IN MA'DI?[1]

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INTRODUCTION

In Ma'di a transitive verb plus free object occurs in OV order under certain conditions described in sections 2 and 3. Torben Andersen (1984:19) lists several descriptions of Moru-Ma'di languages from 1925 to 1981 that describe two word orders, SVO and SOV; but he presents evidence that in Moru the alleged SOV order is really:

> ... subject + verb + complement. The finite verb is an auxiliary that takes a complement consisting of a nonfinite verb phrase, in which the nonfinite verb is preceded by its object. The nonfinite verb is a nominal, of which the object is a modifier.

Part of Andersen's basis for this analysis is that he finds a full set of 'pronouns' actually to be verbal prefixes plus auxiliary *á*. Only *ká*, which he demonstrates to be third person imperfective, had previously been treated as 'the' imperfective auxiliary.

Andersen's argument that SVO is the basic word order for Moru applies to Ma'di as well. As in Moru, Ma'di has a set of pronominal prefixes fused with *á* 'imperfective' which were previously treated as pronouns (see section 2.1 OV following the imperfective verb).

In Avokaya, Callinan (1986.50) states that SVO is the basic structure of Avokaya sentences, but it has an SOV structure when the matrix verb has one of the following four suffixes: *-'a* 'imperfective', *-zó* 'narrative', or *-lé* or *-re* 'dependent'. In Ma'di suffixes are not used for any of the above functions; *-lé* marks direction, *-re* marks participle, and *k-* marks a dependent verb.

Avokaya has been described more recently as basically SOV, having "SOV structure in its narrative tense, in the imperfect, and in the *otiri* 'when' clause versus SVO in its secondary story line (the perfect), in irrealis constructions (both subjunctive and negative), and in the *be ... ri* 'when' clause." (Longacre 1990.91-99). This analysis seems to arise from giving preference to the narrative tense and the potential link between postpositions and SOV word order. However, I believe the weight of Moru-Ma'di evidence favors an SVO history. In fact, Andersen (1984:33) proposes that the Avokaya imperfective is not SOV at all, but rather a non-verbal locative clause, i.e. Subject - Complement.

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[1] Ma'di is a member of the Moru-Ma'di subgroup of Central Sudanic, belonging to the Nilo-Saharan family of languages. The Ma'di people are located on both sides of the Uganda-Sudan border, on both sides of the Nile in Uganda and on the east bank in Sudan. To the southwest they border on Lugbara, to the east on Acholi, and to the north on the Bari groups.

Prof. Joe Grimes has provided many helpful suggestions in the preparation of this paper. Any shortcomings are my responsibility. I am still in initial stages of Ma'di analysis and have a very limited corpus of translated text. Translation of the texts and other help has come from Lisa Schnoor, Angela Abeya, Rose Moi and Matilda Tarakpe. Data used are Ugandan Ma'di. Comparison with Sudanese Ma'di has not been done.

1. SVO Order

The basic word order in Ma'di simple clauses is SV(O). The only exceptions to this rule are non-verbal clauses and two kinds of verbal clauses containing fronted objects. Section two treats embedded OV clauses as expansions of SV, i.e. SV(OV). Section three deals with object fronting (OV) resulting from different processes than those that give rise to SV(OV). In this present section I am considering only clauses in which the Subject is realizing an actor of some variety, not a patient, since those in which patient fills the subject are described under section 3 Fronted OV order.

The following examples illustrate SVO clauses with explicit objects. Clausal objects, such as quotations, thoughts, and desires, occur only as objects of SVO clauses and are illustrated in examples (10) to (13) below:[2] The clause filling the object of (13) is in OV order and will be discussed under 2.2.

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[2] Ma'di consonants, vowels, and tones are listed below in their orthographic forms with phonetic symbols in brackets where the orthography differs (see Andersen (1986) for a fuller description).

CONSONANTS:

	LABIAL	DENTAL	RETRO.	PALATAL	VELAR	LABIOVELAR	GLOTTAL
PLOSIVE							
Vl:	p	t	tr	c [ts]	k	kp	' [ʔ]
Vd:	b	d	dr	j [dz]	g	gb	
Prenasal:	mb	nd	ndr	nj	ng [ŋg]	mgb [ŋmgb]	
IMPLOSIVE:	'b [ɓ]	'd [ɗ]		'j			
NASAL:	m	n		ny [ɲ]	(ŋ)		
FRICATIVE							
Vl:	f	s					
Vd:	v	z					
Prenasal:	mv						
SONORANT:	l			y		w	
TRILL:			r				

VOWELS:

-ATR	Front	Central	Back	+ATR	Front	Back
High	i		u		ị	ụ
Low	e	a	o		ẹ	ọ

TONES:

There are four tones which occur on single syllables: high /á/, mid /a/, low /à/, and falling /â/. Most falling tones are the result of high or mid tones followed by a floating low, but they may also occur with isolated syllables. Rising tones have been found always to occur over two syllables, even when these are identical vowels, such as in the proper name Komàá, the feminine form of Komà.

Semantic and Grammatical designations in the interlinear examples are the following:

1 'first person', 2 'second person', 3 'third person', ACC 'accompaniment', adj 'adjective', adv 'adverbial', art 'article', aux 'auxiliary', CMP 'completive', conj 'conjunction', CONT 'continuative', cop 'copula', DEF 'definite', dem 'demonstrative', DIR 'direction to/attempt', EMPH 'emphatic', excl 'exclamatory', HAB 'habitual', ideo 'ideophone', imp 'imperative', IPF 'imperfective', INC 'inceptive', inf 'infinitive', int 'interrogative' n 'noun', neg 'negative', num 'numeral', O 'object', p.adj 'possessive adjective'; part

(1)

O'bà	**'barángwâ**	**ni**	**líndrí**	**gá**	**kwe**	**ìtí;**
o- *'bà*	*'barángwá*	*~ni*	*líndrí*	*gá*	*kwe*	*ìtí*
3sPST- put	baby	def	shade	into	tree	under
pfx- V	*O-n*	*art*	*n*	*post*	*n*	*post*

She put the baby in the shade under a tree. [A2]

(2)

Kòmàá	**osu**	**drị̀**
Kòmàá	*o-* *su*	*drị̀*
Komaa	3spst- bend	head
S-pn	*pfx- V*	*O-n*

She bent her head down. [A4]

(3)

Emú	**nzìarú**	**sâ**	**ku.**
Emú	*nzì* *-arú*	*sâ*	*ku*
come	carry -it	even	not
V	*V* *-sfx*	*adv*	*neg*

She didn't even come carry him. [A17]

(4)

Ìtú àcí,	**Dràmánítì**	**Gúlí**	**ti**	**trò**	**evụ̀**	**ụwákî**	**Lóngáolîrá**	**ni**	**óní**	**sì.**
Ìtú àcí	*Dràmání ti*	*Gúlí*	*ti*	*trò*	*e- vụ̀*	*ụwá* *-kî*	*Lóngáolîrá*	*ni*	*óní*	*sì*[3]
Afternoon	Dramani pl	Guli	pl	with	dir-go	throw -3pl	Lóngá	DEF	stone	with
I-adv	*S-pn* *prt*	*pn*	*prt*	*post*	*pfx- V*	*V* *-sfx*	*O-pn*	*art*	*n*	*post*

In the afternoon Dramani and his friends and Guli and his friends came and threw stones at Longalira. [B9]

(5)

Ụsọ̀kî	**rụ**	**ani**	**kwe**	**sì**	**bíbí.**
Ụ- *sọ̀* *-kî*	*rụ*	*ani*	*kwe*	*sì*	*bí* *-bí*
mult- pierce-3pl	body	him	stick	with	wound-pl
pfx V *sfx*	*O-n*	*prn*	*n*	*post*	*n* *-dup*

They stabbed its body with a stick, making many wounds. [B10]

(6)

Dárá	**u'bà**	**à'i**	**ní**	**kómí**	**lélé**	**sì**	**lélé**	**sì**	**rè.**
Dárá	*u-* *'bà*	*à'i*	*ní*	*kómí*	*lélé*	*sì*	*lélé*	*sì*	*rè*
lizard	mult- put	them	to	chair	equal-space	with	equal-space	with	in rows
S-n	*pfx- V*	*prn*	*post*	*O-n*	*n*	*post*	*dup*	*post*	*adv*

The lizard arranged the chairs for them in rows. [D4]

(7)

Dárá	**awí**	**lamá**	**à**	**tî**	**ni**	**'díni**
Dárá	*awí*	*lamá*	*à*	*ti*	*~ni*	*'díni,*
lizard	open	meeting	poss	discussion	def	like this
S-n	*V*	*O-n*	*post*	*n*	*art*	*adv*

The lizard opened the meeting's discussion like this, "..." [D8]

(8)

Ànyi	**utì**	**gàgà**	**'bâzí**	**ní**	**a'à**	**ku**	**à'dusì?**
Ànyi	*utì*	*gàgà*	*'bâzí*	*ní*	*a'à*	*ku*	*à'dusì*
you(pl)	break off	a bit	others	to	some	not	why
S-prn	*V*	*O-n*	*n*	*post*	*adj*	*neg*	*int*

Why don't you break off a bit and give some to others? [D30]

'participle'; PASS 'passive', PL 'plural', POSS 'possessive', post 'postposition', pfx- 'prefix', prn 'pronoun', prt 'particle', PST 'past', Q 'question', rel 'relator', SIM 'simultaneous', s 'singular', -sfx 'suffix', -sup 'suprafix', S 'subject', TOP 'topic marker', V 'verb', VOC 'vocative'

[3] Floating low tone does not affect proper nouns.

(9)	**Àrà**	**eri**	**'bará**	**'dìà**		**owókâ**		**ni**	**rá.**
	Àrà	*eri*	*'bará*	*'dì*	*-à*	*owó*	*-ka*	*~ni*	*rá*
	python	hear	child	this	poss	cry	-inf	def	comp
	S-n	*V*	*O-n*	*dem*	*post*	*v*	*-sfx*	*art*	*prt*

The python heard the baby's crying. [A18] (The object of hearing is a possessed action.)

(10a)	**Endrè**		**o'jo,**	**b)**	**"Nyì'bà**	**c)**	**Kecá**		**rụarú**		**ìré**	**lá'díni ..."**
	Endre	*-~*	*o-*	*'jo*	*Nyì-'bà*		*k-*	*ecá*	*rụ*	*-arú*	*ìré*	*lá'díni*
	mother	-def	3spst-	say	2s-let		dep-	arrive	body-his		near	like that
	S-n	*-sup*	*pfx-*	*V*	*pfx-V*		*pfx-*	*V*	*n*	*-sfx*	*adv*	*adv*

The mother said, "Let it arrive near its body like that ..." [A32]

(11a)	**Endrè**		**o'jo,**	**b)**	**"Nyì'bà**	**c)**	**kungù**	**d)**	**kolú**		**dru**	**círí."**
	Endre	*-~*	*o-*	*'jo*	*Nyì-*	*'bà*	*k-*	*ungù*	*k-*	*olú*	*dru*	*círí*
	mother	-def	3spst-	say	2s-	let	dep-	sniff	dep-	stay	so	quiet
	S-n	*-sup*	*pfx-*	*V*	*pfx-*	*V*	*pfx-*	*V*	*pfx-*	*V*	*conj*	*adj*

The mother said, "Let (the thing) sniff so (the baby) will stay quiet." [A38-41] (Note that clauses b-d function as a clausal object of *o'jo* 'say'; and clauses c-d function as a clausal object of *nyì'bà* 'you let'. Whereas clause b has an independent verb, c and d have dependent verbs which refer to two different, unmarked agents.)

(12)	**Orà**		**òkpó**	**rìi**		**ámvụ̀**	**'i.**
	o-	*rà*	*òkpó*	*rì*	*'i*	*ámvụ́*	*~'i*
	3spst-	thought	important	be	emph	garden	emph
	S-pfx-	*V*	*adj*	*cop*	*prt*	*n*	*prt*

She thought the garden was more important. [A52]

(13)	**Álè**		**ìzá**	**nyaka.**
	Á- lè		*ìzá*	*nya -ka*
	1spst-	want	meat	eat -inf
	pfx-	*V*	*O-Cl(O-n*	*V -sfx)*

I wanted to eat meat.

2. SV(OV) Order

SV(OV) word order is obligatory under one of two conditions. Section 2.1 describes the imperfective condition and 2.2 the non-imperfective verb plus modal/aspect condition. In either case the V_1 verb may be inflected for person and tense, while the V_2 verb cannot be inflected for person and tense, though, like V_1, it can take *u-* 'multiple action' or *e-* 'direction'. (Verbs filling the V_1 position are often not inflected because of VCV stem shape or because of a 'direction' or 'multiple' prefix.)

2.1 OV following the imperfective verb

Most SV(OV) clauses result from the occurrence of the imperfective 'auxiliary'. SV(OV) word order is obligatory when a transitive verb is in the imperfective and has an explicit object. The imperfective auxiliary occurs in the first verb position (V_1) while the transitive verb occurs in V_2 to the right of the object.

(subject) V_1:(intransitive) imperfective O:n V_2:transitive

An imperfective following an intransitive verb only effects the the transitive verb which follows it. There is no change in the form of the transitive verb. It is primarily known to be nominal only because it is embedded in the complement of the imperfective verb and is preceded by its object. However, Andersen (1986:203) reports that non-finite forms of monosyllabic mid tone verb stems carry an initial floating low tone, apparently related to the *ò* prefix in Moru. And, I

finally discovered that, once a gain, Torben was right. However, the floating low tone is only perceptible on the final syllable of a preceding noun when that syllable is not already low, and only barely perceptible when it is mid. A native speaker who is usually good at recognizing tone did not recognize this floating low until we had established it on an otherwise high syllable, i.e. *òcé* 'dog' becomes *òcê* in *Ká òcê mgba.* 'He is hitting the dog.' After much trial, he agreed that it also created a falling tone from mid. I am therefore inserting the floating low before each of the verbs in V_2 position in the morpheme line in the examples below, although it is not realized on many, e.g. (14-17).

These clauses have previously been thought to be SOV clauses for two reasons: first, the only difference between first and second person pronouns and first and second person prefixes plus *á* 'imperfective' is a high tone (missed by most expatriates), and secondly, the third person *ká* was thought to be an auxiliary without a person-number prefix. The full set of imperfectives in Ma'di is: *má* 'I am', *nyí* 'you are', *ká* (or *aná*) 'he/she/it is', *àmá* 'we are', *ànyí* 'you(pl) are', *kákî* 'they are'.[4]

The examples in this section are of: a) SV(OV) clauses in which only the imperfective occurs in V_1, and b) SV(OV) clauses in which the imperfective follows an intransitive verb in V_1. The first two examples (14) and (15) illustrate the imperfective verb phonologically attached to a transitive when there is no free object between. When the object is a known 3rd person, it may be marked by *-a*, which is not a regular verb suffix, on the nominalized transitive verb. (See further discussion in 2.3.)

a) Examples of the imperfective verb alone in V_1:

(14) Mụ́ngwẹ̀a.

m-	*á*	*~ụngwẹ*	*-a*
1s	ipf	call	him (the boy)
pfx-	*V_1*	*V_2*	*- sfx*

I am calling him.

(15) sâ endrè kîváa áwu,

sâ	*endre*	*-~*	*k-á*	*~ivá*	*-a*	*áwu*
also	mother	-def	3s-ipf	comfort	-it	cont
adv	*S-n*	*-sup*	*pfx-V_1*	*V_2*	*-sfx*	*adv*

... the mother was also continuing to comfort it. [A49]

(16) tà ká àmà 'bará à rụ̂ ni ungù.

tà	*k-á*	*àmà*	*'bará*	*à*	*rụ*	*~ni*	*~ungù*
thing	3s-ipf	our	child	poss	body	def	sniff
S-n	*pfx-V_1*	*prn*	*O-n*	*post*	*n*	*art*	*V_2*

[The babysitter shouted again, "Mom,] something is sniffing our baby's body." [A37]

(17) Nyí tébèsâ tà 'dì ri, lókuà?"

nyi-	*á*	*tébèsâ*	*tà*	*'dì*	*~ri*	*lóku*	*à*
you-	ipf	from start	thing	this	insist	true	is it?
pfx-	*V_1*	*conj*	*O-n*	*prn*	*V_2*	*adj*	*int*

... since you insist on this thing, is it true?" [A69] (The conjunction *tébèsâ* can precede or follow the subject. Here it follows for subject emphasis.)

[4] I assume that 2nd person *i* has displaced *a*, but the high tone remains. 3rd person *aná* only precedes CVCV matrix verbs, so it is not relevant to SVOV clauses.

(18)	**Ká**	**drìâ**	**wílílí**	**onze**	**sâ,**
	K- á	*drìâ*	*wílílí*	*~onze*	*sâ*
	3s- ipf	now	wailing sound	scream	although
	pfx- V_1	*adv*	*n*	*V_2*	*conj*

Although she was now screaming '*wililí*', ... [A74]

(19)	**Ká**	**ídré**	**unya**	**áwu.**
	K- á	*ídré*	*u- ~nya*	*áwu*
	3s- ipf	rat	mult- eat	hab
	pfx- V_1	*O-n*	*pfx- V_2*	*adv*

It eats the rats. [B4]

(20)	**Àmà**	**bọ̀kítà**	**ká**	**à'du**	**unya**	**áwu?**
	Àmà	*bọ̀kítà*	*k- á*	*à'du*	*u- ~nya*	*áwu*
	our	cat	3s- ipf	what	mult- eat	hab
	p.adj	*S-n*	*pfx- V_1*	*O-int*	*pfx- V_2*	*adv*

What does our cat eat? [B36]

(21)	**má**	**drì**	**i'dù,**
	m- á	*drì*	*~i'dù*
	1s- ipf	head	raise
	pfx- V_1	*O-n*	*V_2*

[I run a little;] I raise my head; [I run a little; I raise my head.] [D14]

(22)	**"Ànyi**	**Padàrá**	**rìi**	**ká**	**à'i**	**ecú**	**dru nì.**
	ànyi	*Padàrá*	*rì 'i*	*k- á*	*à'i*	*~ecú*	*dru nì*
	you(pl)	family lizards	be emph	3s- ipf	you	take pride	neg.reason
	S-prn	*n*	*cop post*	*pfx- V_1*	*O-prn*	*V_2*	*prt*

They said, "You lizards are taking pride in yourselves for nothing. [D20]

(23)	**àmá**	**ànyi**	**gwì.**
	àm- á	*ànyi*	*~gwì*
	1pl- ipf	you (pl)	snatch
	pfx- V_1	*O-prn*	*V_2*

[You think] we will snatch you. [D23]

b) Examples of the imperfective following an intransitive in V_1:

(24)	**Àrà**	**i'dó**	**ká**	**'bará à**	**rụ̂**	**ni**	**ungù.**
	Àrà	*i'dó*	*k- á*	*'bará à*	*rụ*	*~ni*	*~ungù*
	python	start	3s- ipf	child poss	body	def	sniff
	S-n	*V_1*	*pfx- V_1*	*O-n post*	*n*	*art*	*V_2*

The python began sniffing the baby's body. [A35]

(25)	**E'dú**	**lòcókwe**	**trò**	**b) emú**	**ká**	**àrà**	**ni**	**umgba**	**kpùkpù.**
	E'dú	*lòcókwe*	*trò*	*emú*	*k- á*	*àrà*	*~ni*	*u- ~mgba*	*kpùkpù*
	pick	hoe	with	come	3s- ipf	python	def	mult- beat	beating.sound
	V_1	*n*	*post*	*V_1*	*pfx- V_1*	*O-n*	*art*	*pfx- V_2*	*ideo*

[She picked up her hoe and] she came and was beating the python, pow! pow! [A70]

(26)	**À'du tà**	**orị̀**	**ká**	**Kòmàá**	**'bará à**	**rụ̂**	**ni**	**umbe**	**nì?**
	À'du tà	*o- rị̀*	*k- á*	*Kòmàá*	*'bará à*	*rụ*	*~ni*	*~umbe*	*nì*
	what thing	3spst- sit	3s- ipf	Komaa	child poss	body	def	lick	emph
	int n	*pfx- V_1*	*pfx- V_1*	*pn*	*n post*	*n*	*art*	*V_2*	*prt*

What was licking Komaa's baby's body? [A84]

2.2 OV following verbs other than the imperfective

(S) V_1:(imperfective) (in)transitive O:np V_2:transitive M/A

Example 13 shows that an OV clause can follow a transitive verb, such as *lè* 'want'. This OV is clearly embedded in the object as a nominal phrase, indicated both by the order and the infinitive suffix *-ka* on the embedded verb.

Examples 3 and 4 in section 1 show that an intransitive verb (without a following imperfective auxiliary) which occurs in the first verb position may be followed immediately by a transitive verb plus object, i.e. an $SV_{int}V_{tr}O$ clause. However, in most examples a transitive verb following an intransitive verb occurs in V_2, following its object. Every example of this in my data involves the occurrence of some kind of nominalizing suffix or modal/aspect postposition following the transitive verb (indicated by M/A in the formula above). Verbs of motion are followed by OV plus *-re* 'nominalizing suffix' in examples 27, 28, 30 and 31. The verbs *i'dó* 'begin' or *esì* 'fit' are followed by OV plus *-lé* 'direction' in examples 29 and 32. The verb *kôji* 'IPF take', followed by OV plus *sì* 'cause/instrument' is a special case. On the one hand, it is a transitive verb in the imperfective so it would be followed by OV in any case. However, it is included here because the combination *kôji ... sì* always occurs in a coordinate clause with the sense of simultaneous action with the preceding coordinate clause, with no reference to 'taking'. In my data the suffix *-re* occurs only on transitives following verbs of motion, but it may be more widespread. It often seems to carry the meaning of purpose, but that may be no different than the infinitive mentioned in the first paragraph above. If the suffix *lé* 'direction' turns out to be a nominalizer like *-re*, it could be that it only occurs on embedded transitives following non-motion verbs, but so far it seems to carry the sense of direction, or attempt towards, as in (32). Even if it marks direction, it may also function as a nominalizer by reason of replacing *-re* in embedded environments.

So I conclude that some embedded OV constructions require a nominalizing suffix or a postposition, while those embedded in an imperfective verb complement do not.

a) Examples without the imperfective but with intransitive verb and M/A markers:

(27)	**Kòmàá tị**	**ovù**	**anâ 'baráléyí**	**tịtrò**	**ámvụ́a**	**fúlị̀a**	**okụ́re.**
	Kòmàá tị	*o- vụ*	*anâ 'baráléyí*	*~tị trò*	*ámvụ́ 'a*	*fúlị̀ 'a*	*okụ́ -re*
	Komaa pl	3spst-go	her babysitter	pl acc	garden at	peanut in	weed -part
	S-pn prt	*pfx- V_1*	*prn n*	*prt post*	*n post*	*n(O) post*	*V_2 -sfx*

Komaa went with her baby and babysitter to the garden to weed around the peanuts. [A1] *(fúlị̀ 'a* is usually treated as a postpositional locative phrase but could be treated as a noun phrase according to Dimmendaal's analysis that postpositions, e.g. *'a* 'in/stomach', may still be nouns in genitive or associative relation in Central Sudanic languages. i.e. 'to weed stomach of peanuts'. (Dimmendaal 1986:13-19).)

(28)	**Emú**	**aníní**	**bàléyí**	**kwère**	**ku**
	Emú	*aní ní*	*bàléyí*	*kwè -re*	*ku*
	come	him to	milk	give -part	not
	V_1	*pro post*	*O-n*	*V_2 -sfx*	*neg*

She didn't come to nurse it. [A16]

(29)	**Àrà**	**i'dó**	**'barángwá**	**'dì**	**arilé.**
	Àrà	*i'dó*	*'barángwá*	*'dì*	*ari -lé*
	python	start	baby	this	approach -dir
	S-n	*V_1*	*O-n*	*dem*	*V_2 -sfx*

The python started hurrying toward this baby. [A21]

(30)	**olè**	**emúka**	**bàléyí**	**kwère**	**'bará ní**	**ku.**
	o-	*lè emú -ka*	*bàléyí*	*kwè -re*	*'bará ní*	*ku*
	3spst -	like come -inf	milk	give -part	child to	not
	pfx-	*V_1 v -sfx*	*O-n*	*V_2 -sfx*	*n post*	*neg*

... she did not even want to come to give milk to the child. [A51]

(31)	**À'di**	**omu**		**ámvụa**		**fúlị**	**okụre**		**nì?**
	À'di	*o-*	*mu*	*ámvụ*	*a*	*fúlị*	*okụ*	*-re*	*nì*
	who	3pst-	go	garden	in	peanut	weed	-part	emph
	prn	*pfx-*	*V_1*	*n*	*post*	*O-n*	*V_2*	*-sfx*	*prt*

Who went to the garden to weed peanuts? [A82]

(32)	**Padàrá**		**mvò'bómvó'bo**	**'dìi**		**esị**	**àmà**	**kẹ́sị**	**ni**	**alịlé**		**ku.**
	pa-	*dàrá*	*mvò'bómvó'bo*	*'dì*	*'i*	*esị*	*àmà*	*kẹ́sị*	*ni*	*alị*	*-lé*	*ku*
	family-	lizard	bloated stomach	this	emph	fit	our	case	def	judge	-dir	not
	S-pfx-	*n*	*descriptive*	*dem*	*prt*	*v1*	*p.adj*	*n*	*art*	*V_2*	*-sfx*	*neg*

This lizard family with the bloated stomachs aren't fit to attempt to judge this case. [D57]

b) Examples of intransitive verb preceded by the imperfective auxiliary:

(33)	**ká**	**fúlị**	**ni**	**okụ́.**	**kôji**	**'barâ**	**ni**	**ivá**	**sì**
	ká	*fúlị*	*~ni*	*okụ́*	*ká-oji*	*'bará*	*~ni*	*ivá*	*sì*
	ipf	peanut	def	weed	meanwhile	child	def	comfort	SIM
	aux	*O-n*	*art*	*V_2*	*conj*	*O-n*	*art*	*V_2*	*prt*

... she was weeding the groundnuts and, at the same time, she was comforting the baby (by singing). [A5]

(34)	**endrè**		**kîváa**			**áwu,**	**kôji**		**tà**	**ni**	**okụ́**	**sì.**
	endre	*-~*	*ká*	*ivá*	*-a*	*áwu*	*k-á*	*oji*	*tà*	*ni*	*okụ́*	*sì*
	mother	-def	ipf-	comfort-it		cont	meanwhile		thing	def	weed	SIM
	S-n	*-sup*	*V_1*	*V_2*	*-sfx*	*adv*	*pfx-aux*	*V_1*	*n*	*art*	*v1*	*prt*

... the mother was comforting it (by singing), and, at the same time, she kept weeding the garden. [A49] (Note the reversal of weeding and comforting between (33) and (34). In (33) the mother was more concerned with weeding; but as the baby's crying increased, she became more concerned with comforting (34).

2.3 Motivation for SV(OV)

In both the 2.1 and 2.2 conditions above, we can conclude that the embedded OV clauses are nominals. In 2.1 the so-called imperfective auxiliary is an intransitive verb, probably carrying the meaning 'to be at', making its complements nominals of location. In section 2.2, OV clauses embedded as objects of postpositions are also nominals.

This still leaves us with at least three hypotheses for the motivation for OV ordering. First, according to government and binding theory (GB), a nominalized verb cannot assign case to its object, so the object moves up to an empty node preceding the verb (cf. Faab 1992). Two less theoretical arguments are that either such clauses take a genitive (possessor-possessed) order, or that, being nominals, they take noun phrase order, i.e. noun first. Of these two, I prefer the latter—not regarding the nonfinite verb as head and its object as modifier, as some have—but the initial noun as head and the nonfinite verb as modifier, as should be expected in a head-first noun phase. When a modifier precedes the head in a Ma'di noun phrase, the copula/link *rì* must follow it (cf. examples 12 and 38).

Andersen (1984:30) discusses a possible genitive order but drops it, whereas Wright (1995:46-50) gives preference to it. OV ordering matches the genitive order found in examples (7), (9), (16), (20), (24), (27), (36-37) and (40), if we consider that the genitive should be a noun, while the possessed could be some kind of nominalized verb. In example (9) the possessed is, in fact, a nominalized verb carrying the infinitive marker *-ka*. On the other hand, the possessor-possessed construction requires the genitive marker *à*, following (and often phonologically attached to) the

genitive.[5] Furthermore, Ma'di also has genitives of the possessed-possessor order which do not take the marker (see examples 5 and 10). Wright picks up on Andersen's suggestion of a possible link between the *-na* 'covert 3rd person' marker on imperfective transitive verbs (V_2) and the genitive marker *-na*. This is the same as the *-a* '3rd person' suffix which only occurs on V_2 in Ma'di, but I think it may be better viewed as the trace of a former postpositional imperfective marker, as in the Avokaya construction discussed below. In Ma'di nothing can come between the object and its verb, and object pronouns are not genitives as in Logo.

If we were to take up the genitive argument, we could be struck by the fact that in Baká, a Bongo-Bagirmi language of Central Sudanic, the verbs of VO clauses embedded in prepositional phrase take the genitive suffix.

Treating *á* 'imperfective' as a 'be at' locational verb, has good evidence. Let's consider that at a previous time Ma'di had a postposition marking imperfective aspect just like *'a/'á* in Avokaya. Andersen (1984:33) suggests a relationship between its grammaticalization from 'stomach' to 'in/at' and also to 'imperfective', so that the Avokaya *ma bo nya-'a* 'I banana eat in/IPF' could be equally translated 'I am eating bananas' or 'I (am) in/at banana-eating'. This, like the postpositions illustrated in 2.2 above may have been the original cause for an embedded verb plus object to take the form of a noun phrase, i.e. noun first. Possibly, the verb **adré* 'to be/remain/stay' co-occurred with it and eventually took on the full function of imperfective aspect, making the postposition *'á* redundant until it was dropped in Logo, while in Ma'di and Moru the *á* moved up and replaced it. The verb *adre* has both the verbal and imperfective meanings in Logo. In Avokaya, either *dre* 'still' or *ri/rì* 'progressive' can optionally co-occur with the imperfective suffix, adding durative aspect. In Ma'di there is a conjunction *adresâ* 'still', but the verb *olúka* now carries the meaning 'to stay/remain'.

Further possible evidence for this argument is that the third person suffix *-a* which only occurs on transitive verbs in imperfective constructions when a known object is omitted, i.e. redundant, may be a trace of the imperfective suffix (see examples 14, 15 and 34). In Ma'di this *-a* cannot optionally co-occur with an object. For tense/aspect markers to change positions is not unusual in these languages, for example, the past marker *rá* 'completive' occurs only in final position in Ma'di (see example. 9), but in an auxiliary position in Avokaya (see example 35).

(35)	**alígi**	**trá**	**àwó**	**ngò**	**-'a.**
	leopard	past	cry(n)	cry	-ipf

A leopard was crying

3. Fronted OV Order

OV order results from the promotion of a logical object to subject position.

3.1 OV Resulting from Passivization

In Ma'di passivization, the object is promoted to subject position and the verb can carry a person/tense prefix, as well as the passive suprafix—a high tone on the final vowel. The person prefix is in concord with the logical object, which is thus grammatical subject. In Ma'di passive clauses do not have agentives.

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[5] I suppose it is conceivable that the floating tone of the nominalized verb (V_2) is, instead, a reduction of the genitive à. But I have no idea why it would have reduced in this environment but occur in full form otherwise.

(36)	**driálê**	**àmà**	**'bará**	**endré**			**àngwé**	**ku.**
	driálê	*àmà*	*'bará*	*e-*	*ndre*	*-é*	*àngwé*	*ku*
	now	our	child	dir-	see	-pass	outside	not
	adv	*O-p.adj*	*n*	*pfx-*	*V*	*-sup*	*adv*	*neg*

Now our baby (S) cannot be seen (V) outside. [A67]

The above example can be put into the imperfective, demonstrating that 'baby' is the subject of the imperfective, as well as the passive verb.

(37)	**Adre sâ**	**àmà**	**'bará**	**kéndré**				**àngwé.**
	Adre sâ	*àmà*	*'bará*	*k-*	*á*	*endre*	*-é*	*àngwé*
	Still	our	child	3s-	ipf	see	-pass	outside
	adv	*O-p.adj*	*n*	*pfx-*	*aux*	*V*	*-sup*	*adv*

Our baby can still be seen outside. [A67b]

3.2 OV resulting from Topicalization of Nominal Objects

The object of an active verb can be topicalized and an appositional object can follow the verb in the usual object position. Although the agent cannot occur in subject position, any verb agreement is with the understood agent.

If the first example below were restated so that the agent functioned as subject, the noun phrase would have to follow the verb and be followed by its apposition:

(38)	**Kpètè**	**o'di**		**úbí**	**gbòrọ**	**rìi**		**tọ̀wú;**
	Kpètè	*o-*	*'di*	*úbí*	*gbòrọ*	*rì*	*'i*	*tọ̀wú*
	local beer	3spst-	cook	beer-pot	big	be	emph	five
	O-n	*pfx-*	*V_2*	*n*	*adj*	*cop*	*prt*	*num*

He cooked five big pots of beer. [D2]

(39)	**òvídrú**	**ma**	**Dárá**	**sì**	**ma**	**'i,**	**ìndre**		**má**		**lù**	**íngoni?**
	òvídrú	*ma*	*Dárá*	*sì*	*ma*	*'i*	*ì-*	*ndre*	*ma-*	*á*	*lù*	*íngoni*
	as for	me	lizard	with	me	tm	2P-	see	I-	ipf	run	how
	conj	*prn*	*n*	*post*	*prn*	*prt*	*pfx-*	*V_2*	*pfx-*	*aux*	*v1*	*adv*

As for me the lizard myself, you see--I run how? (how do you see me run?) [D11] (The clause, 'I run how?' may be considered to be an elaboration on the object 'me'. When a pronoun is topicalized, it takes the topicalizing particle *'i*.)

3.3 OV resulting from Topicalization of Relative Clauses

Relative clauses appear always to be topicalized when filling the logical object of a question. The embedded OV constructions are also nominals which may be considered to have the same motivation as those of 2.1 and 2.2.

(40)	**Tà**	**mâ**	**drì**	**i'dú**	**jó**	**'díni**	**rìi**		**ìnì**		**òte**	**à?**
	Tà	*mâ*	*drì*	*i'dú*	*jó*	*'díni*	*rì*	*'i*	*ì-*	*nì*	*òte*	*à*
	rel	my	head	raise	reason	like this	be	emph	2pl-	know	perfectly	int
	O-n	*p.adj*	*n*	*v*	*n*	*adv*	*cop*	*prt*	*pfx-*	*v*	*adv*	*prt*

Do you really know why I bob my head like this? (That I raise my head like this do you really know why?) [D17]

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Update on Baka Phonology and Orthography, as of 1996

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Introduction

Baka[1] as a written language is still in its infancy. Some early attempts at writing it were made before the language was properly studied, but these attempts did not meet with much success, because of an inadequate understanding of the grammar and phonology of the language. However, in the early 1980's, an initial study of Baka phonology was made, and this laid the groundwork for devising a good orthography. The results of that study by Kirk Parker and Edward B. Mandeson were published in OPSL no. 4 ("Baka Phonology," by Kirk Parker, pp. 63-85). Since then, further work in the language has revealed the necessity of making some changes in the analysis presented in that paper. Consequently, this paper will point out some of the changes in the phonological analysis in conjunction with presenting the current Baka orthography.

Since Parker's initial study of the language, materials have been printed in three different orthographies. The first trial orthography indicated tone with diacritical marks, but at the same time it used some special vowel characters which were not fully accepted by the community. The second one did away with the objectionable special vowel characters by using a dieresis to distinguish vowel qualities, but left tone unmarked. In 1992, the Baka Language Committee reviewed the importance of tone as a feature of the language, and they decided that tone should be indicated in the orthography. The present orthography, therefore, follows the system used in writing Avokaya vowels in that tone is indicated by accents above the vowel letters, and Advanced Tongue Root (+ATR) vowels are marked with a subscript dot. Of the languages that write tone, Avokaya was chosen as a model, since the Avokayas and the Bakas have many cultural and affinal ties, and a significant number of them speak both languages.

Consonants

There are 40 consonants in Baka represented in the current orthography as shown in the Chart on page 115.

Parker (p. 65) included a 41st consonant in his inventory: a voiced bilabial plosive with a trilled release /br/; however, it was later discovered that all instances of this sound were actually the labiovelar /gbr/. [In this paper, when necessary for clarity, phonemic information is enclosed in virgules, orthographic information is enclosed in angle brackets, and phonetic information is enclosed in square brackets.]

Parker also reported (pp. 67f) that /p/ and /f/ do not contrast consistently. He pointed out that there are words in which /f/ occurs consistently in everyone's speech, and there are words in which /p/ alternates with /f/, depending on the ideolect. However, it must also be noted that there are certain words (e.g., **/pàpáyì/** 'papaya') in which /p/ occurs consistently. Therefore, besides <f> and <p>, which represent the invariant /f/ and /p/ respectively, the Baka alphabet has <ph>, which is used for /f/ alternating with /p/.

[1] Baka is a Bongo-Bagirmi language of the Western group of Central Sudanic languages in the Nilo-Saharan family.

Baka Consonants

	labio-dental/ bilabial	alveolar simple	alveolar complex	palatal/ alveo-palatal	velar	labiovelar simple	labiovelar complex	glottal
Plosive								
voiceless	p	t	tr	c	k	kp	kpr	'
voiced	b	d	dr		g	gb	gbr	
prenasalized	mb	nd	ndr		ng	ngb	ngbr	
Implosive	'b	'd		'y				
Nasal	m	n		ny	ŋg			
Fricative								
voiceless	f	s						h
voiced	v	z						
prenasalized	nv	nz						
Flap	ɣ	r		ɾ				
Lateral		l						
Approximant				y		w		

/c/ is pronounced as affricate with free variation between either alveolar or alveopalatal point of articulation.

/z/ is pronounced as either fricative or affricate, with free variation between alveolar or alveopalatal point of articulation.

/f, v, ɣ/ are pronounced with labiodental point of articulation.

Although Parker reported (p. 67) that /'y/ was produced with no oral closure, it is now recognized that it is a true palatal implosive.

/nv/ is pronounced more like [mv] than [nv].

/'/ and /h/ occur only in interjections, /h/ word-initially, and /'/ word-medially.

Phonemes labeled 'complex' are pronounced with a homorganic trilled release.

Vowels

Although Parker (p. 69) described eleven vowels (five +ATR, five –ATR, and one neutral), it has since been found that tongue root position is emic for only the high front and the high back vowels. Other etic +ATR vocoids are simply allophones of the –ATR vowels in the proximity of /ị/ and /ụ/. Evidence to the contrary was apparently based on faulty data (e.g., **/sàyì/** 'sand' is –ATR, not +ATR as reported by Parker, pp. 75f). Although historically there were probably +ATR front and back low vowels, they have now merged with their –ATR counterparts /e/ and /o/. Baka, therefore, appears to have only eight vowels: two +ATR vowels, and six –ATR vowels. They are represented in the current orthography as follows:

	front	central	back
+ATR high	ị		ụ
−ATR high	i	ɨ	u
low	e	a	o

Tone

As reported by Parker (p. 70), Baka has two tone registers. In the current orthography, high tone is symbolized by an acute accent above the vowel letter, and low tone by the absence of a diacritic above the vowel letter:

/úgú/	**<úgú>**	'to buy'	**/úgù/**	**<úgu>**	'to steal'
/ngònò/	**<ngono>**	'chicken'	**/ngónó/**	**<ngónó>**	'a type of tree'
/bàngá/	**<bangá>**	'animal'	**/bángá/**	**<bángá>**	'bachelor'
/ndéré gò/	**<ndéré go>**	'you went'	**/ndèré gò/**	**<nderé go>**	'he went'
/ɨ'bì/	**<ɨ'bi>**	'to shoot'	**/ɨ'bí/**	**<ɨ'bí>**	'to give'

Not reported by Parker is the fact that a vowel can carry a sequence of differing tones, thus producing a tone glide. Such tone sequences are relatively rare, and most are sequences of two tones. A fair number occur in loan words. For the orthography, it has been decided that no extra diacritics be used for writing the tone sequences. Rather, the vowel letter should be doubled in order to show both elements of the glide:

/bú˘/	**<búu>**	'banana'	**/sụ́˘/**	**<sụ́ụ>**	'market'	**/sì´/**	**<sií>**	'silent'
/zé˘/	**<zée>**	'us'	**/zùrá˘/**	**<zuráa>**	'skin bag'	**/gbò´/**	**<gboó>**	'partly full'

When proper nouns referring to humans (i.e., personal names) occur as direct objects of the verb, a grammatical high-low tone sequence is added to the lexical tone of the final syllable, thus producing a sequence of three tones:

base form	*direct object*
/ndòtó/	**/ndòtó^/**
/máárákàyà/	**/máárákàyà^/**

However, it has been decided that personal names should always be written with the same spelling in spite of this added grammatical tone. Thus **/máárákàyà^/** is not spelled ***<Máárákayaáa>**, but **<Máárákaya>**, as is **/máárákàyà/**. Context usually tells the reader when to add the grammatical tone, but since the reader may not know whether a name is a personal name or a clan name, personal names are capitalised, while clan and tribal names remain uncapitalised; e.g., **<Ébere>** 'Eber' versus **<ébere>** 'a Hebrew'.

As described by Parker (p. 71), there are genitival suffixes which have variable tone. [It should be noted that, contrary to Parker (p. 84, footnote 6), the second person singular genitival suffix also has variable tone.] The tone on these morphemes dissimilates from the tone of the preceding syllable. These tones will be written as they occur, thus giving two forms of each of these suffixes. It is deemed that the difference in tone marking will not change the shape of the suffix enough to cause any difficulty in quick recognition of the morpheme by readers. Examples:

<'bụzé>	'our father'	**<mbágáze>**	'our mother'
<'bụyị>	'your father'	**<mbágáyị>**	'your mother'

Another morpheme that has variable tone is the intensifier **/zà/ ~ /zà´/**. Its tone dissimilates from the following tone; e.g., **<za mbá>** 'all', **<zaá gị>** 'up to'.

Syllable

Parker gave two syllable types: CV and V, but there is also a rare third type CVV, which does not contrast in length with CV; e.g., /**trɨ́é**/ 'gathered together', /**ɗùò**/ 'exactly', /**ɓúó**/ 'only if', and /**kɨ́é̱ɗò**/ 'one'.

Historically, the word for 'one' was /**kérɨ́ɗò**/, but it has evolved into two different words, both currently in use. In one case, the final syllable /–ɗò/ was elided, leaving /**kérɨ́**/. In the other case, the middle syllable /–ɾɨ́/ was elided, leaving /**ké̱ɗò**/. However, even though the +ATR /ɨ́/ elided in the second case, the +ATR feature remained, leaving the /é/ and the /ò/ with a +ATR pronunciation. Since the +ATR pronunciation of these vowels is normally allophonic and not phonemic, the underlying form seems to have been reinterpreted to /**kɨ́é̱ɗò**/ in conformity with the vowel assimilation and elision rules given by Parker. /**trɨ́é**/, /**ɓúó**/, and /**ɗùò**/ may have similar histories of elided syllables or segments.

Vowel Harmony, Elision, Transition vowels & Underlying form

In the interest of maintaining word shape for easy word recognition, the decision has been made to represent as much as possible the underlying form of vowels in spite of assimilation, elision and neutralization. This includes the monosyllabic body parts, which in some environments are unstressed and thus are pronounced with a neutralized vowel (cf. Parker, p. 74-78). Examples:

pronunciation	*written form*	*meaning*
[domá]	<**domá**>	'my head / on me'
[di̱ mandụlụ]	<**do Mandụlụ**>	'Mandulu's head / on Mandulu'
[daa]	<**doa**>	'his head / on him'
[gomá]	<**gomá**>	'my neck'
[gu mandụlụ]	<**go Mandụlụ**>	'Mandulu's neck'
[goa]	<**goa**>	'his neck'

Punctuation and Intonation

Polarity questions begin with a question mark to alert the reader to the question intonation which starts at the beginning of the question; e.g.,

?'Dúɗu **bi̱lámáyɨ́?** 'Did you sleep well?'
you.sleep good.your

?Áyí **go** **nzíyiyɨ́?** 'Are you ready?'
You.be *pfiv* ready.your

So far, no evidence has been found to substantiate Parker's assertion (p. 81) that certain morphemes cause intonation perturbation.

Preposition sequences

When there is a sequence of prepositions or nouns (body parts) functioning as prepositions, they are written as separate words; e.g.,

Gɨ	**do**	**kacɨ́**	'after'
from	top(= on)	footstep	

Gɨ	**zía**	'from him'
from	to.him	

Compounds

The only compounds to be written are compound verbs and compound nouns; e.g.,

gámásó'do 'to go seek' (from **gámá** 'to walk around' + **só'do** 'to seek')
'dí'bióyó 'to remove' (from **'dí'bi** 'to take' + **óyó** 'to turn')
kénzéɨsɨ 'fish type' (from **kénzé** 'fish' + **ɨsɨ** 'dog')
ezegámá 'walking friend' (from **eze** 'friend' + **gámá** 'walking around' [n])

Word division

A word may be divided between syllables: **mé/ngɨ**, **ó/to**, **ótoó/mo**, **bikɨ/drɨ́**, **bi/kɨdrɨ́**, **kɨ́é/'do** [not **kɨ́/é'do**], **'búó** [not **'bú/ó**], **'bụa** [not **'bụ/a**], **mbá/gáa** [not **mbágá/a**].

A line should not begin with a single-letter word (**a** or **e**), since these are pronounced as one syllable with the preceding vowel: **óto a** [not **óto / a**], **mbágá e** [not **mbágá / e**].

Swadesh 100 word list

me		máa (prn)
thee		yíị (prn)
us		zée (prn)
this		ba (dem)
that		née (dem)
who		ambi (prn)
what		ꞌdi (prn)
not		wá (adv)
be not		ndá (vi)
belly		simi (n)
neck		go (n)
breast		umbu (n)
chest		kóꞌdú (n)
heart		mimbéꞌde (n)
liver		kúṛụ (n)
drink		éwé (vt)
bite		náná (vt)
all		mbá (adv)
many		túꞌdú (adj.n)
one		kíéꞌdo (num)
two		gbre (num)
big	(sg)	mongú (adj.n)
	(pl)	minguroko (adj.n)
long		ngbángbá (adj.n)
small	(sg)	owú (adj.n)
	(pl)	minzéré (adj.n)
woman		kára (n)
man		oꞌdo (n) / yaꞌdá (n)
person		ꞌyị (n)
father		ꞌbụ (n)
fish		kénzé (n)
snake		kámá (n)
bird		solú (n)
dog		ísị (n)
louse		misúgoṛó (n) / mesịsị (n)
tree		kágá (n)
seed		kúfú (n)
grass		súwú (n)
leaves		tịyí (n)
leaf		mbílí tịyí (n+n)
root		cíyí (n)
bark		sókó (n)
skin		saná (n)
meat		esị (n)
blood		sáma (n)
bone		cóngó (n)
grease		sụꞌbú (n)
egg		ꞌbu (n)
horn		ngiṛí (n)
tail		sono (n)
hair		bị (n)
feather		bị (n)
head		do (n)
ear		mbílí (n)
eye		komo (n)
see		lúrú ~ úrú (vt)
hear		úwú (vt)
know		ówo (vt)
sleep		ꞌdúꞌdu (vi)
die		úyu (vi)
kill		úfu (vt)
swim		úcụ bada (vt+n)
fly		ịnyị (vi)
go		ndéré (vi)
come		ógụ (vi)
lie		ꞌdúꞌdu bi (vi+adv)
sit		ndísị bi (vi+adv)
stay		ndísị (vi)
stand		tóro (vi)
give		íꞌbí (vt)
say		úku (vt)
sun		kadra (n)
moon		éfé (n)
star		kele (n)
water		iní ~ ịní (n)
rain		iní ~ ịní (n)
stone		tutú (n)
sand		sayi (n)
earth		káṇgá (n)
cloud		bụṛụngú (n)
smoke		cika (n)
fire		phoꞌdụ (n)
ash		mbụkụ (n)
burn		óngbó (vt) áṛá (vi)
path		misiꞌdi (n)
mountain		
(grey rock)		landa (n)
(laterite)		rubu ~ ruvu (n)
(earth)		ꞌdúkụ (n)
red (adj)		bikesí (adj.n) / (bi)zambá (adj.n)
redness		kesí (n)
be red		ésí (vi)
yellow		misa-sayi (adj.n)

white (adj)	bɨkenyɨ́ (adj.n)
whiteness	kenyɨ́ (n)
be white	ényɨ́ (vi)
black (adj)	bɨkụlụ (adj.n)
blackness	kụlụ (n)
be black	ụ́lụ (vi)
night	ndụlụ (n)
hot (adj)	--
heat (n)	kɨ́rɨ́ (n)
be hot	ɨ́rɨ́ (vi)
mouth (inner)	ko (n)
(outer)	tara (n)
tooth	so (n)
tongue	dondene (n)
claw	sókó sɨ́lɨ́ (n+n)
	sókó sɨndɨ́ (n+n)
leg	sɨndɨ́ (n)
sole of foot	sɨmɨ sɨndɨ́ (n+n)
knee	ngụ́rụ́ sɨndɨ́ (n+n)
arm	sɨ́lɨ́ (n)
palm of hand	sɨmɨ sɨ́lɨ́ (n+n)
cold (n)	drụ́ (n)
cold (adj)	bɨkɨdrɨ́ (adj.n)
coldness	kɨdrɨ́ (n)
be cold	ɨ́drɨ́ (vi)
thin	rógbó (adj.n) /
	fɨ́-fɨ́yo (adj.n)
new	mɨkánda (adj.n)
good (adj)	bɨlámá (adj.n)
be good	éme sá (vi)
dry (adj)	mɨgágá (adj.n)
be dry	gágá (vi)
wet (adj)	mɨsí-silí (adj.n)
be wet	sílí (vi)
name (n)	ɨrɨ (n)

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