

Chapter 1

The diversity of SAuxOV in the Macro-Sudan belt

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We examine the syntactic properties of different instances of SAuxOV word order in West Africa, and show that languages which possess this surface order actually have fundamental differences in clause structure. We divide these structurally diverse surface SAuxOV orders into two types: ‘strict’ and ‘fake’ SAuxOV. Crucially, we show that a restricted range of ‘Strict SAuxOV’ languages are spoken in a region we refer to as the Mandesphere, and observe that these languages are generally more head-final than languages outside this area. We then observe that there is no one syntactic structure of ‘Fake SAuxOV,’ and languages possessing this surface order in limited environments do not share any important syntactic properties for the purpose of syntactic typology.

1 Introduction

This paper shows that apparently similar SAuxOV clausal word orders in West Africa are structurally diverse. We argue that only one structural incarnation of SAuxOV represents an areally significant phenomenon in W. Africa, namely, structures in which TP is head initial but VP is head final. We show this area is restricted to a particular geographical area we call the Mandesphere, and that this structure is correlated with head finality, an observation that goes back to at least Heine (1976). We confirm this correlation with a new typological survey of the region, and propose diagnostics for the relevant structure. For other languages occurring to the east of the Mandesphere, we show that SAuxOV is a property of specific constructions which are structurally distinct from SAuxOV proper.

It has been known since at least Heine (1976) that SAuxOV is a typologically significant property of West African languages. More recently, Güldemann (2008; 2011) has suggested that S(Aux)OVX, with emphasis on X, is a property of a linguistic area he labels the Macro-Sudan Belt, similar to the Sudanic zone of Clements & Rialland (2008), which stretches west to Senegal and Guinea and



east to the Central African Republic. One issue with this claim is that the distribution of S(Aux)OVX observed by Güldemann (2008) is not quite coextensive with the Macro-Sudan Belt. Compare, for example, Güldemann's map for the distribution of labiovelars in Figure 1, which spans the entirety of the proposed Macro-Sudan Belt, to the distribution of S(Aux)OVX in Figure 2, which seems restricted to the Western parts of the same region.

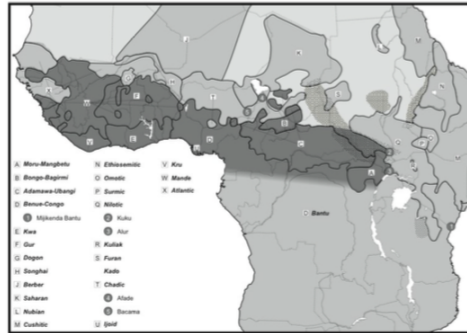


Figure 1: Labio-velar consonants in African languages (Güldemann 2008: 10)

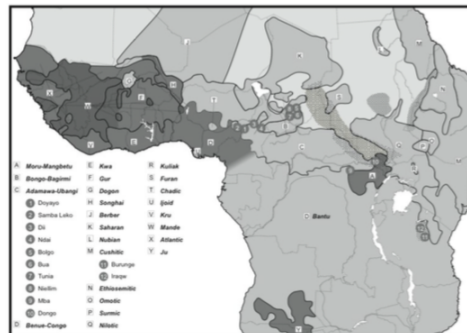


Figure 2: Word order S(Aux)OVX in African languages (Güldemann 2008: 15)

Another issue is the murkiness of the S(Aux)OVX label itself. There are several candidates for combinations of surface properties that we could typologize as 'S(Aux)OVX'. For example, we could include languages with surface SAuxOV in any context, languages which alternate between SVO and SOV, or languages with OVX order in any context, among other possibilities.

The purpose of this paper is to offer a typology of SAuxOV based on formal syntactic analyses of systematically different types of SAuxOV. Our main claim,

in some respects similar to that of Creissels (2005), is that there is a well-defined SAuxOV structure which occurs in a subpart of the Macro-Sudan Belt we call the Mandesphere. These orders are especially pervasive in Kru and Mande languages, and we will examine one language from each family. One example from each Guébie (Kru) and Dafing (Mande) is provided below.

- (1) a. Guébie (Kru: Côte d'Ivoire; Notes)
e⁴ ji³ fa³¹ li³
 1SG.NOM FUT coconuts eat
 'I will eat coconuts.'
- b. Marka Dafing (Mande: Burkina Faso; Notes)
wúru-¹ú¹ ní fwó-¹ó jìmi
 dog-DEF PST meat-DEF eat
 'The dog ate the meat.'

We will argue that Guébie and Dafing have bona fide mixed-headedness in their clause structure — a head initial TP and generalized OV order in VP — a characteristic of what we label as 'Strict SAuxOV.' We will see that West African languages with Strict SAuxOV structures are generally characterized by head-finality below the level of the clause.

On the other hand, there are a number of languages in the Macro-Sudan Belt with surface word orders that resemble SAuxOV, but nevertheless are not Strict SAuxOV languages, as determined by structural criteria. Instead, apparent SAuxOV in these languages is conditioned by a particular syntactic construction, for example a restricted set of auxiliary-like elements, as in the Gwari completive in (2a), or a nominalized complement, as in the Fongbe example in (2b):

- (2) a. Gwari (Benue-Congo: Nigeria; Hyman & Magaji 1970:51)
wó lá shnamá si
 3SG COMPL:SG yam buy
 'S/he has bought a yam.'
- b. Fongbe (Kwa: Benin; Lefebvre & Brousseau 1999:215)
Ûn jè nú qù jí
 1SG fall thing eat.NOM on
 'I began to eat.'

We will see that languages with these more restricted instances of OV order have fewer head-final properties than Strict SAuxOV languages. These conditional or

‘fake’ SAuxOV structures are more common on the periphery of and outside the Mandesphere.

The structure of this paper is as follows. Section 2 lays out the properties of Strict SAuxOV structures in (1) and shows how they apply in more detail for the languages mentioned above, Guébie and Dafing. Section 3 reports the results of a small typological survey of 55 languages that shows that SAuxOV languages are concentrated in the Mandesphere. Section 4 offers an analysis of the two cases of ‘Fake SAuxOV’ structures in (2) and discusses some additional complicating factors. Section 5 concludes.

2 Strict SAuxOV

In this section we present diagnostics for Strict SAuxOV structures and show how these diagnostics can be applied to two specific languages, Guébie (Kru) and Dafing (Mande). The diagnostics are focused on the nature and position of auxiliaries in a language in general, and the distribution of objects.

Beginning with the auxiliary, the relevant auxiliary position is the position where obligatory TAM marking occurs in a language, a diagnostic which is generally applicable to West African languages, which tend to mark tense or aspect in every clause. To qualify as a ‘strict’ SAuxOV language, this auxiliary must be adjacent to the subject, and, in languages which index subjects, the auxiliary position must be the locus of such agreement. Crucially, then, if a language allows multiple auxiliaries to occur, this will be the position of the highest (usually left-most) auxiliary. In syntactic terms, these diagnostics converge on the T^0 position in the clause.¹

Once such an auxiliary position is identified, the crucial test for whether a language is ‘Strict SAuxOV’ is that, in the presence of an overt auxiliary distinct from the verb, it must have obligatory, generalized OV word order within VP, where the relevant object is the single object of a transitive verb or the primary or direct object in a ditransitive verb. Requiring an overt auxiliary allows us to accommodate languages where the verb will move to the T^0 in specific environments, namely when no auxiliary is present, resulting in SVO order.

2.1 Strict SAuxOV in Kru

In this section we present data from Guébie, a Kru language spoken in southwest Côte d’Ivoire. Word order properties in Guébie are similar to, if not the same as,

¹ Equivalent to Infl or I^0 in earlier implementations.

word order across (Eastern) Kru languages (cf. Marchese 1979), so we are using Guébie data here to diagnose SAuxOV across the Kru language family.

Most clauses in Guébie show SAuxOV order, where nothing can intervene between subject and auxiliary, and the verb is clause final. This is true of both main clauses, (3), and embedded clauses, (3b).

- (3) a. *Strict SAuxOV in Guébie* (Kru: Côte d'Ivoire; Notes)
 e^4 ji^3 fa^{31} li^3
 1SG.NOM FUT coconuts eat
 'I will eat coconuts.'
- b. e^4 wa^2 gba^1 e^4 ka^3 $te\epsilon^{3.3}$ $k\alpha klal\epsilon^{3.2.2}$
 1SG.NOM want.IPFV that 1SG.NOM IRR snake touch
 'I want to touch the snake '

According to Dryer (2007), a number of other word order properties tend to correlate with OV across languages. These include postpositions, genitive-noun order, and manner adverbs before main verbs. Guébie displays all of these typological characteristics, as shown in (4).

- (4) Guébie (Kru: Côte d'Ivoire; Notes)
- a. *Postpositions*
 ɔ^3 ji^3 su^3 $m\epsilon^3$ $gara^{1.1}$
 3SG.NOM FUT tree in perch
 'He will perch in a tree.'
- b. *Gen-N*
 $touri^{1.1.3}$ la^2 $d\alpha re^{3.3}$
 Touri GEN money
 'Touri's money'
- c. *AdvV*
 e^4 ji^3 $fafa^{4.4}$ fa^{31} li^3
 1SG.NOM FUT quickly coconuts eat
 'I will eat coconuts quickly'

In addition to word order properties that correlate with OV order in different languages, we see other head-final properties in Guébie, such as nominalized verbal objects, which surface before the main verb, (5).

- (5) SAux[OV]_{NOM} V in Guébie (Kru: Côte d'Ivoire; Notes)
 e^4 ji^3 [ja^{31} la^2 li-li- $je^{3.2.2}$] $koci^{23.1}$
 1SG.NOM FUT coconuts of eat-RED-NMLZ start
 'I will start eating coconuts'

We see that word order in Guébie is overwhelmingly head final. However, when there is no auxiliary present, the verb fails to surface clause-finally, and instead appears immediately after the subject, resulting in SVO order, (6). SVO order only appears in two clause types: simple perfective, (6a), and simple imperfective, (6b).

- (6) *Verb movement: S-V_i-O-t_i in Guébie* (Kru: Côte d'Ivoire; Notes)
- a. e^4 li^3 ja^{31}
 1SG.NOM eat.PFV coconuts
 'I ate coconuts.'
- b. e^4 li^2 ja^{31}
 1SG.NOM eat.IPFV coconuts
 'I eat coconuts.'

The difference between perfective and imperfective verbs in Guébie is tonal. Verbs are only differentiated for aspect when they surface in the immediately-post-subject position. That is, verbs only show inflection when there is no auxiliary. This is a point of variation in Kru languages, where some languages show inflection on verbs even when they are not in the inflectional position (Marchese 1979).

Returning to our "Strict SAuxOV" diagnostics, we see that Guébie falls into the category of Strict SAuxOV languages. First, it has a syntactic auxiliary position, immediately following the subject, where TAM is marked. Usually TAM is marked by auxiliaries, but when verbs surface in this position, they are marked with inflection. Otherwise, they are not.

Guébie also shows obligatory OV word order within the verb phrase. The following diagram shows our proposed clause structure for Guébie SAuxOV clauses.

We see in Figure 2.1 that the auxiliary is in T, the inflectional position. We also see that objects precede verbs within the verb phrase, VP.² When there is

² We acknowledge that in syntactic theories which assume Kayne (1994)'s Linear Correspondence Axiom even Strict SAuxOV languages would involve object movement, although it would be obligatory. We set this issue aside for now, as it does not affect our main point. This question is particularly interesting for Mande languages, which we discuss in the next subsec-

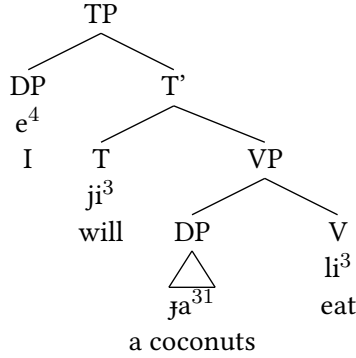


Figure 3: Guébie clause structure (cf. Sande 2014)

no auxiliary present, we propose that the clause-final verb undergoes movement to T, the inflectional position. This is shown in (2.1).

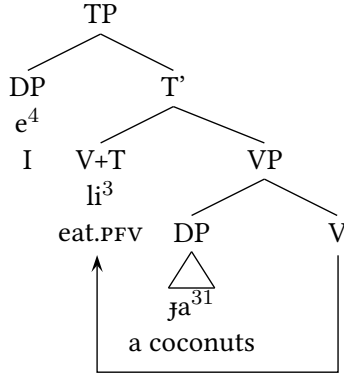


Figure 4: Verb movement in Guébie (cf. Koopman 1983, Sande 2014)

We will see that it is not only Kru languages which show Strict SAuxOV characteristics, but other languages in the Mandesphere do as well.

2.2 Strict SAuxOV in Mande

Our second example of Strict SAuxOV is from Dafing, also known as Marka, a Western Mande language spoken in Burkina Faso which is closely related to Bambara and Jula, which are both major Mande languages in the area. Word order in

tion, as non-nominal objects follow the verb. This is surprising as Dryer (2007) observes that OV languages typically have V-Adv and V-PP orders.

Dafing is representative of Mande languages more generally (e.g. Creissels 2005; Nikitina 2011).

As in Guébie, most main clauses in Dafing show SAuxOV word order. Dafing has an obligatory auxiliary position which must occur immediately after the subject. As in Guébie, this is true for both main and embedded clauses:

(7) *Strict SAuxOV in Dafing* (Mande:Burkina Faso; Notes)

- a. *wúru-¹ú¹ ná fwó-¹ó pìmi*
dog-DEF FUT meat-DEF eat
‘The dog will eat the meat.’
- b. *ê: ná fɔ́ ká wúru-¹ú¹ ná fwó-¹ó pìmi*
3SG PFV say COMP dog-DEF FUT meat-DEF eat
‘She said that the dog will eat the meat.’

Mande languages have many of the head-final properties that Kru languages do. For example, Dafing has postpositions (8a) and genitive-noun word order in the noun phrase (8b). However, Mande languages are very firmly SAuxOVX in the sense that all VP constituents besides the primary object follow the verb, including adverbs and oblique arguments (Nikitina 2009). This is illustrated in (8c), which shows verb-adverb order.

(8) *Head finality in Dafing* (Mande:Burkina Faso;)

- a. *Postpositions*
wúru-¹ú¹ tábàrí-¹í zúkò
dog-DEF table-DEF under
‘The dog is under the table.’
- b. *Gen-N*
fii ká¹á wúru-¹ú
Sidiki GEN dog-DEF
‘Sidiki’s dog’
- c. *but VAdv*
wúru-¹ú¹ ní fwó-¹ó pìmi zònà-zònà
dog-DEF PST meat-DEF eat quickly
‘The dog ate the meat quickly.’

As verb-manner adverb order is generally a property of VO languages according to Dryer (2007), Mande languages can be seen as less head-final than Kru languages.

Yet another head final property that Dafing shares with Kru languages like Guébie (5) is that nominalized complement clauses precede embedding verbs:

- (9) SAux[OV]_{NOM}V (Notes)
*wúru-¹ú ¹ní [fwó-¹ó *pimí-í*] dàmna*
 dog-DEF PFV meat-DEF eat-DEF begin
 ‘The dog began eating the meat.’

This is a point of variation in Mande, as Eastern Mande languages such as Wan do not allow the full nominalized VP to precede the higher verb (Nikitina 2009).

Finally, Dafing never allows verb movement in transitive clauses. Even for TAM categories with null auxiliaries, like the habitual, SOV order is found:

- (10) No verb movement in Dafing (Notes)
*wúru-¹ú fwó-¹ó *pimi**
 dog-DEF meat-DEF eat
 ‘The dog eats the meat.’

There is some evidence that V-to-T movement might apply in certain conditions, for example in intransitive perfectives, where the auxiliary *ní* is realized as a suffix *nà*. Koopman (1992) proposes verb movement only in the intransitive to account for a similar alternation in Bambara. Yet it is very hard to find evidence for intransitive verb movement for the obvious reason that the object, the only element which could be used to identify the position of the verb in either T or V, is absent by definition.

Setting intransitive clauses aside, we see that the basic structure which has been proposed for Kru can be applied to Mande:

This structure is overly simplistic in a number of ways, but the most important issue is that Mande VPs might not actually be head-final. Instead, there is a perfectly reasonable analysis of such cases which involve obligatory movement of the primary object to the specifier of VP or some higher projection, as proposed by Koopman (1984); Koopman (1992) for other Mande languages. Yet at least in some Mande languages these might be bona fide head final structures, if such a distinction is admitted in one’s theory, where the postverbal constituents are adjuncts (cf. Nikitina 2009) or obligatorily extraposed. Further research is necessary to answer these questions.

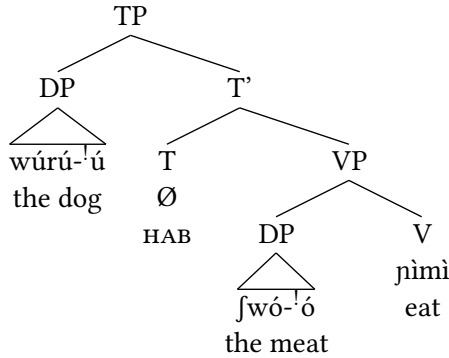


Figure 5: SAuxOV in Dafing

2.3 Summary

Regardless of such complications, we have seen that Guébie (Kru) and Dafing (Mande) share the basic clausal architecture at the level of general syntactic analysis: they have a head initial TP and a head final (roughly) VP, making them Strict SAuxOV languages in our terminology. We have shown that the syntactic facts about auxiliaries and the position of objects in the two languages are largely similar, modulo differences which conceal this similarity such as verb movement and adverb position.

We also showed that both Dafing and Guébie have some clearly head-final properties: both have Gen-N word order, and, both have postpositions. In the following section, we observe that the correlation between SAuxOV and head-finality is general in West Africa, and second that both properties are confined to a sub-area of the Macro-Sudan belt we label the Mandesphere.

3 Distribution of Strict SAuxOV

In order to test how much of the Macro-Sudan belt is characterized by Strict SAuxOV, defined by the properties in (2), we followed the following three steps: 1) Establishing a relevant structure, 2) Identifying structural diagnostics based on descriptive facts, and 3) Conducting a survey on the basis of those structural diagnostics. These three steps result in a typological survey based on both hierarchical structure and descriptions of linear word order properties. The relevant structure for Strict SAuxOV, as discussed in section (??), involves a dedicated inflectional position immediately following the subject, and OV word order within

the verb phrase. To address steps two and three, above, we identified 28 syntactic variables meant to identify Strict SAuxOV languages, and we carried out a survey of 55 languages from the Macro-Sudan belt, recording the value for each syntactic variable whenever relevant information was available. The languages surveyed comprise a diversity sample based on genetic affiliation and geography, loosely based on the sample used by Clements & Rialland (2008). The remainder of this section reports on the results of our survey.

The following map shows the distribution of Strict SAuxOV word order in the Macro-Sudan belt, based on our survey.

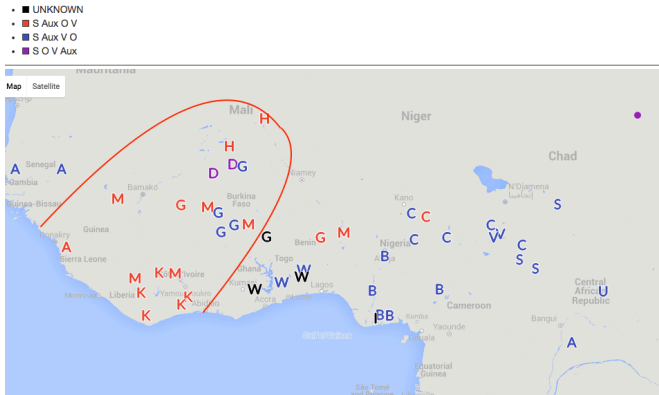


Figure 6: Distribution of SAuxOV (red)

We see that while there is a strong cluster of Strict SAuxOV languages in West Africa, this word order does not characterize all of the Macro-Sudan belt. We have drawn a red line around what we will refer to as the *Mandesphere*. We believe that SAuxOV order in the Macro-Sudan belt originated in the Mandesphere.

In order to discover whether other head-final properties are distributed in the same way as Strict SAuxOV order in Africa, we looked first at the distribution of postpositions, which closely mirrored the postposition map of Africa from the World Atlas of Language Structure Dryer (2013a) 7.

Like postpositions, Genitive-Noun word order correlates with OV across languages (Dryer 2007), and it is well known that adposition and genitive order track each other across languages based on their relationship in grammaticalization. The distribution of Genitive-Noun order given our survey is shown in 8.

The WALs map of Genitive-Noun order in Africa shows a very similar distribution.

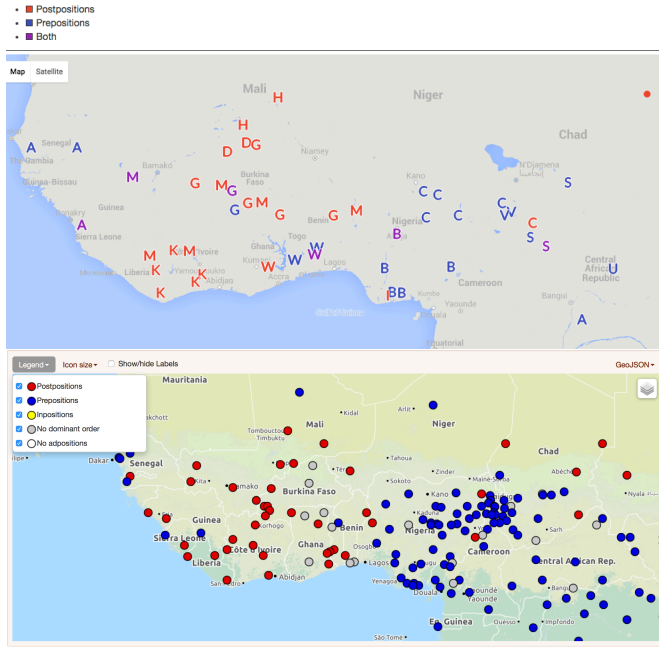


Figure 7: Distribution of postpositions in our survey (top) and WALS (bottom) (Dryer 2013a)

Dryer (2007) also says that OV languages tend to surface with manner adverbs before verbs. However, we found that Manner Adverb-Verb order is much more narrowly distributed in Africa than are other head-final properties like postpositions, Genitive-Noun order, and even Strict SAuxOV.

Unlike the distribution of postpositions and Genitive-Noun order, which looked very similar to the distribution of Strict SAuxOV, manner adverbs before verbs does not seem to correlate with other head-final properties.

Also too narrow a criterion is verb movement. We saw in Guébie, a Strict SAuxOV language, that when there is no auxiliary present, the verb surfaces immediately after the subject. We analyze this SVO order as verb movement. While the Mandesphere is almost entirely characterized by Strict SAuxOV languages, only a subset of these languages shows verb movement. The results of our survey are summarized in the Table 1.

We conclude, then, that head-final properties like postpositions and Genitive-Noun order correlate strongly with Strict SAuxOV order in the Macro-Sudan belt. As head final properties are centered around the Mandesphere, along with

1 The diversity of SAuxOV in the Macro-Sudan belt

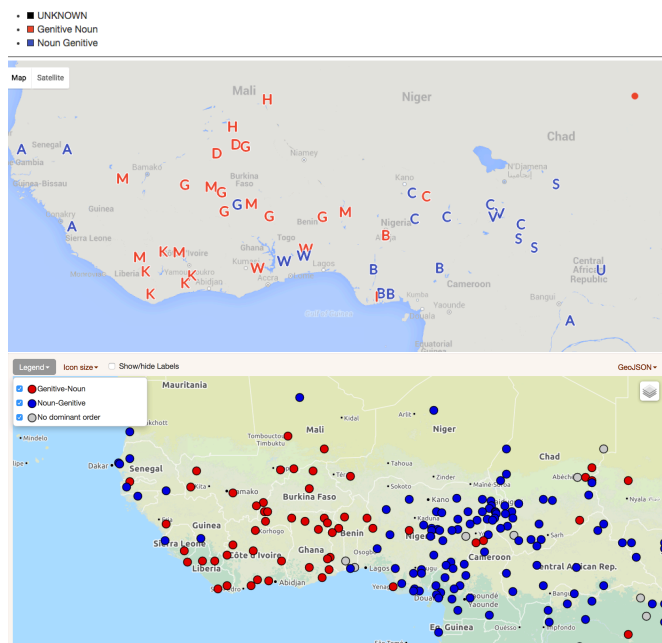


Figure 8: Distribution of GenN in our survey (top) and WALS (bottom) (Dryer 2013b)

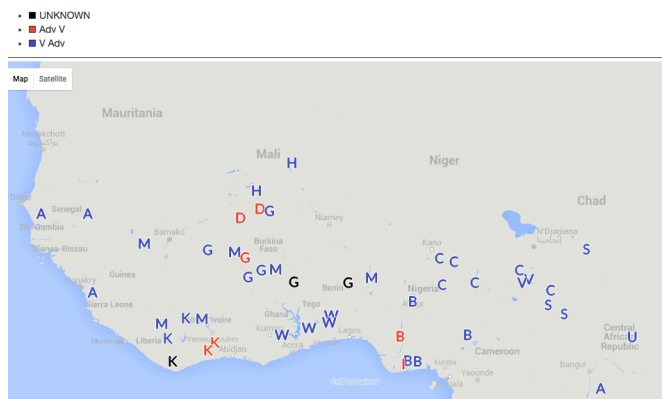


Figure 9: Distribution of Adv-V (red)

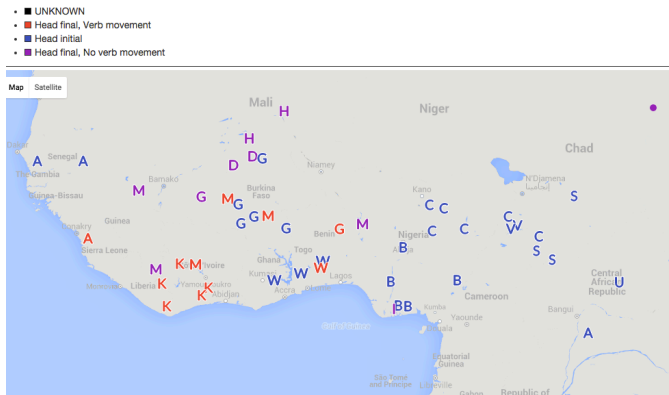


Figure 10: Distribution of verb movement (red)

Table 1: Head-final properties whose distribution correlates with Strict SAuxOV

	Correlates with Strict SAuxOV	Too narrow
Postpositions	X	
Genitive-Noun	X	
Verb-Adverb order		X
Verb movement		X

SAuxOV word order, we concur with Heine (1976) that Proto-Mande was likely head final, and are likely the source of this areal pattern. While the results of our survey show that only languages the Mandesphere, show Strict SAuxOV order, there are a number of other languages in the Macro-Sudan belt which show what we refer to as *Fake SAuxOV*. The structure and origin of Fake SAuxOV is discussed in the next section.

4 Fake SAuxOV

4.1 Introduction

In this section we present languages exhibiting Fake SAuxOV structures, Gwari (Nupoid) and Fongbe (Gbe). In these languages SAuxOV order is only found in particular constructions. In other words, SAuxOV is not a general organizing principle of clause structure in these languages. Furthermore, Fake SAuxOV languages are structurally diverse. In Gwari, (11a), SAuxOV order appears with a restricted set of auxiliary-like elements. In Fongbe, (11b), it is limited to nominal-

ized complements.

(11) *Apparent cases of SAuxOV*

a. *Gwari (Benue-Congo: Nigeria)*

wó kú àshnamá si
3SG COMPL:PL yams buy

‘S/he has bought yams.’

(Hyman & Magaji 1970: 56)

b. *Fongbe (Kwa: Benin)*

Ûn jè nú d̀ù jí
1SG fall thing eat.NOM on

‘I began to eat.’

(Lefebvre & Brousseau 2002: 215)

We will also see that languages with a more restricted distribution of OV order display fewer head final properties than Strict SAuxOV languages. This reinforces the conclusion that Fake SAuxOV languages are not characterized by OV within the VP, unlike Strict SAuxOV languages.

4.2 Gwari

In this section we present data from Gwari, a Nupoid language spoken in Nigeria. In clauses without an auxiliary-like element, Gwari displays SVO word order, as shown in (12).

(12) *SVO word order in Gwari*

a. *wo si òbwī*

3SG buy groundnut

‘S/he buys groundnuts.’

(Hyman & Magaji 1970: 51)

b. *wo lá shnamá*

3SG take:SG yam

‘S/he takes a yam.’

(Hyman & Magaji 1970: 51)

Past tense is marked with an over auxiliary-like element that appears after the subject. The word order in past tense clauses is SAuxOV, as shown in (13):

(13) a. *Today past continuous*

wo béī si shnamá
3SG T.PST buy yam

‘S/he was buying yams.’

(Hyman & Magaji 1970: 54)

- b. *Yesterday past continuous*
 wò bei sii ōbwī
 3SG Y.PST buy groundnut
 ‘S/he was buying groundnuts.’ (Hyman & Magaji 1970: 54)
- c. *Beyond yesterday past continuous*
 wò bei si ōbwī
 3SG BY.PST buy groundnut
 ‘S/he was buying groundnuts.’ (Hyman & Magaji 1970: 54)

The data in (13) distinguish Gwari from a Strict SAuxOV language like Guébie in that an overt auxiliary does not force a change from VO to OV order.

The word order properties identified by Dryer (2007) as correlating with OV order offer further support for a VO analysis of Gwari. Specifically, Gwari shows mixed headedness: it has both prepositions and postpositions, (14a); genitive-noun order, (14b); and V-adverb order, (14c).

- (14) a. *Prepositions/Postpositions*
 wo tú shnamá lō ó tēbùl-`
 3SG put yam STAT LOC table-LOC
 ‘S/he is putting the yam on the table.’
- b. *Genitive-Noun*
 ēfí yàbà
 child banana
 ‘the child’s banana’ (Hyman & Magaji 1970: 25)
- c. *V-Adverb*
 yi gô àkyàuta cīcī
 1PL buy gifts always
 ‘We always buy gifts.’ (Hyman & Magaji 1970: 51)

Thus, Gwari exhibits both head-initial and head-final properties, unlike Guébie and Dafing, which display a more uniform profile of head-finality.

Gwari displays OV order in the completive aspect. Like the past tense construction that we saw above, the completive aspect is marked with an auxiliary-like element. Unlike the past tense, however, where we saw SAuxVO order, in the completive aspect word order is SAuxOV, as shown in (15).

- (15) a. *lá: singular objects*

- wó lá shnamá si
3SG COMPL:SG yam buy
'S/he has bought a yam.' (Hyman & Magaji 1970: 64)
- b. kú: plural objects
wó kú àshnamá si
3SG COMPL:PL yams buy
'S/he has bought yams.' (Hyman & Magaji 1970: 56)

There is another difference between the past tense and completive constructions. As shown in (15), the completive auxiliary agrees with the number of the object. This is not the case for the past tense auxiliary, which does not agree with either the subject or the object.

The past tense auxiliary and completive auxiliary may also be combined, as shown in (16). When this occurs, word order is SAuxOV, as in the plain completive.³

- (16) a. Today past completive
w-a kú àshnamá si
3SG-TPST COMPL:PL yams buy
'S/he bought yams.' [today] (Hyman & Magaji 1970: 57)
- b. Yesterday past completive
wò kùì àshnamá si
3SG Y.PST.COMPL:PL yams buy
'S/he has bought yams.' [yesterday] (Hyman & Magaji 1970: 57)
- c. Beyond yesterday past completive
wò bei kú àshnamá si
3SG BY.PST COMPL:PL yams buy
'S/he has bought yams.' [before yesterday] (Hyman & Magaji 1970: 57)

Recall that in Strict SAuxOV languages like Guébie and Dafing, there is a single auxiliary position in the clause. That Gwari allows multiple auxiliaries in one clause further supports the conclusion that SAuxOV in Gwari has a different source than SAuxOV in Guébie and Dafing.

We analyze Gwari as having a VO order in the verb phrase, unlike Strict SAuxOV languages. This allows for a simple analysis of SAuxVO past tense clauses in Gwari, as shown in figure (11). We assume that past tense auxiliaries occupy the head T.

³ In example (16b), the two auxiliaries are fused.

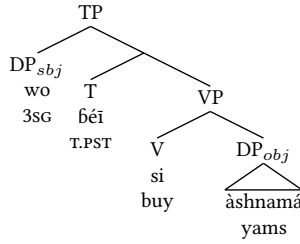


Figure 11: Simple structure for SAuxVO in Gwari

However, this simple structure cannot account for SAuxOV orders when a completive auxiliary is present. First, we have seen past tense and completive auxiliaries can co-occur, and thus completive auxiliaries cannot occupy that same inflectional position. Second, the structure in figured (11) cannot account for the alternation in word order.

A revised analysis of Gwari SAuxVO is presented in (12). First, we assume that there are two additional projections between TP and VP – an aspectual phrase, AspP, and a verb phrase layer, vP. We propose that the object DP always undergoes object shift to the specifier of vP. In SVO and SAuxVO clauses, this shift is obscured by the verb moving from V, through v, to Asp.

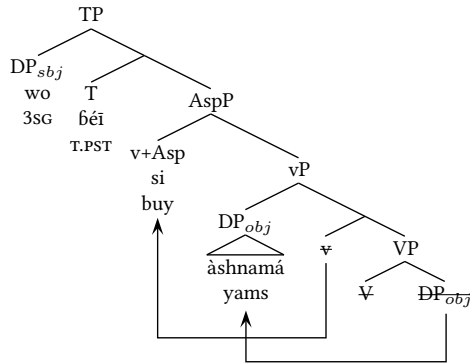


Figure 12: SAuxVO via object Shift + verb movement

The derivation of SAuxOV orders when there is a completive auxiliary is shown in figure (13). In these cases, the head AspP is occupied by an overt completive auxiliary. This blocks movement of the verb to Asp, much as presence of an overt auxiliary in T blocks verb movement in Guébie. Because object shift always applies, the surface word order is SAuxOV.

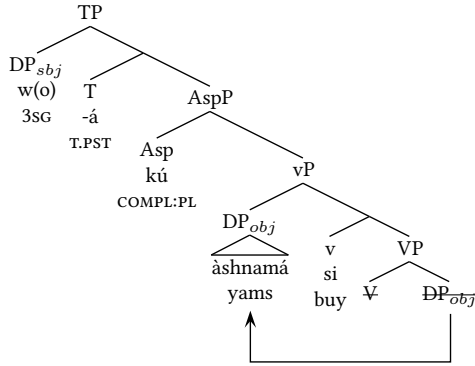


Figure 13: Structure of ‘Fake’ SAuxOV in Gwari

Support for the object movement approach to OV orders in Gwari comes from double object constructions. When there is no completive auxiliary, as in (18), the verb precedes both objects. In completive clauses, however, the verb occurs between the two objects. Either order is possible, as seen in (19b)-(19c).

(17)

(18) *Double Objects: SVO₁O₂ wo bma mi būsì ya lo*
3SG break 1SG stick PART STAT

‘S/he is breaking my stick’

(19) *Completive: SAuxO₁ VO₂ / SAuxO₂ VO₁*

a.

b. *wó lá būsì bmà mi ya*
3SG COMPL:SG stick break 1SG PART

‘S/he has broken my stick’

c. *wó lá mí bmà būsì ya*
3SG COMPL:SG 1SG break stick PART

‘S/he has broken my stick’

The current analysis accounts for this in a simple way – either object in a double object construction is able to shift to the specifier of vP. This is obscured by verb movement in non-completive contexts, but in completive clauses object shift reemerges. Crucially, a head-final analysis of the Gwari VP cannot account for this set of facts, because we would expect both objects to precede the verb in the absence of verb movement.

What we have seen is that Gwari is uniformly head-initial in its clausal spine, but SAuxOV still emerges in a limited set of contexts. Namely, SAuxOV only emerges when verb movement is blocked, and then only because object shift also occurs. This is markedly different from the Strict SAuxOV languages Guébie and Dafing, where VP is head final and TP is head initial. In the next section, we will see that in Fongbe, SAuxOV order emerges from a distinct construction, nominalization.

4.3 Fongbe

Fongbe is a Kwa language spoken in Benin. Fongbe is SVO in main clauses without an auxiliary, as seen in (20). Like Gwari, Fongbe has a set of auxiliaries that trigger SAuxVO word order, as seen in (20b).

(20) SVO

- a. *Kòkú xò Ásíbá*
Koku hit Asiba
'Koku hit Asiba' (Lefebvre & Brousseau 1999:247)
- b. SAuxVO
Lili nò d̀ù gbàd̀é
Lili HAB eat corn
'Lili (habitually) eats corn.' (Lefebvre & Brousseau 2002: 94)

Fongbe also displays mixed headedness properties, as did Gwari. Nominal complements precede the noun that selects them, a head-final characteristic, (21a). On the other hand, possessors follow the noun they modify, a head-initial characteristic, (21b).

(21) a. *Comp-N*

- càkpàlò sín gò ó*
beer OBJ bottle DEF
'the bottle of beer' (Lefebvre & Brousseau 1999:45)

b. *N-Gen*

- àwà ví ó tòn*
arm child DEF gen
'the child's arm' (Lefebvre & Brousseau 2002: 45)

Other word order properties also show mixed headedness results. Fongbe has both prepositions and postpositions, as shown in (22a). Verbs precede adverbial modifiers, as shown in (23).

- (22) a. *Pre- and postpositions*
Kòkú xò àsón nú Àsibá
 Koku buy crab for Asiba
 ‘Koku bought crab for Asiba’ (Lefebvre & Brousseau 1999:302)
- b. *Kòkú ɖò àxì mɛ̀*
 Koku be.at market in
 ‘Koku is in the market’ (Lefebvre & Brousseau 2002: 325)
- (23) *V-Adv*
Kòkú wà àzɔ̀ gànjí
 Koku do work well
 ‘Koku worked well’ (Lefebvre & Brousseau 2002: 381)

Lefebvre & Brousseau (2002) describe an ‘aspectual verb construction’ which superficially has the word order SAuxOV. As shown in (24), however, these aspectual verbs actually take a PP complement, the head of which selects a nominalized verb phrase.

- (24) *SV[OV]_{NOM}*
- a. *Àsibá ɖò [[ví ɔ̀ kpón]] wɛ̀]*
 Asiba be.at child DEF look.at.NOM POST
 ‘Asiba is looking at the child’ (Lefebvre & Brousseau 1999:215)
- b. *Ûn jɛ̀ [[nú ɖù] jí]*
 1SG fall thing eat.NOM on
 ‘I began to eat.’ (Lefebvre & Brousseau 1999:215)

Aspectual verbs in Fongbe differ in a crucial way from auxiliaries that trigger OV order in the languages surveyed so far. Namely, these retain lexical verb uses. For example, the verb *jɛ̀* in (24b) can be used to simply mean ‘fall’. Thus, these word orders are better labeled ‘SVOV’ than ‘SAuxOV’. This makes them unlike the auxiliaries in the Strict SAuxOV languages, where the ‘auxiliary’ realizes the inflection head of the clause.

We analyze Fongbe as being head initial in both VP and TP. In SAuxVO clauses, the auxiliary occupies the head T. This is shown in figure (14).

We analyze Fake SAuxOV orders in Fongbe as involving a main verb which selects a PP complement. The head of the PP, in turn, selects a nominalized VP complement. The structure is shown in figure (14).

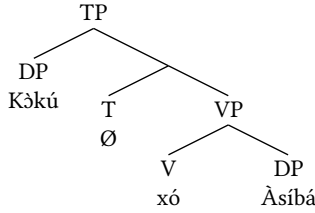


Figure 14: SAuxVO Structure in Fongbe

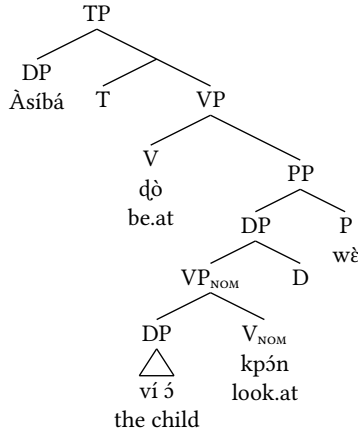


Figure 15: ‘Fake SAuxOV’ Structure in Fongbe (cf. Aboh 2004, ch. 6)

As we have seen, nominal complements precede the noun that selects them in Fongbe. Therefore, apparent OV order inside the nominal VP arises simply because Comp-N is the normal order for noun phrases. Because Fongbe is head-initial in verb phrases, the aspectual verb precedes its complement, and this gives rise to apparent SAuxOV order.

4.4 Summary

In this section, we have seen that neither Gwari nor Fongbe fits the diagnostics for being a Strict SAuxOV language. First, OV order has a very restricted distribution in both languages. In Gwari, it occurs only when there is a completive auxiliary which blocks verb raising. In Fongbe, OV order only occurs in nominalized verb phrases. Second, outside these narrow circumstances, auxiliaries occur with VO word order. Under our analysis of Gwari and Fongbe, this is because these auxiliaries occupy TP. Finally, both Gwari and Fongbe have head-initial

verb phrases, whereas Guébie and Dafing have head-final verb phrases.

These differences make it clear that Gwari and Fongbe are not Strict SAuxOV languages. Furthermore, the derivation of SAuxOV word order in the two languages differs. In Gwari, a combination of object shift and lack of verb raising conspire to yield SAuxOV orders. In Fongbe, OV order emerges in nominalized complements to certain aspectual verbs. Therefore, a path for future research is to investigate how much variation there is within Fake SAuxOV languages. It seems certain that both phenomena are relatively common in West Africa, given the frequency of Gen-N word order.

Importantly, however, Gwari and Fongbe do not exhaust the ways in which a language can exhibit conditional SAuxOV. For example, object shift is obligatory with pronouns in Ogoni languages such as Kana (Ikoro 1996), and it is conditioned by negation in Leggbó (Good 2007). In summary, fake or conditional SAuxOV is syntactically distinct from the SAuxOV structures we find in the Mandesphere and is not a uniform syntactic phenomenon.

5 Conclusion

This paper has provided syntactic analyses of distinct SAuxOV structures in the Macro-Sudan Belt. We have seen that a number of factors cross-cut in this area, some of which conceal underlying structural cores, and some which yield the illusion that languages are more structurally similar than they actually are. For example, both Kru and Mande languages have true SAuxOV clause structures, while this analytic point is somewhat concealed in Kru due to the presence of verb movement. Interestingly, the existence of verb movement might lead to the impression that Kru is also a Fake SAuxOV language like Gwari and Fongbe, but this is clearly not the case.

Another general point, relevant to syntactic typology, is that a typology based on syntactic analyses of languages are more predictive than typologies based on the presence of particular surface features such as occasional OV order. In particular, the Strict SAuxOV languages in Table (16) have more head final properties than Fake SAuxOV languages, a point which is quite general, as we saw in Section (3). Crucially, if Kru languages were mislabeled as Fake or conditional SAuxOV due to the presence of verb movement, these correlations would be lost. But this ignores the point that Kru languages always have head-final VPs.

Finally, we observe that the mixture of syntactic analysis and typology pursued in this paper offers a more nuanced perspective on typological patterns and trends than the one assumed in much typological literature. In particular,

	Type	O V	Gen N	PP	V Adv	Vmove?
Guébie	Strict	OV	GenN	PostP	Adv-V	Yes
Dafing	Strict	OV	GenN	PostP	V-Adv	No
Gwari	Fake	VO	GenN	Pre/Post	V-Adv	Yes
Fongbe	Fake	VO	NGen	Pre/Post	V-Adv	?

Figure 16: Strict and Fake SAuxOV (OV properties in blue)

by looking at general properties of clause structure in different languages rather than simple word orders or the existence of certain constructions, it has become clear that the Mandesphere is an important linguistic area for syntactic purposes, a point recognized by Heine (1976) (see Figure (17)).

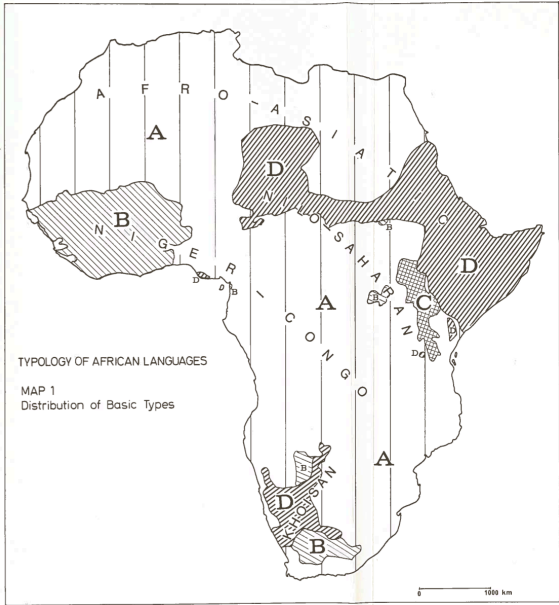


Figure 17: *from* Heine 1976

With Heine, we take the prominence of head-finality in this area to be an indication of long-standing head-final structures in the Mandesphere. The Fake SAuxOV structures arising on the of the Mandesphere, then, are potentially attributable to more recent contact with the languages in the Mandesphere, most likely Mande languages themselves given the centuries-long influence of the Mali

Empire. One upshot of this conclusion is that there are no deep syntactic clause structure properties which are obviously reconstructable for the Macro-Sudan Belt as a whole, given the important differences between languages of the Mandesphere and those outside of it. We leave a more detailed discussion of the implications of these findings for the linguistic history of West Africa for future work.

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