

Verb-Object-Negative Order
in Central Africa

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1. Introduction

The goal of this paper is to document a typological phenomenon that is common in an area in central Africa but quite infrequent elsewhere in the world, and to propose that this is a candidate for an areal phenomenon, since the languages exhibiting the property in question are distributed over branches of three different families, Niger-Congo, Nilo-Saharan, and Afro-Asiatic (though only in the Chadic branch). The phenomenon in question involves the position of negative words in VO languages, in particular, the placement of the negative after both the verb and object, usually at the end of the clause, as in the Gbaya Kaka example in (1) from Gbaya Kaka.

(1) Gbaya Kaka (Adamawa-Ubangi, Niger-Congo; Cameroon, CAR): SVONeg

mi-zək	wi	ndɔŋ	na
1SG-see	person	that	NEG
'I do not see those people' (Tucker & Bryan 1966: 101)			

Crosslinguistically, the most common position for negative words in VO languages is before the verb, usually immediately before the verb, as in the example in (2) from Koromfe.

(2) Koromfe (Gur, Niger-Congo; Burkina Faso, Mali): SNegVO

a	vaga	koŋ	ba	bene
ART	dog.SG	DET.NONHUMAN.SG	NEG	come.PAST
'the dog did not come' (Rennison 1997: 98)				

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Data supporting this crosslinguistic preference for negatives to precede the verb in VO languages was presented in Dryer (1988). Further support for this conclusion, based on a larger database of languages and with the data organized in a way discussed in greater detail in Dryer (1989, 1992), is provided below.

Before discussing issues about the position of negative morphemes, it is necessary to make some initial remarks about different types of negative morphemes. First, this paper restricts attention to what can be called neutral clausal negatives, morphemes that negate an entire clause, as illustrated by the English word **not** in **I have not seen the dog**. Not considered here are words like negative pronouns, like English **nobody** or **nothing**) or negative adverbs, like **never** or **nowhere**. Nor do I include negatives with some narrow focus, as in English **I am going to Montreal, not to Toronto**. I am also specifically concerned with mechanisms for negating declarative clauses with verbal predicates. I am thus not concerned with morphemes used to negate imperative clauses, nor constructions used for negating clauses with nominal predicates, in so far as these are different in a language from constructions for negating declarative clauses with verbal predicates.

Negative morphemes are sometimes separate words, as in (1) and (2) above, and they are sometimes affixes that attach to verbs, either as a prefix, as in (3), or as a suffix, as in (4).

- (3) Lelemi (Kwa, Niger-Congo; Ghana): negative prefix

betsuili	ba-ta-nu-ŋu
people	3PL-NEG-see-3SG
'people don't see him' (Höftmann 1971: 51)	

- (4) Malgwa (Biu-Mandara, Chadic; Nigeria): negative suffix

fá-nó-ŋə	ŋá
build-1SG.PERF-NEG	house
'I did not build a house' (Löhr 2002: 190)	

Whether a particular morpheme in a language should be considered an affix or a separate word is not always easy to determine. In some cases, even experts on a language may consider the question indeterminate, even when all the relevant facts are known. Since the data in this paper is based on grammatical descriptions written by other people, reflecting a wide variety of degrees of linguistic expertise and descriptive frameworks, and since my treatment of a morpheme as bound or non-

bound is largely based on the orthographic conventions of my sources, the classification of negative morphemes in this paper as bound or non-bound should not be taken too seriously. It would be a mistake, however, to simply lump together all negative morphemes regardless of their morphological status. Most of the discussion in this paper will be restricted to negative morphemes that are represented as separate words, although I will have occasion to mention negative affixes where appropriate. Unless I specifically indicate otherwise, all references to negatives should be interpreted as referring specifically to negative words.

Negative morphemes that are separate words most commonly simply code negation, but sometimes they code other elements of meaning as well. For example, the word **gero** in Moro, illustrated in (5), is actually an auxiliary verb that codes both negation and past tense; the fact that it is a verb is shown by the fact that it takes a subject prefix, like the second word in (5).

- (5) Moro (Kordofanian, Niger-Congo; Sudan)

i-gero	i-gaberta
1SG-PAST.NEG	1SG-have
'I didn't have' (Black & Black 1971: 20)	

The particle **náá** in (6) from Gokana codes both negation and third person singular.

- (6) Gokana (Cross-River, Niger-Congo; Nigeria)

náá	bā	giáá
NEG.3SG	eat	fish
'he doesn't eat fish'		

I will not distinguish negative morphemes that code only negation from negative words that also code other elements of meaning.

2. Order of negative word and verb

Table 1 provides data from a crosslinguistic sample of over 1300 languages (Dryer 1989, 1992) on the position of negative words relative to the verb in VO languages (languages in which the verb precedes the object).

Table 1
Order of verb and negative word in VO languages

	Afr	Eur	SEA&O	AuNG	NAm	SAm	Total
VO&VNeg	18	1	5	9	0	1	34
VO&NegV	23	7	19	9	26	9	93

(Afr = Africa, Eur=Eurasia, SEA&O=Southeast Asia and Oceania, AuNG=Australia-New Guinea, NAm=North America, SAm=South America)

The meaning of this table is explained in Dryer (1992). The numbers represent the number of genetic groups I call genera, roughly comparable to the subfamilies of Indo-European, containing languages of the sort listed on the lefthand side within each of the continental areas across the top. The '18' immediately under the label 'Africa', for example, indicates that there are 18 genera in Africa containing languages which my database represents as being VO and VNeg, while the '23' below the '18' indicates that there are 23 genera in Africa which contain languages I have coded as VO and NegV. For each area, the number of genera for the type that is represented by the highest number of genera within that area is enclosed in a box.

One crosslinguistic phenomenon reflected in Table 1 is that negative words more commonly precede the verb (NegV) than follow the verb (VNeg). VO&NegV outnumbers VO&VNeg in each of the six large geographical areas in Table 1, except in Australia-New Guinea, where there are an equal number of the two types. Overall, VO&NegV outnumbers VO&VNeg by 93 genera to 34, a ratio of almost 3 to 1. However, while Africa conforms to this overall pattern, since VO&NegV outnumbers VO&VNeg, it does so more weakly. In fact, more than half (18 out of 34) of the genera containing VO&VNeg languages are spoken in Africa. In Table 2, I list the 18 genera containing VO&VNeg languages in Africa in my database, with the specific languages exhibiting that order.

Table 2

VO&VNeg languages in Africa, by genus (negative words only):

Niger-Congo

ADAMAWA-UBANGIAN: Mumuye, Mbum, Mundang, Tupuri, Gbaya

Kaka, Gbeya Bossangoa, Ngbaka, Sango, Baka, Zande, Nzakara, Mba.

KWA: Ega.

NUPOID: Nupe.

IDOMOID: Igede.

PLATOID: Jukun, Birom, Fyem, Gworok.

KAINJI: Duka.

BANTOID: Tiv, Jarawa, Mungaka, Basaa, Duma, Lingala, Pogoro, Kimatuumbi.

LAAL: Laal.

Nilo-Saharan

EASTERN JEBEL: Gaam.

DAJU: Shatt.

KRESH: Kresh, Aja.

BONGO-BAGIRMI: Baka, Bongo, Jur Mödö, Ngambay, Mbaye, Bagirmi, Gula, Kenga, Bagiro, Kara, Yulu, Binga.

GUMUZ: Gumuz.

Afro-Asiatic

MASA: Masa.

EAST CHADIC: Lele, Kera.

BIU-MANDARA: Tera, Margi, Lamang, Podoko, Gisiga, Mada, Uldeme, Musgu, Mbara, Buduma, Logone.

WEST CHADIC: Angas, Mupun, Ron, Ngizim, Pa'anci, Miya.

SEMITIC: Mehri.

Note that my system of assignment of language groups to continental areas treats all of Afro-Asiatic as being in Africa, thus including various Semitic languages of the Middle East, Thus Table 2 includes Mehri, a South Arabian language. Note also that I have treated Laal as Niger-Congo, though its classification is quite unclear (Boyeldieu 1982b). In Table 3, I similarly list the 23 genera in Africa containing VO&NegV languages.

Table 3

VO&NegV languages in Africa, by genus (negative words only):

Khoisan

NORTHERN KHOISAN: !Xu (Ju/'hoan).

SOUTHERN KHOISAN: /Xam

Niger-Congo

KORDOFANIAN: Moro.

GUR: Koromfe, Konni, Dagaare, Dagbani, Bimoba, Sisaala, Kirma.

ADAMAWA-UBANGIAN: Iro.

KWA: Fongbe.

NUPOID: Ebira.

DEFOID: Yoruba.

EDOID: Bini.

CROSS RIVER: Gokana.

BANTOID: Bafut, Duala, Kwangali, Ndonga, Mbalanhu, Sesotho.

Nilo-Saharan

SONGHAY: Koyra Chiini.

SURMIC: Didinga, Murle, Tennet, Majang.

TEMEIN: Temein.

NILOTIC: Shilluk, Dholuo, Lango, Bari, Ateso, Pokot.

KULIAK: Ik, So.

KOMAN: Koma.

KADUGLI: Kadugli, Katcha.

Afro-Asiatic

BERBER: Ayt Ayache Tamazight, Ayt Ndhir Tamazight, Ghat, Rif, Figuig, Ayt Frah Aurès.

BIU-MANDARA: Gude.

WEST CHADIC: Hausa.

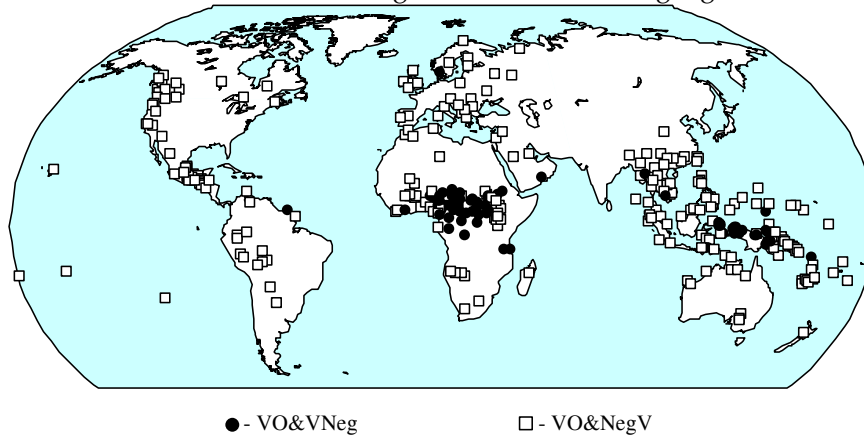
SEMITIC: Modern Hebrew, Gulf Arabic, Modern Literary Arabic, Syrian Arabic.

EGYPTIAN-COPTIC: Sahidic Coptic.

(Note that I treat the Kadugli languages as Nilo-Saharan, following Bender (1996), rather than as Kordofanian, as treated by Greenberg (1966), though nothing hinges on this.)

The extent to which Africa patterns differently from the rest of the world is brought out even more clearly by Map 1, in which the black circles represent VO&VNeg languages and the white squares represent VO&NegV languages.

Map 1
Order of verb and negative word in VO languages



The more common VO&NegV languages are widely distributed throughout the world. It is the dominant type in Europe and North Africa; except for a pocket on and near New Guinea, it is the dominant type in an area extending from southeast Asia through Indonesia, the Philippines, Australia, and the Pacific; and it is overwhelmingly dominant among VO languages in the Americas. The less frequent VO&VNeg type is far more geographically circumscribed. There is a large area in Africa, though the map shows that it is not spread over Africa but is generally confined to an area in central Africa, a point I will discuss further below. As noted above, there is also a smaller area where it is found on and around New Guinea. But outside these two areas, there are very few examples of VO&VNeg: one in Europe (Danish), one on the Arabic peninsula, two on the mainland of southeast Asia, and one in Brazil.

Examples of languages in Africa exhibiting VO&VNeg order are given in (7) to (18). The examples in (7) to (9) illustrate this in three different branches of Chadic.

(7) Kera (East Chadic; Chad)

wə	hàmàŋ	kúsúkín	bà
3SG.MASC	eat	meat	NEG
'he did not eat the meat' (Ebert 1979: 222)			

- (8) Angas (West Chadic; Nigeria)

Musa rok gik mwa duŋ-duŋ ka
 Musa throw rock PLUR much NEG
 'Musa didn't throw many rocks' (Burquest 1973: 178)

- (9) Musgu (Biu-Mandara, Chadic; Cameroon, Chad)

à sèdā cécébè pàɣ
 3SG:MASC know jackal NEG
 'he didn't see the jackal' (Meyer-Bahlburg 1972: 186)

The examples in (10) to (13) illustrate VO&VNeg order in different branches of Nilo-Saharan.

- (10) Ngambay (Bongo-Bagirmi, Nilo-Saharan; Chad, Cen. Afr. Rep.)

sú ò [né gó à Dā] àl
 Sou see thing REL 3SG.FUT do NEG
 'Sou did not see what he could do' (Vandame 1963: 116)

- (11) Kresh (Kresh, Nilo-Saharan; Sudan)

Kôkó āmbá gôkó 'dī
 Koko he.hit Goko NEG
 'Koko did not hit Goko' (Brown 1994: 165)

- (12) Gumuz (Sese dialect) (Kumuz, Nilo-Saharan; Ethiopia, Sudan)

nəməgázi ərsəgəń-je mɪsəgwa =je
 yesterday 1SG.eat-NEG food=NEG
 'I didn't eat food yesterday' (Bender 1979: 53)

- (13) Shatt (Daju, Nilo-Saharan; Sudan)

ɛŋgöbibu wuxu bux suxonɔ
 children drink beer NEG
 'children do not drink beer' (Tucker & Bryan 1966: 241)

Note that in the Gumuz example in (12), there is both a negative suffix **-je** on the verb as well as a negative clitic **=je** attached to the last word in the sentence.

Finally, the examples in (14) to (18) show VO&VNeg order in various branches of Niger-Congo.

(14) Mbum (Adamawa-Ubangi, Niger-Congo; Cameroon, Central African Republic)

gòì **Bàṅ** **zí** **Bàṅ** **ndòì** **yá**
 dog take come take bird NEG
 'the dog did not bring birds' (Hagège 1970: 318)

(15) Birom (Platoid, Niger-Congo; Nigeria)

yèn **a-tòs** **nèy** **wet**
 3PL AORIST-bear children NEG
 'they have not given birth to children' (Bouquiaux 1970: 386)

(16) Nupe (Nupoid, Niger-Congo; Nigeria)

eṣì **bavùn** **lá** **nyankpa** **à**
 dog fond.of.flesh take iron NEG
 'a dog is fond of flesh, but it will not take a piece of iron (by mistake)' (Banfield 1914: 40)

(17) Tiv (non-Bantu Bantoid, Niger-Congo; Nigeria)

a **kaḥa** **sure** **ga**
 NC1 hoe farm NEG
 'he did not hoe the farm' (Abraham 1940: 22)

(18) Lingala (Bantu, Niger-Congo; Democratic Rep. of Congo)

nakokí **kokenda** **na** **ndáko** **na** **yé** **té**
 1SG.can.PRES INF.go.EVE PREP house PREP 3SG NEG
 'I cannot go to her house' (Meeuwis 1998: 40)

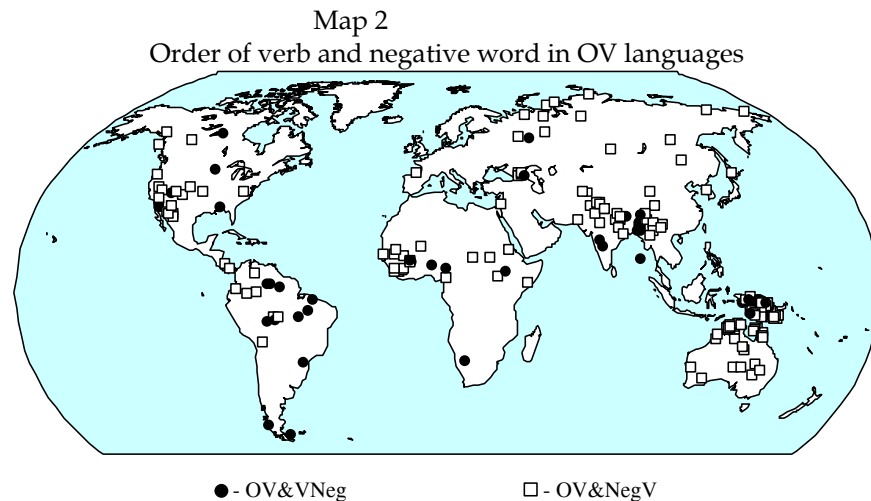
The data in Table 1 above show a crosslinguistic preference for NegV order in VO languages, but this preference is not specific to VO languages, since the same preference is found in OV languages as well, as shown in Table 4.

Table 4
 Order of verb and negative word in OV languages

	Afr	Eur	SEA&O	AuNG	NAm	SAm	Total
OV&VNeg	5	3	5	13	3	8	37
OV&NegV	11	15	7	26	12	9	80

Table 4 shows that NegV order is more common than VNeg order among OV languages in all six large geographical areas. The reasons for restricting attention to VO languages in this paper derive from the fact that it is VO languages in Africa, rather than OV languages, which exhibit a crosslinguistically atypical pattern and a clear areal pattern within Africa.

Map 2 is analogous to Map 1, except that it shows the distribution of NegV and VNeg order among OV languages.



Map 2 is strikingly different from Map 1 in terms of the lack of geographical patterning to the distribution of the minority VNeg type. Apart from New Guinea, where both types are found (and whose distribution cannot be seen clearly on this map), VNeg languages are widely scattered as a minority type in most parts of the world, and are not especially common in Africa.

3. Languages with double negation

Tables 1 and 2 exclude languages in which the normal construction for negation is a double negative, with one morpheme preceding the verb (possibly prefixed) and one following the verb (possibly suffixed). An example of such a language is Kanakuru, which can be described as SNegVONeg, as illustrated in (9).

- (19) Kanakuru (West Chadic; Nigeria): SNegVONeg

baba wo-shii nai tapa u
 father NEG-he drink tobacco NEG
 'my father does not smoke tobacco' (Newman 1974: 60)

Ma is similar, except here the preverbal negative is a prefix on the verb.

- (20) Ma (Adamawa-Ubangi, Niger-Congo; D R Congo): NegVONeg

tá-mù-sùbù-li nɔŋgbó nyɔ̃
 NEG-1SG-eat-PAST meat NEG.1SG
 'I did not eat meat' (Tucker & Bryan 1966: 130)

Now there are some languages which employ double negation which do so only some of the time. In Hausa, for example, there is both an SNegVONeg construction, illustrated in (21a) as well as an SNegVO construction, illustrated in (21b).

- (21) Hausa (West Chadic; Nigeria): SNegVO(Neg)

a. **bàn san sūna-n-sà ba**
 NEG:1SG know name-LINK-3SG NEG
 'I don't know his name' (Kraft & Kraft 1973: 108)

b. **ba nà zuwà dà kai**
 NEG CONT come:NOMIN with 2SG
 'I am not going with you' (Kraft 1963: 134)

Where a language exhibits such an alternation, I classify it according to the position in which the negative is obligatory. By this criterion, Hausa is coded as a NegV language, since both constructions involve a preverbal negative while only the first involves a postverbal negative². An example of a language of the opposite sort is Mupun, also a Chadic language, illustrated in (22).

² Note that this way of classifying Hausa makes it look more different from other Chadic languages than it is. But typological classification generally involves drawing arbitrary lines in what is really a typological continuum, and inevitably some languages get classified one way because they happen to be just on the other side of the line.

(22) Mupun (West Chadic; Nigeria): (Neg)SVONeg

(ba) **k̀̀** **n=se** **lua** **nyer** **kas**
 NEG PERF 1SG=eat meat bird NEG
 'I did not eat the bird meat' (Frajzyngier 1993: 353)

Since in Mupun it is the postverbal negative which is obligatory, I classify Mupun as SVONeg. The Bongo-Bagirmi language Bongo is similar to Mupun in this respect, as illustrated in (23).

(23) Bongo (Bongo-Bagirmi, Nilo-Saharan; Sudan): S(Neg)VONeg

- a. **ma** **nja** **ami** **a'ji** **wa**
 1SG NEG make thing NEG
 'I am not doing anything' (Santandrea 1963: 69)
- b. **m-u-ye** **le'ji** **wa**
 1SG-PAST-drink beer NEG
 'I did not drink beer' (Santandrea 1963: 68)

4. The order of postverbal negative words relative to other postverbal constituents

The discussion above documents the fact that VO&VNeg order is somewhat more common in Africa than it is elsewhere in the world. However, most of the VO&VNeg languages in Africa have the further characteristic that the negative not only follows the verb, but follows an object noun phrase if there is one as well: all of the examples cited above in (7) to (18) exhibit this property. It is further illustrated in (24) for Mbara, a Chadic language, in (25) for Bagirmi, a Nilo-Saharan language, and in (26) for Duka, a Niger-Congo language.

(24) Mbara (Biu-Mandara, Chadic; Chad): SVONeg

í **z̀̀m** **h̀̀r̀̀p̀̀y** **'b̀̀y**
 3PL eat turtle NEG
 'they do not eat turtle' (Tourneux, Seignobos & LaFarge 1986: 190)

(25) Bagirmi (Bongo-Bagirmi, Nilo-Saharan; Chad): SVONeg

deb-ge **tol** **tobio** **li**
 person-PL kill lion NEG
 'the people did not kill the lion' (Stevenson 1969: 92)

(26) Duka (Kainji, Niger-Congo; Nigeria): SVONeg

kó	ɛɛ	ɛr-gààn	dé	hár	wér	ò
even	arrow	one	it	touched.NEG	body	of
ən-ká	zur	yo	á			
that	lion	?	NEG			

'not even one arrow touched that lion's body'
(Literally: 'even one arrow didn't touch that lion's body')
 (Bendor-Samuel, Skitch and Cressmann 1973)

It is worth noting that the VONeg order contrasts with that of another VO&VNeg language in another part of the world, namely colloquial French. While Standard French employs double negation, the preverbal negative is optional in colloquial French, so that colloquial French is thus an instance of a VO&VNeg language. However, in French the postverbal negative immediately follows the verb, preceding the object, in contrast to the typical situation in Africa, in which the negative follows the object. Example (27a) illustrates the double negation of Standard French, (27b) the postverbal negation of colloquial French, while (27c) illustrates how the postverbal negative precedes an object.

(27) French: S(Neg)VNegO

- | | | | | | | |
|----|--------------------------|-------------|-------------|------------|-----------|---------------|
| a. | je | ne | sais | pas | | |
| | 1SG | NEG | know | NEG | | |
| | 'I don't know' | | | | | |
| b. | je | sais | pas. | | | |
| | 1SG | know | NEG | | | |
| | 'I don't know' | | | | | |
| c. | je | ne | vois | pas | la | maison |
| | 1SG | NEG | see | NEG | the.FEM | house |
| | 'I do not see the house' | | | | | |

Another VO language of Europe exhibiting VNeg order is Danish, at least in certain syntactic contexts. But in such contexts, the negative, as in French, precedes an object, as illustrated in (28).

(28) Danish: SVNegO

Jens købte ikke en bil i går
 John bought NEG INDEF car PREP yesterday
 'John did not buy a car yesterday'

(Allan, Holmes & Lundskaer-Nielsen 1995: 492)

SVNegO order does occur in a minority of the VO&VNeg languages of Africa. A clear case is Yulu, illustrated in (29).

(29) Yulu (Bongo-Bagirmi, Nilo-Saharan; Sudan): SVNegO

j-ée'dē mbè lōc jēpé
 1PL-see COMPL NEG moon
 'we did not see the moon' (Boyeldieu 1987: 202)

It is worth noting that Yulu contrasts with the other Bongo-Bagirmi languages for which I have data, which are more commonly VONeg. Another probable instance of a VNegO language is Basaa, a Bantu language. This is the order illustrated in (30), though I am not sure if this is the normal position of the negative in Basaa.

(30) Basaa (Bantu, Niger-Congo; Cameroon): (probably) SVNegO

a m-pōd be baŋga mam
 3SG NC₁-speak NEG word thing
 'he is not speaking the truth' (Schürle 1912: 93)

The dominant order among VO&VNeg languages in Africa, however, is VONeg. This order is also found in Europe: in German clauses which are SVO, the negative follows the object, in contrast to French and Danish, as illustrated in (31).

(31) German: SVONegX

er dankt seinem Vater nicht für das Geschenk
 he thanked his father NEG for the gift
 'he did not thank his father for the gift'

However, German still contrasts with the typical SVONeg language in Africa in that in German, the negative follows the object noun phrase but precedes adverbs and prepositional phrases. If we denote such phrases as 'X', we can say that SVO clauses in German are SVONegX, as illustrated

in (31), in which the negative precedes the prepositional phrase **für das Geschenk** 'for the gift'.

Now although I lack data on this point for a number of the VO&VNeg languages in Africa, the languages for which I have data on this point predominantly differ from German in placing the negative at the end of the clause, following any adverbs or adjunct phrases. The examples in (32) to (35) illustrate this for languages from each of the three major families, Aja in (32) and Bagiro in (33) from Nilo-Saharan, Lingala in (34) from Niger-Congo, and Mupun in (35) from Chadic (Afro-Asiatic).

(32) Aja (Kresh, Nilo-Saharan; Central African Republic): SVOXNeg

i'è řembe dyi kádyì 'ini gu ðo
 make friends with bad people NEG
 'don't make friends with bad people' (Santandrea 1976: 242)

(33) Bagiro (Bongo-Bagirmi, Nilo-Saharan; CAR, DRC): SVOXNeg

tā nàbō kè̀mè màgè mí gò
 AOR.3.do work in field my.to NEG
 'he did not do work in my field' (Boyeldieu 2000: 227)

(34) Lingala (Bantu, Niger-Congo; Democratic Rep. of Congo): SVOXNeg

nakokí kokenda na ndáko na yé té
 1SG.can.PRES INF.go.EVE PREP house PREP 3SG NEG
 'I cannot go to her house' (Meeuwis 1998: 40)

(35) Mupun (West Chadic; Nigeria): (Neg)SVOXNeg

aḅuon mənə ba wu wa ji n=mupun kas
 after that NEG 3.MASC return come REP=Mupun NEG
 'after that, he did not return to Mupun' (Frajzyngier 1993: 355)

Again, there are a few exceptions to this. While Schuh (1972) describes the normal position of the negative morpheme in Ngizim as following adverbial elements, as in (36a), he reports that they precede adverbs which are specifically sentence adverbs, such as **amžaru** 'tomorrow' in (36b).

(36) Ngizim (West Chadic; Nigeria): SVOXNeg, but SVONegX with sentence adverbs

- a. **ná** **karmə** **dəm-gu** **naa** **gawa** **tku** **bai**
 1SG.PERF chop wood-DEF with axe this NEG
 'I didn't chop the wood with this axe' (Schuh 1972: 324)
- b. **wàa** **dlama** **wana** **bai** **amžaru**
 1PL.IMPERF do work NEG tomorrow
 'we won't finish the work tomorrow' (Schuh 1972: 465)

However, otherwise, the negative occurs clause-finally in Ngizim, even following a complement clause, as in (37).

- (37) **ndàa rama ii maatə-k jaabi maa dà ši am bai**
 NEG
 'one doesn't tell an eater of beans that he should drink water'
 (Schuh 1972: 462)

And in Kimatuumbi, both VONeg and VNegO orders occur, as illustrated in (38).

- (38) Kimatuumbi (Bantu, Niger-Congo; Tanzania): SVONeg/SVNegO
- a. **naakɨbwénj** **kilóloombe** **lɨlɨ**
 1SG.SUBJ-it-saw shell NEG
 'I didn't see the shell' (Odden 1996: 219)
- b. **nɨnákeengeemba** **lɨj** **nn'unda** **wáangu**
 I.cleared NEG field my
 'I haven't yet cleared my field' (Odden 1996: 211)

Another VONeg language in Africa in which the negative need not be clause-final is Jur Mödö, in which the negative can be freely positioned among adverbial or adjunct elements, as in (39).

(39) Jur Mödö (Bongo-Bagirmi, Nilo-Saharan; Sudan): SVONeg, but not SVOXNeg

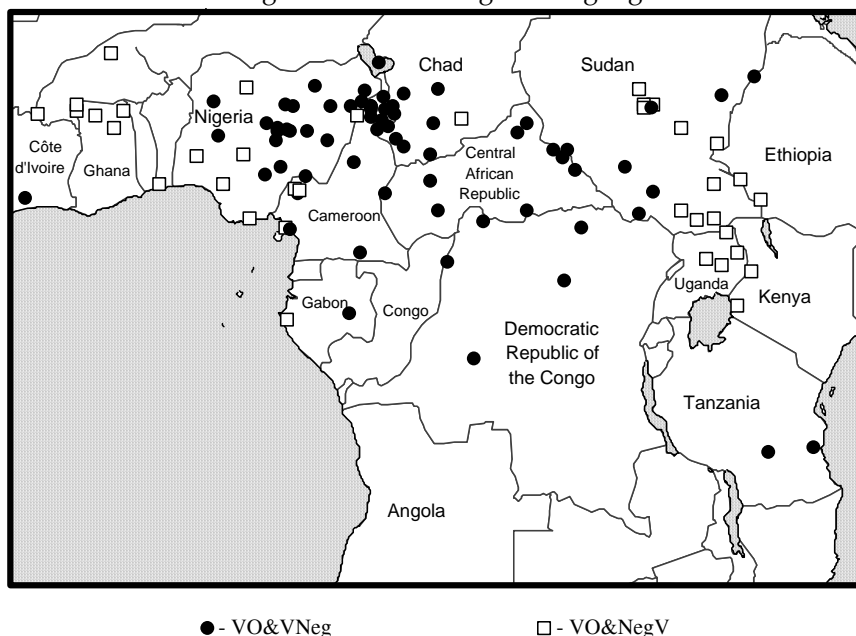
d-úwókè **léndé** 'ba rò **kómà'jò** **àbò** **dë**
 1PL-hear matter of body humbling his NEG
gbĩ **yó**
 also against.expectation
 'we did not listen to his urgent plea' (Persson & Persson 1991: 15)

There may be other languages in which the information from available sources is somewhat lacking in which the negative can precede other elements. I have evidence for many languages in this area being SVONeg where I do not have conclusive evidence that they are SVOXNeg.

5. Distribution of VO&VNeg and VO&NegV in central Africa

As noted above, Map 1 shows VO&VNeg languages in Africa tend to be concentrated in an area in the middle of Africa, what I will call central Africa. Map 3 zooms in on this area.

Map 3
Order of verb and negative word among VO languages in central Africa

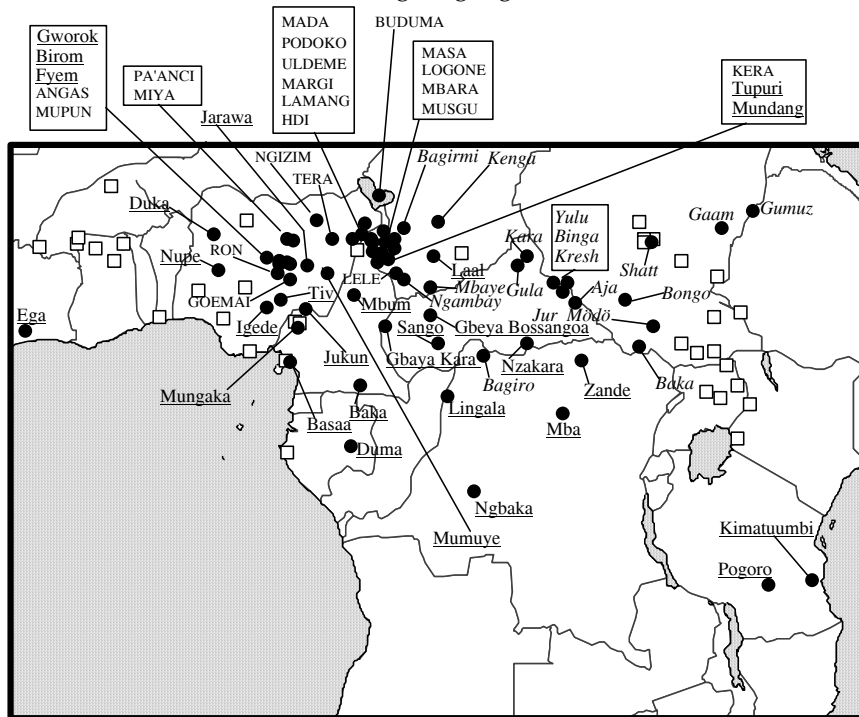


As on Map 1, the black dots on Map 3 represent VO languages which place the negative word after the verb (VO&VNeg), while the white squares represent VO languages which place the negative word before the verb (VO&NegV). Map 3 shows that the area where VO&VNeg languages are common is one centred around the Central African Republic, extending north into the southern half of Chad, extending west to cover much of Cameroon and the eastern half of Nigeria, extending south into the Democratic Republic of the Congo, and extending east into Sudan. The map shows a few VO & VNeg languages outside this immediate area which may represent historically unrelated instances of this order, one language in Côte d'Ivoire, two in Tanzania, and two along the Sudan-Ethiopian border. These cases are discussed briefly below.

We will see a series of maps like Map 3, showing different details; trying to put all these details onto the same map would render the map unreadable. Map 4 removes the country names, but adds the names of the specific VO&VNeg languages. The type appearance on Map 4 codes the major family the language belongs to: italics is used for Nilo-Saharan

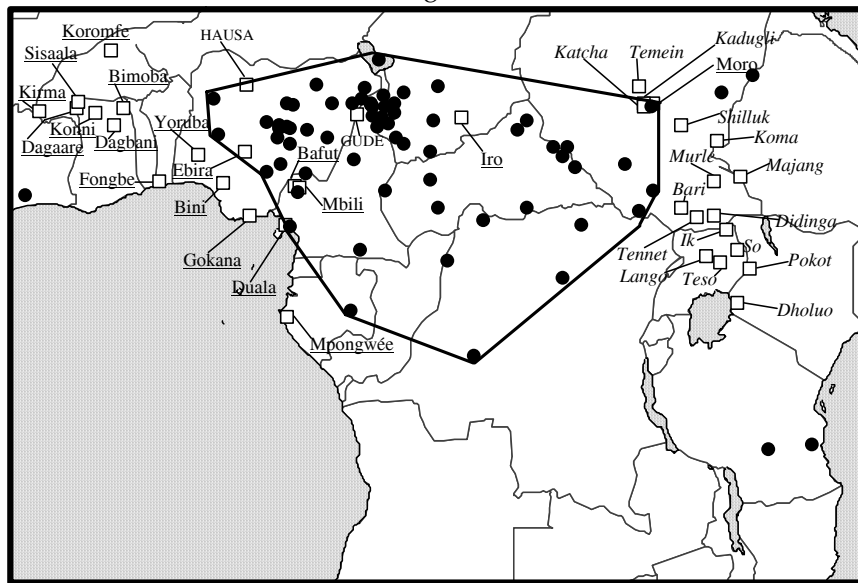
languages, underlining for Niger-Congo, and small uppercase for Chadic (Afro-Asiatic). The names in boxes represent sets of languages that are too close together for it to be possible to include separate labels and pointers.

Map 4:
Order of verb and negative word among VO languages in central Africa,
with VO&VNeg languages identified



Map 5 is a similar map, except that it identifies the VO&NegV languages.

Map 5
 Order of verb and negative word among VO languages in central Africa,
 with VO&NegV languages identified and with the core area of
 VO&VNeg delineated



Map 5 also includes a line that delineates the primary area within which VO&VNeg is common. Apart from a couple of languages on this line, there are only three languages within this area that are VO&NegV. One of these is Gude, a Biu-Mandara Chadic language with a rather different construction for negation from that generally found in Chadic languages. Gude is normally VSO, as in (40a), but it employs the order NegSVO in negative clauses, as illustrated in (40b).

(40) Gude (Biu-Mandara, Chadic; Nigeria, Cameroon): VSO, but NegSVO

- a. **kə** **kii** **Musa** **faara**
 COMPL throw Musa stone
 'Musa threw a stone' (Hoskison 1983: 90)
- b. **pooshi** **Musa** **kii** **faara**
 NEG Musa throw stone
 'Musa did not throw a stone' (Hoskison 1983: 90)

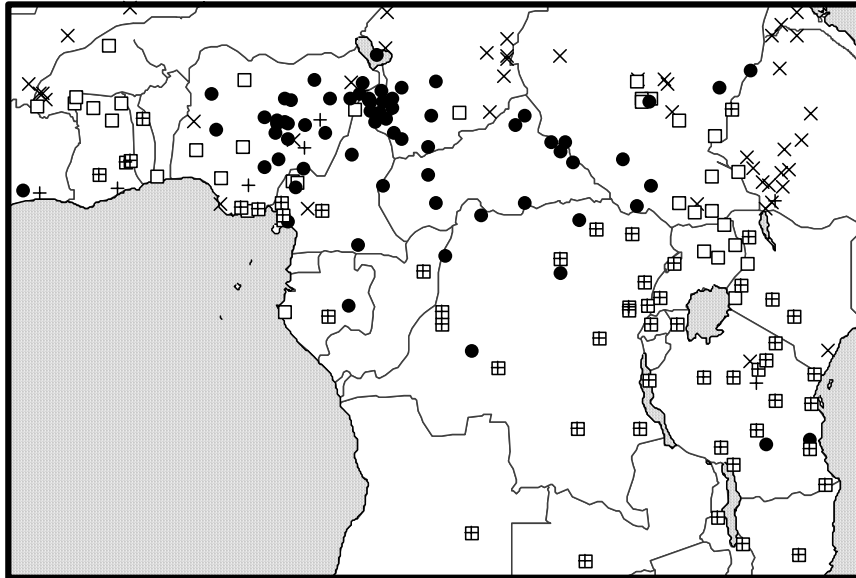
A second VO&NegV language within this area is Iro (Pairault 1969), which is exceptional among Adamawa-Ubangi languages, which are otherwise normally VONeg. Iro sometimes uses a negative suffix in addition to the preverbal negative word, but the preverbal word is apparently obligatory, judging from examples in Pairault (1969). The third VO&NegV language within this area is Bafut, a Grasslands Bantu languages (Chumbow and Tamanji 1994). Bafut employs two negative words before the verb, in NegSNegVO order. But other than these three languages, the languages within this area are overwhelmingly VO&VNeg. There are a number of languages of other types, as discussed below.

6. Other types of languages

6.1 VO languages with negative affixes and OV languages

There are a number of other types of languages not shown on Maps 3 to 5. Map 6 shows three types in addition to the two types shown on Maps 3 to 5. The symbol 'X' is used for OV languages, which are irrelevant to this paper, but are included here for completeness. A plus symbol is used for languages employing negative suffixes on verbs. And a box with a plus symbol in it is used for languages employing negative prefixes.

Map 6
Map with VO languages with negative affixes and OV languages added



● - VO&VNeg □ - VO&NegV × - OV
+ - VO&NegSuffix ⊞ - VO&NegPrefix

The OV languages in Map 6 are mostly in the northern part of the map. Most of them are somewhat removed from the core area in which VO&VNeg order are common, except to the immediate north of this area. There are relatively few languages with negative suffixes in the area shown on the map; the languages in Africa with negative suffixes are listed in Table 5.

Table 5
VO Languages with Negative Suffixes

Niger-Congo
NORTHERN ATLANTIC: Fulani, Ndut, Noon, Diola-Fogny.
SOUTHERN ATLANTIC: Temne.
KWA: Gã, Adioukrou.
IGBOID: Igbo.

Afro-Asiatic

BIU-MANDARA: Malgwa.

WEST CHADIC: Tangale.

SOUTHERN CUSHITIC: Burunge.

But there are many languages in Africa with negative prefixes, particularly in the southern half of the map, where most of these languages are Bantu languages, as illustrated in (41) from Venda.

(41) Venda (Bantu, Niger-Congo; South Africa, Zimbabwe)

mmbwa	a-yo-ngo-luma	nwana
dog	NEG-NC-NEG.PERF-bite	child
'the dog did not bite the child' (Poulos 1990: 216)		

In fact, the area in which negative prefixes are found overlaps somewhat with the southern part of the area in which VO&VNeg order is common, in an area stretching from the northern part of the Democratic Republic of the Congo (formerly Zaire) west to southeastern Nigeria. As one moves south, languages with negative prefixes become the dominant type, especially on the eastern side of the continent. The example in (42) from Isangu, spoken in Gabon, illustrates a negative prefix in the area where there is an overlap of VO&VNeg languages and VO languages with negative prefixes.

(42) Isangu (Bantu, Niger-Congo; Gabon)

má-sò-yí	má-láàngò
1SG-NEG-eat	NC ₆ -taro
'I do not eat taro' (Idiata 1998: 81)	

A list of VO languages in Africa with negative prefixes is given in Table 6.

Table 6
VO Languages with Negative Prefixes

Niger-Congo

NORTHERN ATLANTIC: Balanta

GUR: Kabiyé.

ADAMAWA-UBANGIAN: Barambu.

KWA: Fanti, Twi, Nkonya, Lelemi.

CROSS RIVER: Obolo.

BANTOID: Londo, Bakueri, Tuki, Isangu, Babole, Lontomba, Bolia, Lebéo, Bushoong, Lega, Holoholo, Bila, Kikuyu, Kamba, Chaga, Kinyamwezi, Rimi, Langi, Kaguru, Shambala, Pare, Swahili, Hehe, Pangwa, Kinga, Nkore-Kiga, Runyankore, Runyoro-Rutooro, Haya, Kitalinga, Kihunde, Kinyarwanda, Lucazi, Luba, Tabwa, Ila, Nyanja, Yao, Mwera, Mawiha, Makua, Shona, Venda, Xhosa, Zulu, Ndebele.

Nilo-Saharan

NILOTIC: Turkana, Nandi.

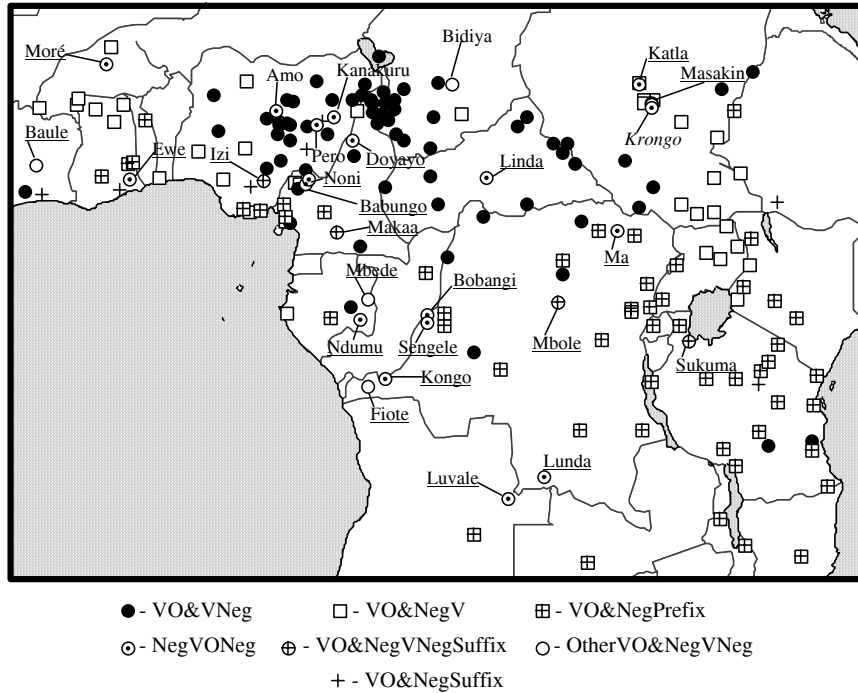
MANGBUTU-EFE: Mamvu.

BERTA: Berta.

6.2. VO languages with double negation

Another set of languages not shown on Maps 3 to 6 are languages with double negation, with one negative preceding the verb (possibly as a prefix) and one negative following the verb (possibly as a suffix). Map 7 shows the languages from Map 6, plus the VO languages with double negation.

Map 7
Map with VO languages with double negation added



Map 7 actually distinguishes three sorts of VO languages with double negation, ones where the postverbal negative follows the object (shown by a white circle with a dot in it), ones where the postverbal negative is a verbal suffix (shown by a white circle with a plus sign in it), and ones where the postverbal negative is a word which either precedes the object, or which can precede or follow the object, or for which I lack data on its position relative to the object (shown by a white circle without anything in it). Examples illustrating each of these three types are shown in (43) to (45) respectively.

(43) Babungo (Bantu): SNegVONeg

ηwá kèe gə táa yìwìŋ mē
 he NEG go.PERF to market NEG
 'he did not go to the market' (Schaub 1985: 91)

(44) Izi (Igboid, Niger-Congo; Nigeria): SNegVNegO, with negative suffix

nwó!ké	té	è-pfú-du	í!yá
man	NEG	3SG-speak-NEG	3SG

'the man is not speaking it' (Meier, Meier and Bendor-Samuel 1975: 217)

(45) Katla (Kordofanian, Niger-Congo; Sudan): SNegVNegO, with postverbal negative a separate word preceding the object

nyɔŋ	ʃa	ny-olök	naŋ	gabas
1SG	NEG	1SG-eat	NEG	meat

literally: 'I not eat not meat' (Tucker and Bryan 1966: 268)

I will not have anything more to say about the latter two of these three types, and will concentrate on the languages where the postverbal negative follows the object, so that the languages can be described as NegVONeg. These languages could be considered a subtype of VONeg, differing from the other VONeg languages we have discussed above only in that there is also a preverbal negative. The majority of the NegVONeg languages in Map 7 occur within the area in which VONeg order is common. Examples from some of these languages are given in (46) to (51). Note that in some languages the preverbal negative is a separate word, while in other cases it is a prefix.

(46) Amo (Kainji, Niger-Congo; Nigeria): NegVONeg

ma	a-nǎ-ì	lìmòn	ba.
NEG	3SG-give-1SG	something	NEG

'he gave me nothing' (Di Luzio 1972: 42)

(47) Ma (Adamawa-Ubangi, Niger-Congo; Dem. Rep. of Congo)

tá-mù-sùbù-li	nónǵbó	nyò
NEG-1SG-eat-PAST	meat	NEG.1SG

'I did not eat meat' (Tucker & Bryan 1966: 130)

(48) Sengele (Bantu, Niger-Congo; Dem. Rep. of Congo)

itándá	t-á-beke	moté	yé
proverb	NEG-NC ₁ -cut	tree	NEG

'un proverbe ne coupe pas un arbre' (Mangulu 2001: 300)

(49) Kanakuru (West Chadic; Nigeria): SNegVONeg

baba wo-shii nai tapa u.
 father NEG-he drink tobacco NEG
 'my father does not smoke tobacco' (Newman 1974: 60)

(50) Pero (West Chadic; Nigeria): SNegVONeg

à-rpúndò cínà-ì = m
 NEG-cook food-DEF=NEG
 'they are not cooking the food' (Frajzyngier 1989: 211)

Krongo, which is on the northeast edge of this area, is different in being NegVSONeg, instead of SNegVONeg, as illustrated in (51).

(51) Krongo (Kadugli; Sudan): NegVSONeg

áj n-óoní à?àñ ỳ?ñ é
 NEG 1/2-know 1SG 3SG NEG
 'I don't know him' (Reh 1985: 370)

Also included here as NegVONeg is Doyayo, which is more strictly speaking SNegVONeg/SNegVNegO.

There are four NegVONeg languages that fall outside the area I have identified as the area in which VO&VNeg is common. Two of them fall to the west of this area, Ewe and Moré, illustrated in (52) and (53).

(52) Ewe (Kwa, Niger-Congo; Ghana, Togo): SNegVONeg

nyè-mé-yì dé àve'-á mè ò
 1SG-NEG-go KV forest-DEF in NEG
 'I am not going into the forest' (Pasch 1995: 55)

(53) Moré (Gur, Niger-Congo; Burkina Faso): SNegVONeg

ā ká nā: uàbà né:mdō ié
 3SG NEG FUT eat meat NEG
 'he will not eat meat' (Lehr, Redden & Balima 1966: 267)

It is not clear whether these languages should be considered manifestations of the same VONeg phenomenon in the core area: these languages are not far away, but they are separated from this area by languages which are not VONeg.

The other two languages falling outside the area are to the south of the area as I have described it so far. These are Kongo and Luvale, illustrated in (54) and (55).

(54) Kongo (Bantu, Niger-Congo; Dem. Rep. of Congo): SNegVONeg

ba-numí **ka** **ba-dí:-dia** **mba** **kó**
 PL-bird NEG 3PL-PAST-eat palm.nut NEG
 'the birds haven't eaten the palm nuts' (Lumwamu 1973: 213)

(55) Luvale (Bantu, Niger-Congo; Angola): SNegVONeg

ka-va-wanyine [**vy-uma** **vize**
 NEG-NC₁.PL-find? NC₄.PL-thing? NC₄.PL-that.yonder
va-tondele]=ko
 NC₁.PL-seek?=NEG
 'they did not find those things they sought' (Horton 1949: 127)

Kongo is only slightly outside the area and presumably should be considered part of this area. On the other hand, Luvale is considerably further south, in Angola. However, I do not have data for any languages between Kongo and Luvale. If it turns out that languages between them (or at least some of them) are also NegVONeg or VONeg, then this would show that the VO&VNeg area extends as far south as Luvale. If, however, the languages in between are not of this sort, then this would suggest that the area does not extend south to Luvale. This is in fact the most significant issue that this paper leaves unresolved regarding the distribution of VONeg order in Africa.

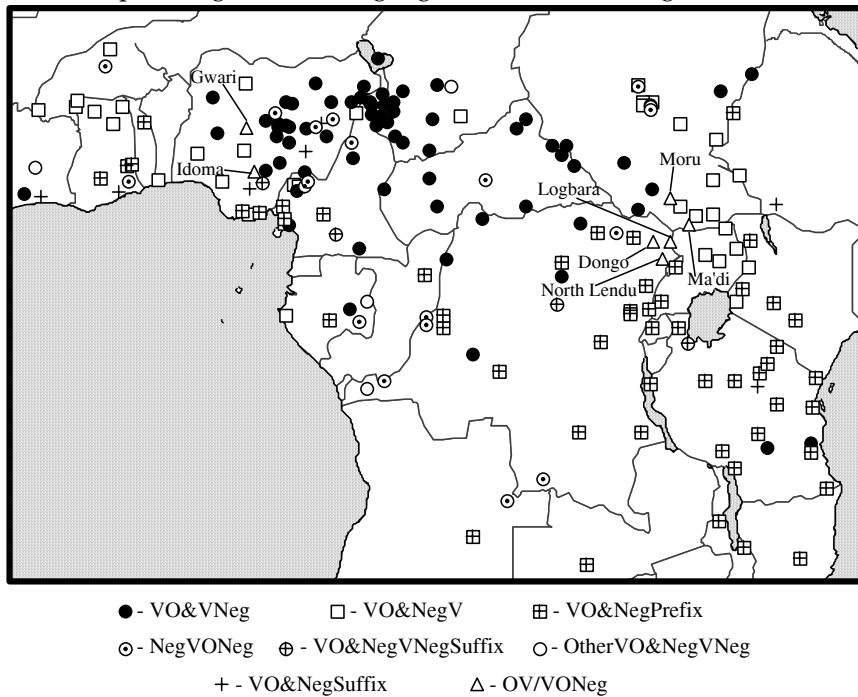
6.3. OV/VO languages which are VONeg when VO

There is yet another type of language that is not represented on the maps so far. The maps so far have shown languages which are clearly VO or clearly OV, but not languages where both orders occur without there being a clear basis for saying that one order is dominant. Significantly, there are eight such languages in Africa that have the further interesting characteristic that when the order is SVO, the negative follows the object, yielding SVONeg order, listed in Table 7 and shown with triangles on Map 8.

Table 7
 Languages which are OV and VO, but VONeg when VO

- Niger-Congo*
 SOUTHERN ATLANTIC: Kisi.
 ADAMAWA-UBANGIAN: Dongo.
 NUPOID: Gwari
 IDOMOID: Idoma
Nilo-Saharan
 MORU-MADI: Moru, Ma'di, Logbara
 BALENDRU: North Lendu

Map 8
 Map adding OV/VO languages which are VONeg when VO



Four of these languages are related Central Sudanic languages, three of them Moru-Ma'di languages, the fourth North Lendu, which are relatively close together in a region in the northeastern corner of the Democratic Republic of the Congo and the adjacent area in southwestern Sudan.

These languages share the feature that they have two constructions, an SOV construction that is associated with imperfective aspect and an SVO construction that is associated with perfective aspect (though Blackings and Fabb 2003 argue that in Ma'di the distinction is associated with tense, not aspect). But in the SVO construction, the order with a negative is SVONeg. This is illustrated in (56) for Moru, in (57) for Ma'di, and in (58) for North Lendu.

(56) Moru (Moru-Ma'di, Nilo-Saharan; Sudan): SOV/SVO, but SVONeg when SVO (but SVONegX)

ndá **ozo** **bongó** **ku-te** **mä-rige**
 3SG give cloth NEG-PAST 1SG-to
 'he did not give me a cloth' (Tucker 1967: 254)

(57) Ma'di (Moru-Ma'di, Nilo-Saharan; Sudan, Uganda: SOV/SVO, but SVONeg when SVO)

m'-āwí **dđóti** **kūrù**
 1SG-open door NEG.PAST
 'I did not open the door' (Blackings and Fabb 2003: 469)

(58) North Lendu (Balendru, Nilo-Saharan; Dem. Rep. of Congo)

má-tra **Lógo** **nzá**
 1SG-speak Logo NEG
 'I do not speak Logo' (Tucker 1967: 411)

Note, however, that the order in Moru is SVONegX, where X denotes something that is not a direct object, like **mä-rige** 'to me' in (56). However, the fact that we get SVONeg order in these languages and the fact that they are immediately to the east of the area in which VO&VNeg order is common suggests that they should be considered instances of the same areal phenomenon.

The other four languages of this sort are Niger-Congo languages, but in very different locations. One is Dongo, an Adamawa-Ubangi language that is spoken very close to the four Central Sudanic languages and with a split between OV and VO that is aspectually governed; I assume that these similarities to the Moru-Ma'di languages are due to contact. The SVONeg order in Dongo is illustrated in (59).

(59) Dongo (Adamawa-Ubangi, Niger-Congo; Dem. Rep. of Congo)

á-zú	nùŋgu	nà
1SG-eat	meat	NEG

'I am not eating meat' (Tucker and Bryan 1966: 130)

Two of the other Niger-Congo languages of this sort are spoken in Nigeria. These are Idoma and Gwari, though Gwari is more accurately OV/VO with double negation in negative clauses with the order SNeg-VONeg, as in (60).

(60) Gwari (Nupoid, Niger-Congo; Nigeria) OV/SNegVONeg

wò	tōí	gyē	mī	wyé	nì
1SG	NEG.PRES.PERF	see	1SG	eye	NEG

'he didn't see me' (Hyman and Magaji 1970: 119)

The last Niger-Congo language of this sort is Kisi, a Southern Atlantic language spoken well to the west of most of the languages discussed in this paper, in Guinea, so that it does not appear on Map 8. I assume that it is an independent instance of SVONeg order.

Note that in some of these languages, the SOV construction is not used with negatives, so that negative clauses are consistently SVONeg; this is the case in Dongo, Ma'di, and Idoma, for example.

7. Marginal instances of VONeg order

There are marginal instances of VONeg order in some other languages. In Gokana, for example, the negative construction with verbal predicates is a preverbal negative, illustrated above in (6). However, the negation of a nominal predicate involves a negative copula plus a clause-final negative, as in (61).

(61) Gokana (Cross River, Niger-Congo; Nigeria)

gbàrà=á	nî	dómbiè	nì^{3/4}
man=that	COPULA.NEG.NONFUT	doctor	NEG

'that man is not a doctor'

Gokana is on the edge of the area in which VONeg order is common, in southeastern Nigeria.

Another marginal case is represented by Malgwa, a Biu-Mandara language. The method of negating clauses in Malgwa for most tense-aspects is by means of a suffix on the verb, as in (62).

(62) Malgwa (Biu-Mandara, Chadic; Nigeria)

fá-nó-ŋə **ŋá**
 build-1SG.PERF-NEG house
 'I did not build a house' (Löhr 2002: 190)

However, in the progressive, negation takes the form of a clause-final particle, yielding VONeg order, as in (63).

(63) **yá** **tírɡə** **f-á** **ŋá** **áware**
 1SG.IMPERF PROG build-POSS house NEG
 'I am not building a house' (Löhr 2002: 199)

Another marginal case is represented by Zande, which has two post-verbal negatives, one which immediately follows the verb, the other which occurs at the end of the clause, as in (64).

(64) Zande (Adamawa-Ubangi, Niger-Congo; Democratic Republic of Congo)

mì-màŋgì **ŋǎ** **sóŋge** **tè**
 1SG-do.PERF NEG work NEG
 'I am not doing work' (Tucker and Bryan 1966: 155)

A final marginal case is found in Busa, a Mande language that is spoken in Nigeria (considerably to the east of most Mande languages). Like other Mande languages, the normal clause order is SOVX, with the object preceding the verb, but with oblique NPs and adverbial elements following the verb. The negative is a clitic that attaches to the last element of the clause, yielding SOVXNeg order, as in (65).

(65) Busa (Mande, Niger-Congo; Nigeria)

wà-è **gàrì** **yī** **swí=ne=rō**
 3PL-HABIT saddle tie scorpion=to=NEG
 'one does not tie a saddle to a scorpion' (Wedekind 1972: 60)

Although this is not VONeg, it is like VONeg in that the negative occurs at the end of the clause following postverbal elements. It differs from

VONeg only in that the postverbal elements it follows are adverbial elements rather than objects. Busa is located somewhat outside the core area in which VONeg order is common, being situated near the western boundary of Nigeria.

The final class of marginal cases is represented by Hausa. As discussed above, Hausa has an obligatory preverbal negative and a final negative in some constructions. Because it is the preverbal negative that is obligatory, I have classified Hausa as NegV. However, the postverbal negative is clause-final, so that Hausa should count as a marginal instance of a VONeg language. There are in fact three other languages that are similar to Hausa in this respect, all three of them Niger-Congo languages. These three languages are Bimoba (a Gur language spoken in Togo), Pambia (an Adamawa-Ubangi language spoken in the Democratic Republic of the Congo), and Bolia (a Bantu language spoken in the Democratic Republic of the Congo). The last two languages here fall within the area in which VO&VNeg is common, while Bimoba falls well to the west of this area. The examples in (66) and (67) illustrate this for Pambia and Bolia respectively.

(66) Pambia (Adamawa-Ubangi, Niger-Congo; Dem. Rep. of Congo)

a-ŋá-nyé	sandò	te
NEG-cook-1SG	food	NEG
'I did not cook the food' (Tucker and Bryan 1966: 155)		

(67) Bolia (Bantu, Niger-Congo; Dem Rep of Congo)

á-pó-lendé	lá	mbúha	pô
3SG-NEG-look	also	back	NEG
'he doesn't look back' (Mamet 1960: 59)			

8. Other types of languages

The discussion and maps above discuss a variety of different patterns for the position of negative morphemes in VO languages in Africa. These do not, however, exhaust the set of possible types. A number of languages that were examined are not shown on the maps. Many of these are languages with more than one negative construction. Some of these languages are ones which sometimes use negative affixes and sometimes use negative words (possibly on opposite sides of the verb), as illustrated in (68) from Karimojong, where the negative is a prefix in the nonpast,

but a separate word in the past (at least if we assume that Novelli's orthography is accurate in this respect).

(68) Karimojong (Nilotic; Nilo-Saharan; Uganda)

- | | | | |
|----|---|---------------|-------------|
| a. | ɲ-á-dɔŋi | | áɛɔŋ |
| | NEG.NONPAST-1SG-pinch | | 1SG |
| | 'I am not pinching' (Novelli 1985: 442) | | |
| b. | pá | á-dɔŋi | áɛɔŋ |
| | NEG.PAST | 1SG-pinch | 1SG |
| | 'I am not pinching' (Novelli 1985: 442) | | |

A list of these languages is given in Table 8.

Table 8

VO Languages in Africa with both Negative Affixes and Negative Words

Niger-Congo

NORTHERN ATLANTIC: Wolof.

ADAMAWA-UBANGIAN: Mondunga.

BANTOID: Nsenga.

Nilo-Saharan

SURMIC: Koegu.

NILOTIC: Maasai, Karimojong.

Afro-Asiatic

BERBER: Shilha.

Others are languages which sometimes use preverbal negative words, but sometimes use postverbal negative words. An example of such a language is Mangbetu, a Central Sudanic language, illustrated in (69).

(69) Mangbetu (Central Sudanic, Nilo-Saharan; Dem. Rep. of Congo)

- | | | | |
|----|---|---------------|-------------|
| a. | má-nyó | ka | ékpè |
| | 1SG-eat | NEG | frog |
| | 'I do not eat frog' (Tucker & Bryan 1966: 54) | | |
| b. | ka | m-éétì | |
| | NEG | 1SG-know | |
| | 'I don't know' (Tucker & Bryan 1966: 54) | | |

A list of languages of this type is given in Table 9.

Table 9

VO Languages in Africa with both Preverbal and Postverbal Negative Words

Niger-Congo

BANTOID: Nkem, Aghem, Ewondo.

Nilo-Saharan

NILOTIC: Acooli.

MANGBETU-ASUA: Mangbetu.

Note that this does not include languages where the preverbal and postverbal negative words co-occur. Such languages are treated above as languages with double negation (though in Nkem, the preverbal and postverbal negatives can occur either by themselves or together). There are also two languages, Ngombe and Doko, which sometimes employ prefixes, sometimes suffixes.

Finally, there are VO languages in which the word order is different in negative clauses from affirmative clauses. For example, Mbili is SVO in affirmative clauses, as in (70a), but SNegOV in negative clauses, as in (70b).

(70) Mbili (Grassfields Bantu, Niger-Congo; Cameroon)

a. **a** **gua** **ati**
 NC₁ fell tree
 'he fells a tree' (Ayuninjam 1998: 339)

b. **a** **ka** **ati** **gua**
 NC₁ NEG tree fell
 'he does not fell a tree' (Ayuninjam 1998: 339)

Grebo, a Kru language, is similar to Mbili in this respect (Innes 1966). And Me'en is SVO in affirmative clauses, as in (71a), but SOV with a negative suffix in negative clauses, as in (71b).

(71) Me'en (Surmic): SVO but SOVNeg

a. **ede** **or** **kobu-o**
 they see chicken-PL
 'they see the chickens' (Will 1989: 147)

- b. **ede** **kobu-o** **or-on**
 they chicken-PL see-NEG
 'they don't see the chickens'

Mursi, also a Surmic language, is SVO in affirmative clauses, but SONegV in negative clauses (Turton and Bender 1976).

9. Distribution of types by family

The discussion so far has been organized by language type. It is useful to summarize the distribution of the types within each family.

9.1. Chadic

With two exceptions, all of the Chadic languages for which I have relevant data are VONeg. In addition to the examples cited above, in (7) from Kera, in (8) from Angas, in (9) from Musgu, in (22) from Mupun, in (24) from Mbara, in (36) from Ngizim, is the example in (72) from Buduma.

(72) Buduma (Biu-Mandara; Chad): SVONeg

- na-hange** **mána** **mīgo** **jā**
 3SG.PAST-hear word people NEG
 'he did not hear the talk of the people'
 (Lukas & Nachtigal 1939:58)

The examples in (73) illustrate this for Tera, though Tera is one of the languages which sometimes employs double negation, as in (73a), and sometimes just the postverbal negation, as in (73b).

(73) Tera (Biu-Mandara; Nigeria): SVONeg

- a. **Ali** **nə** **masa** **goro** **fa**
 Ali NEG.PERF buy kola NEG
 'Ali didn't buy kola' (Newman 1970: 128)
- b. **Ali** **á** **masaran** **fa**
 Ali CONT buy NEG
 'Ali is not buying it' (Newman 1970: 128)

Lamang, illustrated in (74), is an example of a verb-initial Chadic language which is also VONeg, more specifically VSONeg (although there is also sometimes an additional negative marker immediately following the verb).

(74) Lamang (Biu-Mandara; Nigeria): V(Neg)SONeg

kwsàa-xáj t ímú = wó.
 reach-3PL PREP water=NEG
 'they did not reach the water' (Wolff 1983: 253)

Podoko, also a Biu-Mandara language, is similar, as illustrated in (75).

(75) Podoko (Biu-Mandara; Cameroon)

a ỵtə yá daf̣ə la
 FOC prepare.IMPF 1SG ball NEG
 'I would not prepare the ball/lump' (Jarvis 1989: 108)

Hdi, another VSO Biu-Mandara language, employs two negative words, but both follow the verb, so it is not coded here as VNeg. Its order is VNegSONeg, as in (76).

(76) Hdi (Biu-Mandara; Nigeria, Cameroon)

ɓvà 'á xdí-xà tá l'école wù
 like NEG Hdi-PL OBJ school NEG
 'Hdi do not like school' (Frajzyngier and Shay 2002: 380)

Miya, a West Chadic language, also employs double negation, though again, since both negatives sometimes follow the verb, it is classified here as VNeg. But one of the negatives occurs at the end of the clause, cliticized to the last word, while the other sometimes precedes the verb, as in (77a) and sometimes immediately follows the verb, as in (77b).

(77) Miya (West Chadic; Nigeria)

a. **t́ má var áa dùwak = úw**
 it NEG run SUBJ horse=NEG
 'the horse will not run' (Schuh 1998: 283)

b. **à v́ar ma dùwak = úw**
 PERF run NEG horse=NEG

'the horse did not run' (Schuh 1998: 283)

There are also three Chadic languages I code as NegVNeg, and at least two of them, Pero and Kanakuru, are SNegVONeg, so while they also employ a preverbal negative, they follow the general Chadic pattern of employing a negative after the object.

There are only two Chadic languages for which I have data which employ negative words (as opposed to negative affixes) and which I do not code as VO and VNeg. One is the case of Hausa, discussed above, which is sometimes SNegVONeg, but sometimes SNegVO; since the obligatory negative is the preverbal one I classify it as SNegVO. But it is somewhat marginally an exception since it does have the postverbal negative in the SNegVONeg construction. The second exception in my data for Chadic is Gude, illustrated above in (40).

9.2. Nilo-Saharan

The distribution of VO&VNeg order in Nilo-Saharan languages is considerably circumscribed geographically. With three exceptions to be noted below, the VO&VNeg languages in Nilo-Saharan are all Central Sudanic, in fact specifically in the western branch of Central Sudanic, in the Kresh and Bongo-Bagirmi subgroups. In addition to examples cited above in (10) for Ngambay, in (11) for Kresh, in (23) for Bongo, in (25) for Bagirmi, in (33) for Bagiro, in (39) for Jür Mödö, (78) illustrates this order for the Bongo-Bagirmi language Kara.

(78) Kara (=Fer) (Bongo-Bagirmi, Nilo-Saharan; Cen. Afr. Rep.)

j-ùwà lif ɓ?
1PL-see moon NEG

'we do not see the moon' (Boyeldieu 1987: 90)

VONeg order is also found in three other Nilo-Saharan languages, though all three of these are somewhat marginal to the area in which VO&VNeg predominates. The first is Shatt, a language in the small Daju group within Eastern Sudanic, spoken in the Nuba Mountains area in the Sudan and illustrated above in (13). It is geographically separated from the area in which VONeg order is found by languages which are not VONeg, for example by Dinka languages. The two other Nilo-Saharan VONeg languages are even more separated geographically from the central area in which this order is common, and their sharing this property with languages in that area may very well be a coincidence; in fact per-

haps we could even say it is most likely a coincidence. These are two languages spoken in Ethiopia, Gumuz and Gaam. Gaam, illustrated in (79), is an Eastern Jebel language within Eastern Sudanic.

(79) Gaam (Eastern Jebel, Nilo-Saharan; Sudan): SVONeg

ā-māsē fēg wá
 1SG-drink water NEG
 'I don't drink water' (Bender 1989: 168)

Gumuz is a Komuz language, within Nilo-Saharan. The SVNegONeg order of Gumuz is illustrated above in (12).

Nilo-Saharan languages outside the core area in which VONeg order is found are generally not VNeg. For example, Nilotic languages are consistently NegV. This is illustrated in (80) for Dholuo (which has both SNegVO and NegSVO order).

(80) Dholuo (Nilotic; Kenya): SNegVO/NegSVO

.nyathí .ok .nindí kâ.
 baby NEG sleep here
 'the baby is not sleeping here' (Omondi 1982: 152)

Nor is VNeg order found in other VO Eastern Sudanic languages or groups such as Surmic or Kuliak. In Koman, like Gomuz a Komuz language, the order is SNegVO; the preverbal negation is illustrated in (81).

(81) Koma (Koman; Sudan, Ethiopia): SNegVO

'yak-a seg
 NEG-1PL hear
 'we do not hear' (Tucker & Bryan 1966: 367)

And in contrast to Shatt, other VO languages of the Nuba Mountains area in Sudan, including Temein and Kadugli (if the Kadugli languages are Nilo-Saharan) are NegV, though Krongo is NegVSONeg, as illustrated above in (51).

9.3. Niger-Congo

The distribution of VONeg order is even more geographically circumscribed within Niger-Congo. The largest group exhibiting VONeg order

are Adamawa-Ubangi languages, illustrated in (14) above for Mbum and in (82) for Sango.

(82) Sango (Adamawa-Ubangi; Central African Republic): SVONeg

mɔ	hínga	á-wa	tí	Bangui	ape
2SG	know	PL-inhabitant	of	Bangui	NEG

'you don't know the inhabitants of Bangui' (Samarin 1967: 135)

Most of the Adamawa-Ubangi languages I have examined are VONeg, including three languages with double negation which are Neg-VONeg (Linda, Ma, Pambia). VONeg order is also found in Laal, sometimes classified as Adamawa-Ubangi.

This order is also found in many of the Niger-Congo languages of Nigeria, including Birom, Nupe, and Duka, illustrated above in (15), (16), and (26) respectively, and Jukun, illustrated in (83).

(83) Jukun (Platoid; Nigeria): SVONeg

ù	con	ú	bu	wà ká	bá.
2SG	want	2SG	thing	this	NEG

'you do not want this' (Shimizu 1980: 276)

(Interestingly, the negative word **bá** in Jukun resembles the negative word in a number of Chadic languages.)

Yoruba, on the other hand, is a Niger-Congo language of Nigeria which is SNegVO, as in (84).

(84) Yoruba (Niger-Congo; Nigeria): SNegVO

nwọn	kò	ń-fún	mi	l'ówó
3PL	NEG	HABIT-give	1SG	money

'they do not give me money' (Rowlands 1969: 63)

Other VO Niger-Congo languages of Nigeria and further west either are NegV, as in Koromfe, illustrated in (2) above, or employ negative affixes, as in Lelemi, illustrated in (3) above. There is one instance of a VO and VNeg language further west, Ega, a Kwa language of Côte d'Ivoire, which is SVONeg. Ega is sufficiently far from the area in which VONeg is common that it may be a coincidental instance, unrelated to this order further east.

Niger-Congo languages to the south and southwest of the area in which VONeg order is common are generally Bantu languages with

negative prefixes, illustrated in (41) above from Venda. Maps 3 and 4 show two VO&VNeg languages in Tanzania, Kimatuumbi and Pogoro (both Bantu). But as Map 4 makes clear, there are many Bantu languages between these two languages and the principal area in which VONeg order is found, so that these two languages most likely represent an independent development, unrelated to the phenomena found in the principal area of VONeg order. Tom Güldemann tells me that there are other instances of VONeg Bantu languages in Tanzania, though if the languages shown on Map 4 are representative, these are very much a minority. Furthermore, Kimatuumbi is not specifically VONeg, as illustrated in (38) above: it allows both VONeg and VNegO order. The position of the negative relative to the object in Pogoro is not clear from my source.

10. Final Question Particles

The discussion so far has avoided mention of possible factors influencing the position of negative morphemes. One principle that I propose in Dryer (1988) is that negative morphemes tend to precede the verb, perhaps because delaying them increases the chance of confusion, since delaying a negative until the end of the sentence leads to the possible mistaken interpretation by the hearer that the speaker intends the positive form of the sentence. Such a principle might explain why SVO languages with final negative words are less common, though it raises a question of why they are so common in this area in central Africa. Another principle I discussed is a strong tendency for negative morphemes to occur adjacent to the verb; but again SVONeg languages do not conform to this principle.

One factor that may be relevant is that negative morphemes, though they are traditionally viewed as being semantic rather than pragmatic, since they (allegedly) simply change the truth value of the proposition expressed by the clause, are perhaps better viewed as indicating a particular kind of speech act, one of denying. As noted by Givón (1984), people do not express negative sentences unless something in the context has raised the question of the proposition in the first place. They are in that sense much more pragmatically constrained than affirmative sentences.

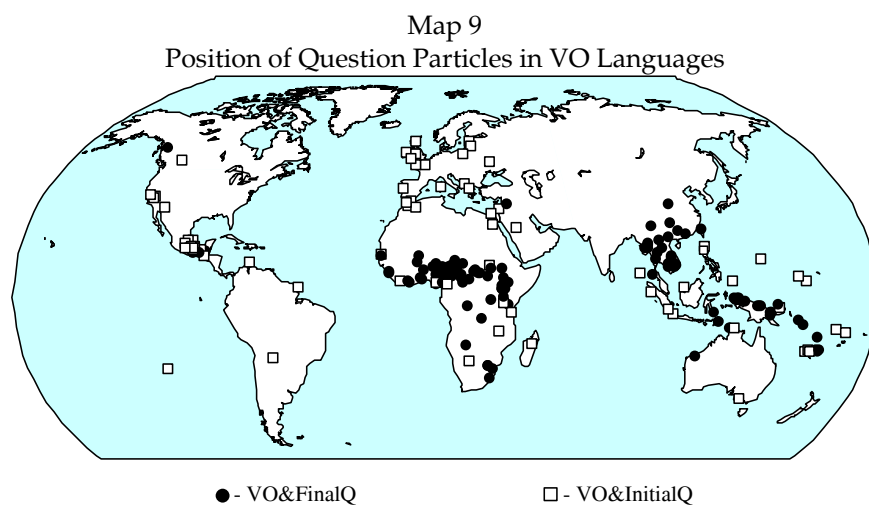
There is another sort of morpheme that is more clearly associated with pragmatic function, and that is markers of polar (or “yes-no”) questions, as in (85) from Margi.

(85) Margi (Biu-Mandara, Chadic; Nigeria)

ùl-ár	gè	Mádà	yà?
see-PAST	2SG	Mada	Q

'did you see Mada?' (Hoffman 1963: 98)

Unlike negative morphemes, such question markers do not exhibit a crosslinguistic tendency to occur next to the verb or to occur early in sentences, and it is quite common crosslinguistically for them to occur in sentence-final position. Map 9 shows the worldwide distribution of two types of VO languages with question particles, ones in which the particle normally occurs at the beginning of the sentence, and ones in which the particle normally occurs at the end of the sentence. Excluded are languages with question particles which appear in some other position, such as second position.



There are interesting similarities and differences between the distribution of negative words in Map 1 and the distribution of question particles in Map 9. One striking similarity is the fact that VO languages with final question particles are especially common in Africa. They are also common around New Guinea. And they are uncommon in the Americas and in Europe and the Mediterranean. A striking difference, on the other hand, is that VO languages with final question particles are quite common in mainland southeast Asia, while VO&VNeg order is not common

at all in this region. Another difference is that the area in Africa in which VOQ order is common is broader than the area in which VONeg is common: it extends west of Nigeria, it extends further east, being common among Nilotic and Surmic languages, and it extends further south, with scattered instances as far south as South Africa.

Like VONeg order, it is found in all three families, as illustrated by the three examples in (86) to (88).

(86) Tera (Biu-Mandara, Chadic; Nigeria): SVOQ

tà	masa	koro-a	mú
2SG.PERF?	buy	donkey-DEF	Q

'did you buy the donkey?' (Newman 1970: 150)

(87) Bagirmi (Bongo-Bagirmi, Nilo-Saharan; Chad): SVOQ

i	ak	ŋ^won-əm	kau	le?
2SG	see	son-1SG	at:all	Q

'did you see my son at all?' (Stevenson 1969: 93)

(88) Gbeya Bossangoa (Adamawa-Ubangi, Niger-Congo; Cen. Afr. Rep.): SVOQ

mé	tombá	tom	béndé?
2SG	send	message	Q

'did you send word?' (Samarin 1966: 224)

In Table 10 are listed the VO languages in my database from Africa with sentence-final neutral question particles, by genus.

Table 10

VO languages from Africa with sentence-final neutral question particles

Niger-Congo

NORTHERN ATLANTIC: Fulani.

SOUTHERN ATLANTIC: Temne.

GUR: Koromfe, Moré.

ADAMAWA-UBANGIAN: Mumuye, Mbum, Gbeya Bossangoa, Sango, Linda.

KWA: Fanti, Nkonya, Ewe, Adioukrou, Twi.

NUPOID: Nupe.

EDOID: Engenni.

IGBOID: Izi.

PLATOID: Jukun, Birom.

KAINJI: Duka, Amo.

BANTOID: Babungo, Noni, Kwangali, Zulu, Swazi, Kihunde.

Nilo-Saharan

KADUGLI: Krongo.

SURMIC: Majang, Me'en.

NILOTIC: Karimojong, Turkana, Nandi.

KULIAK: Ik, So.

KRESH: Kresh.

BONGO-BAGIRMI: Bongo, Ngambay, Mbaye, Bagirmi, Gula, Kenga, Kara, Yulu.

BERTA: Berta.

Afro-Asiatic

EAST CHADIC: Kera.

BIU-MANDARA: Tera, Margi, Lamang, Gude, Musgu, Mbara, Buduma, Logone.

WEST CHADIC: Hausa, Kanakuru, Pero, Angas, Mupun.

SEMITIC: Arabic (Syrian).

A comparison of the genera in Table 10 with those in Table 2 further reflects the broader distribution of VOQ order compared to VO&VNeg order. Further examples of VOQ order are given in (89) to (93) from Chadic languages, (94) and (95) from Nilo-Saharan languages, and (96) to (102) from Niger-Congo languages.

- (89) Kanakuru (West Chadic; Nigeria)

w-átò **wái** **déngà** **ù** **rú**
 NEG-FUT:3SG.FEM get pot NEG Q
 'can't she get a pot?' (Newman 1974: 71)

- (90) Angas (West Chadic; Nigeria)

mwa **ne** [**gi** **mwâ=a**
 3PL see goat PLUR]=Q
 'did they see the goats?' (Burquest 1973: 33)

- (91) Hausa (West Chadic; Nigeria): SVOQ

zâi **zô** **nē^{3/4}**
 FUT.3SG.MASC come Q
 'will he come?' (Kraft & Kraft 1973: 200)

- (92) Buduma (Biu-Mandara, Chadic; Chad)

ga-hange **ba?**
 2SG.PAST-hear Q
 'did you hear?' (Lukas and Nachtigal 1939: 78)

- (93) Lamang (Biu-Mandara, Chadic; Nigeria)

káakà-n **vdzè** **rè?**
 tell?-?? monkey Q
 'did you tell the monkey?' (Wolff 1983: 256)

- (94) Ngambay (Bongo-Bagirmi, Nilo-Saharan; Chad, Cen. Afr. Rep.)

see **i** **a** **k-aou** **se-m** **kametag**
 Q 2SG FUT NOM-go with-1SG afternoon
nee **wa**
 here Q
 'will you go with me this afternoon?' (Thayer 1978: 16)

- (95) Kara (=Fer) (Bongo-Bagirmi, Nilo-Saharan; Central African Republic)

nīn **ùwà** **wīs** **mín** **bà**
 3SG see dog this Q
 'did he see this dog?' (Boyeldieu 1987: 91)

(96) Sango (Adamawa-Ubangi, Niger-Congo; Central African Rep.)

tongana	mɔ	tɛ	ngunzá,	mɔ	tɛ
when	2SG	eat	greens	2SG	eat
susu	mélangé	na	ní	wala	
fish	mixed	with	it	Q	

'when you eat greens, do you eat fish mixed with it, or not?'

(97) Mbum (Adamawa-Ubangi, Niger-Congo; Cameroon, Central African Republic)

kú	ndàkndàk	ké	é
3PL	hit	3SG	Q

'did they hit him?' (Hagège 1970: 325)

(98) Mumuye (Adamawa-Ubangi, Niger-Congo; Nigeria)

a.	mò	insè	yé	tnoona	ya
	2SG	woken:up	PERF	well	Q

'have you woken up well?' (Shimizu 1983: 103)

b.	dè	kpā`	mò	fa	ya
	AORIST.NEG	meet	2SG	NEG	Q

'did he not meet you?' (Shimizu 1983: 103)

(99) Jukun (Platoid, Niger-Congo; Nigeria)

ù	fo	jí	wàá	m	dab
2SG	understood	thing	REL.NONSUBJ	1SG	told
yí	ù	ra	ko		
gave	2SG	have	Q		

'have you understood what I told you?' (Shimizu 1980: 271)

(100) Birom (Platoid, Niger-Congo; Nigeria)

hò	ká:na-yisi	mé	ṅáà
2SG	PAST.INDETERM-call	1SG	Q

'did you call me?' (Bouquiaux 1970: 402)

(101) Duka (Kainji, Niger-Congo; Nigeria)

wón	cɔn ɔ́	ám	yé	wɔ	àp	mò
you	wanted	I	give	you	meat	that
he	wɔ	əm-bɔ̀ɔ̀s	è			
will	you	satisfy	Q			

'you want me to give you meat that will satisfy you?'
(Bendor-Samuel, Skitch & Cressman 1973: 47)

(102) Koromfe (Gur, Niger-Congo; Burkina Faso, Mali)

n	zɔmmaa	a	mũ	bi
2SG	want.prog	ART	rice	Q

'do you want some rice?' (Rennison 1997: 13)

The general conclusion is that VONeg languages tend to be VOQ, and that the use of VONeg order may be in some sense “mimicking” the VOQ word order. It should be emphasized, however, that there are VONeg languages that lack question particles (e.g. Ngizim). Note that even if VONeg languages tend to be VOQ, the opposite does not seem to be the case, given the broader distribution of VOQ. Turkana, for example, employs a final question particle, as in (103a), but a negative prefix, as in (103b).

(103) Turkana (Nilotic, Nilo-Saharan; Kenya, Uganda)

- a. **ĩ-ĩjɔli-km-ĩ** **ekòlò = à**
 2-look-DAT-ASP lid=Q
 'are you looking at the lid?' (Dimmendaal 1983: 430)
- b. **ɲ-e-bun-ò** **aberu'**
 NEG-3-come-ASP woman
 'the woman has not come' (Dimmendaal 1983: 445)

Note that in languages with both sentence-final question particles and sentence-final negative words, it is usually (if not always) the question particle that comes last, if both can co-occur, as in the Kanakuru example in (89) and in the Mumuye example in (98b).

11. Clause-Final Auxiliaries

Another, less common, phenomenon that may be associated with VONeg word order is VOAux order, where Aux is a particle indicating tense or aspect. A number of languages from central Africa also have such clause-final tense-aspect particles, illustrated in (104) from Bagirmi and in (105) from Birom.

(104) Bagirmi (Bongo-Bagirmi, Nilo-Saharan; Chad)

bis	sa	ja	tebire	ga
dog	eat	meat	yesterday	COMPL

'the dog ate the meat yesterday' (Stevenson 1969: 85)

(105) Birom (Platoid, Niger-Congo; Nigeria)

wot	a-jama	hwa	vít
1PL	AORIST-look.for	woman	INCOMPL

'we have looked for the woman' (Bouquiaux 1970: 387)

In Table 11 is a list of languages from Africa with VOAux order, for at least some Aux.

Table 11

Languages with SVOAux, for at least some auxiliary

Niger-Congo

GUR: Bimoba

KWA: Adioukrou

ADAMAWA-UBANGI: Mumuye, Linda

PLATOID: Birom

Nilo-Saharan

KRESH: Kresh

BONGO-BAGIRMI: Baka, Bongo, Jur Mödö, Ngambay, Mbaye, Bagirmi

NILOTIC: Dholuo

MORU-MADI: Moru, Avokaya, Logbara, Ma'di

Afro-Asiatic

EAST CHADIC: Kera

BIU-MANDARA: Musgu

Consider the examples in (106) from Mumuye, illustrating both clause-final tense particles and a clause-final negative particle.

(106) Mumuye (Adamawa-Ubangi, Niger-Congo; Nigeria)

- a. **Znàso baasé Ranti yé**
 Z mimic R perf
 'Znaso has mimicked Ranti' (Shimizu 1983: 107)
- b. **Znàso dé baasé Ranti ni**
 Z PERF mimic R IMMED.FUT
 'Znaso is about to mimic Ranti' (Shimizu 1983: 112)
- c. **Znàso dé baasé Ranti ɓa**
 Z PERF mimic R NEG
 'Znaso has not mimicked Ranti' (Shimizu 1983: 107)

Similarly, note the examples from Ngambay in (107): they show that the aspect particle **ngà** follows the negative but precedes the question particle.

(107) Ngambay (Bongo-Bagirmi, Nilo-Saharan; Chad, Cen. Afr. Rep.)

- a. **m-ā k-ào àl ngà**
 1SG-FUT NOM-go NEG REPEATED
 'I will not go again.' (Vandame 1963: 118)
- b. **á k-ùsā né ngà uà**
 2SG.FUT NOM-eat thing REPEATED Q
 'you are already going to eat?' (Vandame 1963: 118)

Note also that a final negative word may also code aspect, such as the negative inceptive particle **da** in Mada in (108).

(108) Mada (Biu-Mandara, Chadic; Cameroon)

- zàl hénne má, amáázá wala àgàgà da**
 man DEM TOPIC marry.FUT woman always NEG.INCOMPL
 'this man will never marry a woman'
 (Barreteau & Brunet 2000: 109)

Another example of a final negative particle coding tense/aspect is illustrated in (57) from Ma'di.

Despite these languages with clause-final tense-aspect particles, the list in Table 11 is sufficiently different from the list of languages with

VONeg order in Table 2 that it is not clear how related these phenomena are.

12. Concluding remarks

Whenever one finds a typological feature shared among languages from different language families within a well-defined geographical area, questions arise as to where it started. There are two sorts of mechanisms by which features come to occur among unrelated languages within an area. One mechanism is that the feature spreads, and is acquired by languages as the feature spreads into their area. A second mechanism is via substratum influence: the feature was originally found among related languages in a given area, but other languages that have moved into the region have acquired the feature from the languages already existing in that region.

Consider the feature spreading mechanism first. Relevant to this approach is the fact that VONeg order is pervasive throughout Chadic, but is found in disparate branches within the other two major families. Within Bantu, we find it only in a subset of languages closer to the region where this order is common. These facts would suggest a Chadic origin: the pervasiveness of this feature throughout Chadic suggests that it may be reconstructible to Proto-Chadic, and that it spread to various groups in proximity to Chadic. On the other hand, even if it did spread from Chadic, the fact that it spread to so many non-Chadic languages means that it could well have not been a feature in Proto-Chadic but simply a feature in one branch that spread to the other branches, just as it spread to branches of non-Chadic languages. Hence, its pervasiveness throughout Chadic provides no argument for its reconstructibility to Proto-Chadic.

Consider the alternative possibility, of substratum influence. I do not know enough about current ideas of early migrations in this region, so my remarks here should not be taken too seriously. However, my impression is that there is better reason to propose that Chadic and Niger-Congo languages moved into this region, into an area already populated by speakers of Nilo-Saharan languages, than to propose that Chadic or Niger-Congo languages were already there. Under this scenario, the feature would have originated in Nilo-Saharan. The fact that the region covered by Chadic languages is relatively small would provide the explanation for why the feature is so pervasive in Chadic: because of the rela-

tively small size of the region populated by speakers of Chadic languages, the substratum influence could affect the entire family. Interestingly, under this scenario, we also find no reason to interpret the pervasiveness of this feature throughout Chadic as reason to posit it as a feature of Proto-Chadic.

However, it is certainly possible that more detailed comparative work by specialists in these language families may provide arguments for choosing among the different possibilities.

Appendix: List of sources for languages cited

- Acooli: Crazzolaro (1955)
 Adioukrou: Hérault (1978)
 Aghem: Watters (1979)
 Aja: Santandrea (1976)
 Amo: Di Luzio (1972)
 Angas: Burquest (1973)
 Ateso: Hilders and Lawrence (1956)
 Avokaya: Kilpatrick (1981)
 Ayt Ayache Tamazight: Abdel-Massih (1971)
 Ayt Frah Aurès: Penchoen (1973a)
 Ayt Ndhir Tamazight: Penchoen (1973b)
 Babole: Leitch (1994)
 Babungo: Schaub (1985)
 Bafut: Chumbow and Tamanji (1994)
 Bagirmi: Stevenson (1969)
 Bagiro: Boyeldieu (2000)
 Baka (in Cameroon): Kilian-Hatz (1989, 1995)
 Baka (in Sudan): Tucker and Bryan (1966), Santandrea (1976)
 Bakueri: Kagaya (1992)
 Balanta: Fudemann (1999)
 Barambu: Tucker and Bryan (1966), Santandrea (1956)
 Bari: Mitterrutzner (1867), Spagnolo (1933)
 Basaa: Schürle (1912)
 Baule: Carteron (1972)
 Bene: Dunn (1968)
 Berta: Triulzi, Dafallah and Bender (1976), Tucker and Bryan (1966)
 Bidiya: Alio (1986)
 Bimoba: Jacobs (1970)
 Binga: Santandrea (1956)
 Bila: Kutsch Lojenga (2003)
 Bini: Dunn (1968)
 Birom: Bouquiaux (1970)
 Bobangi: Whitehead (1899)
 Bolia: Mamet (1960)
 Bongo: Santandrea (1963)
 Bubi: Abad (1928)
 Buduma: Lukas and Nachtigal (1939)
 Burunge: Kießling (1999)
 Busa: Wedekind (1972)
 Bushoong: Edmiston (1932)
 Chaga: Raum (1909)
 Dagaare: Bodomo (1997)
 Dagbani: Olawsky (1999)
 Degema: Kari (1997)
 Dholuo: Omondi (1982)
 Didinga: Tucker and Bryan (1966)
 Diola-Fogny: Sapir (1965)
 Doko: Twilingiyimana (1984)
 Dongo: Tucker and Bryan (1966)
 Doyayo: Wiering and Wiering (1994)
 Duala: Ittmann (1978)

- Duka: Bendor-Samuel, Skitch and Cressman (1973)
Duma: Adam (1954)
Ebira: Adiva (1989)
Ega: Bole-Richard (1983)
Ekoti: Schadeberg and Mucanheia (2000)
Ewe: Warburton (1968), Ame-ka (1991), Pasch (1995)
Ewondo: Redden (1980)
Fanti: Welmers (1946)
Figuig: Kossmann (1997)
Fiote: Carrie (1890)
Fongbe: Lefebvre and Brousseau (2002)
Fulani: Taylor (1953), Stennes (1967)
Fyem: Nettle (1998)
Ga'anda: Newman (1971)
Gã: Ablorh-Odjidja (1968)
Gaam: Bender (1989)
Gbaya Kaka: Tucker and Bryan (1966)
Gbeya Bossangoa: Samarin (1966)
Ghat: Nehlil (1909)
Gisiga: Lukas (1970)
Gokana: My own data
Grebo: Innes (1966)
Gude: Hoskison (1983)
Gula: Nougayrol (1999)
Gulf Arabic: Holes (1990)
Gumuz: Bender (1979), Uzar (1989)
Gwari: Hyman and Magaji (1970)
Gworok: Adwiraah (1989)
Hausa: Migeod (1914), Kraft (1963), Kraft and Kirk-Greene (1973), Newman (2000)
Haya: Byarushengo (1977)
Hdi: Frajzyngier and Shay (2002)
Hebrew: Glinert (1989)
Hehe: Velten (1899)
Holoholo: Coupez (1955)
Idoma: Abraham (1951)
Igbo: Emenanjo (1978), Carrell (1970)
Igede: Bergman (1981)
Ik: Tucker (1971-73), Serzisko (1989)
Ila: Smith (1907)
Iro: Pairault (1969)
Isangu: Idiata (1998)
Izi: Meier, Meier and Bendor-Samuel (1975)
Jarawa: Lukas and Willms (1961)
Jukun: Shimizu (1980), Welmers (1968)
Jur Mödö: Persson (1981), Persson and Persson (1991)
Kabiyé: Lévikaza (1999)
Kabyle: Chaker (1983)
Kadugli: Abdalla (1969), Matsushita (1986)
Kaguru: Last (1886)
Kamba: Whiteley and Muli (1962)
Kana: Ikoro (1996)

- Kanakuru: Newman (1974)
 Kara: Santandrea (1970),
 Boyeldieu (1987)
 Karimojong: Novelli (1985)
 Katcha: Tucker and Bryan
 (1966)
 Katla: Tucker and Bryan (1966)
 Kenga: Vandame (1968)
 Kera: Ebert (1979)
 Kihunde: Kahombo (1992)
 Kikuyu: Barlow (1960)
 Kimatuumbi: Odden (1996)
 Kinga: Wolff (1905)
 Kinyamwezi: Maganga and
 Schadeberg (1992)
 Kinyarwanda: Hurel (1959)
 Kirma: Prost (1964)
 Kisi: Childs (1995)
 Kitalinga: Paluku (1998)
 Koegu: Hieda (1998)
 Komá: Tucker and Bryan
 (1966)
 Kongo: Bentley (1887), Lum-
 wamu (1973)
 Konni: Cahill (1999)
 Koromfe: Rennison (1997)
 Koyra Chiini: Heath (1999)
 Kresh: Tucker and Bryan
 (1966), Santandrea (1976),
 Brown (1994)
 Krongo: Reh (1985)
 Kru: Rickard (1970)
 Kwangali: Dammann (1957)
 Laal: Boyeldieu (1982a, b)
 Lamang: Wolff (1983)
 Langi: Seidel (n.d.)
- Lango: Noonan (1992)
 Lebéo: Gérard (1924)
 Lega: Meeussen (1971)
 Lele: Frajzyngier (2001)
 Lelemi: Höftmann (1971)
 Linda: Cloarec-Heiss (1986)
 Lingala: Meeuwis (1998)
 Logbara: Crazzolaro (1960),
 Barr (1965), Weber (1994)
 Logone: Lukas (1936)
 Londo: Kuperus (1985)
 Lontomba: Gilliard (1928)
 Luba: De Clercq (1929)
 Lucazi: Fleisch (2000)
 Luvale: Horton (1949)
 Ma: Tucker and Bryan (1966)
 Maasai: Tucker and Mpaayei
 (1955)
 Mada: Barreteau and Brunet
 (2000)
 Ma'di: Tucker and Bryan
 (1966), Tucker (1967),
 Blackings and Fabb (2003)
 Majang: Unseth (1989)
 Makua: Woodward (1926)
 Malgwa: Löhr (2002)
 Mamvu: Tucker and Bryan
 (1967), Vorbichler (1971)
 Mangbetu: Tucker and Bryan
 (1966)
 Margi: Hoffmann (1963)
 Masa: Caitucoli (1986)
 Masakin: Tucker and Bryan
 (1966)
 Mawiha: Harries (1940)
 Mba: Tucker and Bryan (1966)

- Mbalanhu: Fourie (1993)
Mbara: Tourneux, Seignobos
and LaFarge (1986)
Mbaye: Fortier (1971)
Mbede: Adam (1954)
Mbili: Ayuninjam (1998)
Mbole: De Rop (1971)
Mbum: Hagège (1970)
Me'en: Will (1989)
Mehri: Simeone-Senelle (1997)
Miya: Schuh (1998)
Modern Literary Arabic: Co-
wan (1958)
Mofu-Gudur: Barreteau (1988)
Mondunga: De Boeck (1952)
Moré: Lehr, Redden and Bali-
ma (1966)
Moro: Black and Black (1971)
Moru: Tucker and Bryan
(1966), Tucker (1967), An-
dersen (1984)
Mpongwée: Gautier (1912)
Mumuye: Shimizu (1983)
Mundang: Elders (2000)
Mungaka: Tischhauser (1992)
Mupun: Frajzyngier (1993)
Murle: Lyth (1971)
Mursi: Turton and Bender
(1976)
Musgu: Meyer-Bahlburg
(1972), Tourneaux (1978)
Mwera: Harries (1950)
Nandi: Creider and Creider
(1989), Hollis (1909)
Ndebele: Ziervogel (1959)
Ndonga: Viljoen and Amakali
(1978), Fivaz (1986)
Ndumu: Biton (1969)
Ndut: Morgan (1996)
Ngambay: Thayer (1978), Van-
dame (1963)
Ngbaka: Thomas (1963)
Ngizim: Schuh (1972)
Ngombe: Motingea (1988)
Nkem: Sibomana (1986)
Nkonya: Reineke (1972)
Nkore-Kiga: Taylor (1985)
Noni: Hyman (1981)
Noon: Soukka (2000)
North Lendu: Tucker and
Bryan (1966), Tucker
(1967)
Northern Sotho: Louwrens
(1995)
Nsenga: Ranger (1928)
Nupe: Smith (1967), Banfield
(1914)
Nyanja: Price (1966), Mateene
(1980), Bentley and Kule-
meka (2001)
Nzakara: Tucker and Bryan
(1966)
Obolo: Faraclas (1984)
Pa'anci: Skinner (1979)
Pambia: Tucker and Bryan
(1966)
Pangwa: Stirnimann (1983)
Pare: Kagaya (1989), Kotz
(1909)
Pero: Frajzyngier (1989)
Podoko: Jarvis (1989)

- Pogoro: Hendle (1907)
 Pokot: Baroja (1989), Craz-
 zolara (1978), Tucker and
 Bryan (1966)
 Rif: Kossmann (2000)
 Rimi: Olson (1964)
 Ron: Seibert (1998)
 Runyankore: Morris and Kir-
 wan (1972)
 Runyoro-Rutooro: Rubongoya
 (1999)
 Sahidic Coptic: Lambdin
 (1983)
 Sango: Samarin (1967)
 Sengele: Mangulu (2001)
 Sesotho: Paroz (1946)
 Shambala: Besha (1993)
 Shatt: Tucker and Bryan (1966)
 Shilha: Applegate (1955),
 Applegate (1958)
 Shilluk: Kohnen (1933), Wes-
 termann (1912)
 Shona: Fortune (1955)
 Sisaala: Blass (1975)
 So: Tucker and Bryan (1966),
 Serzisko (1989)
 Sukuma: Batibo (1985)
 Swahili: Ashton (1944)
 Swazi: Ziervogel (1952)
 Syrian Arabic: Cowell (1964)
 Tabwa: de Beerst (1896)
 Tangale: Jungraithmayr (1991)
 Temein: Tucker and Bryan
 (1966)
 Temne: Scott (1956), Wilson
 (1961)
 Tennet: Randal (1998)
 Tera: Newman (1970)
 Tiv: Abraham (1940)
 Tonga: Collins (1962)
 Tuki: Biloa (1997)
 Tupuri: Ruelland (1988)
 Turkana: Dimmendaal (1983)
 Twi: Christaller (1875)
 Uldeme: Colombel (1997)
 Venda: Poulos (1990)
 Wolof: Njie (1982), Sauvageot
 (1965)
 Xhosa: McLaren (1939)
 Yao: Whiteley (1966)
 Yoruba: Bamgbose (1966),
 Ogunbowale (1970), Row-
 lands (1969)
 Yulu: Santandrea (1970),
 Boyeldieu (1987)
 /Xam: Anonymous (nd)
 !Xu (Ju/'hoan): Dickens (1992),
 Snyman (1970)
 Zande: Gore (1926), Tucker
 and Bryan (1966)
 Zulu: Ziervogel, Louw and Tal-
 jaard (1981)

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