Tunen syntax within a structural typology of Aux-O-V word orders

Elisabeth J. Kerr (Leiden University)
Comparative Syntax (ComSyn) series, Leiden University, 16th March 2023

1   Introduction

1.1   Word order variation in Niger-Congo

- Most Niger-Congo languages have SVO order (Fig.1; Good 2017) and the canonical SOV language is verb-final (SOV#)
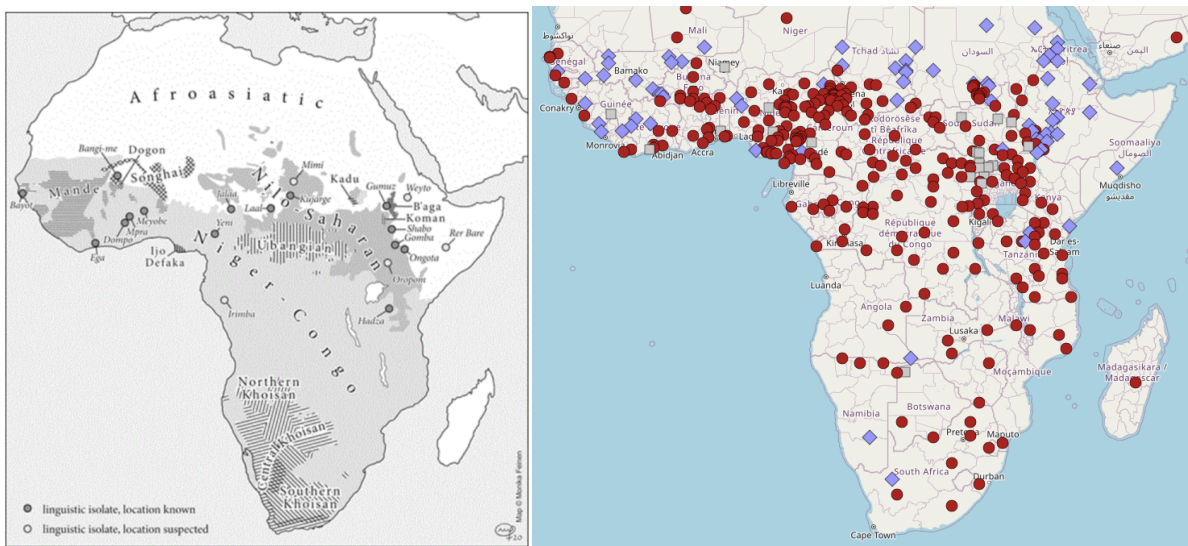

Figure 1: Map showing Niger-Congo in relation to other language families in Africa (Good 2020). WALS feature 83A; red circle = VO, blue diamond = OV, grey square = "no dominant order" (Dryer 2013).

- But **Tunen** (Bantu A44, ISO 639-3 tvu, Cameroon) is unusual in having S-Aux-O-V-**X** word order (Dugast 1971; Bearth 2003; Mous 1997, 2003, 2005) (1)[1]

(1)   a.   bá-ndɔ   bɛ-kana   **tála** ɔ   yɔkɔ
           SM.2-PRES 8-basket   put   PREP 7.chair
           'They are putting baskets on the chair.'

     → Subject marker (SM) and tense marker (TAM) separated from the verb by the object

    b.   bá-ná   bɛ-kana   **tála** ɔ   yɔkɔ
           SM.2-PST2 8-basket   put   PREP 7.chair
           'They put baskets on the chair.'
           (Tunen, Mous 1997:125, adapted)

     → While Tunen is SOV, it is not verb-final: obliques follow the verb (SOVX)

- This S-Aux-O-V-X order is consistent across TAM (Mous 2005) and IS contexts (Kerr submittedb); found with lexical+pronominal O in both matrix (1) and embedded clauses (2)[2]

---

[1]See end of handout for glosses. Unless otherwise stated, transcriptions/glosses are unchanged from the sources.

[2]My Tunen field data are cited with the surface form, underlying form with morpheme breaks, original French translation as agreed with consultants, additional English, and consultant initials and UID for database entry in [ ] brackets.

(2) mɛ́ndɔ **manya** ɔwá Matɛ́ŋɛ aka <u>hiəfulə</u> **fanak**.
/mɛ-ᴴndɔ   **manya** ɔwá Matɛ́ŋɛ a-ka   <u>hɛ-əfulə</u> **fana-aka**/
SM.1SG-PRES know   REL.1 1.Martin SM.1-PST3 19-book read-DUR
'Je sais que Martin a lu le livre.' ('I know that Martin has read the book.')   [JO 905]

- NB: Tunen is classified as Narrow Bantu but is close to Bantu homeland, bordering non-Bantu Bantoid (subgroup of Benue-Congo, itself a subgroup of Niger-Congo); first branch of Bantu
- Compare the canonical agglutinative Bantu verb (3); all other Bantu Aux-V-O[3]

(3) Wa-toto   w-ote   **wa-na-fundish-w-a**   <u>Ki-swahili</u>.
2-children 2-all   SM.2-PRES-teach-PASS-FV 7-swahili
'All (the) children are taught Swahili.'   (Swahili, East Africa; van der Wal 2015:2, adapted)

1.2   Aux-O-V as a disharmonic word order

- Assumed in Greenbergian tradition that there is a cross-linguistic preference for **harmonic word order** (Greenberg 1963; Hawkins 1983; Dryer 1992), i.e. consistent headedness
- Aux-O-V word order is therefore surprising: it is a case of **disharmonic word order**; (or 'mixed clausal headedness' Sande et al. 2019): we have a head-initial TP, but a head-final VP
- The Aux-O-V type of disharmony is the only predicted possible type within the clausal domain according to the Final-Over-Final Condition proposed syntactic universal (4):
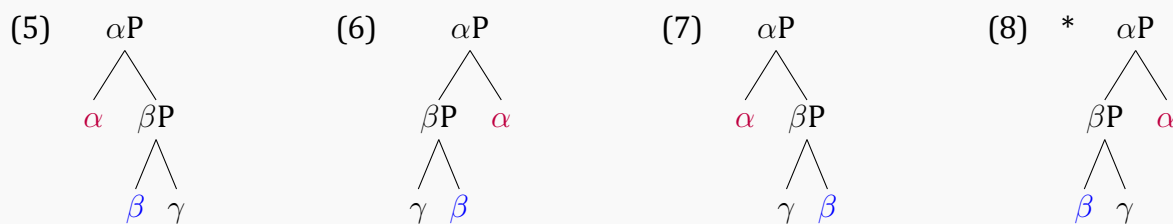
FOFC

(4) **The Final-Over-Final Condition (FOFC) on disharmonic structures:**

"*[αP [βP β γ] α], where β and γ are sisters and α and β are members of the same extended projection"

or, in other words: "A head-final phrase αP cannot immediately dominate a head-initial phrase βP, if α and β are members of the same extended projection."

(Holmberg 2017:1; see also Biberauer 2017:190, Biberauer et al. 2014)

⇒ Aux-O-V falls into disharmonic type (7); αP = head-initial Aux/TP; βP = head-final VP
⇒ FOFC predicts that we can't derive the alternative disharmonic type (8), but the availability of (7) means such structures need to be derivable
⇒ FOFC also makes predictions about diachrony: Headedness change to head-finality starts at the bottom of the extended projection: compatible with proposals that OV in Niger-Congo is innovative

---

[3]See Appendix re: Ewondo/Nyokon partial Aux-O-V; Ewondo restricted to pronominals, Nyokon in TAM-based alternation with SVO. See van der Wal (2015); Downing and Hyman (2016), Kerr et al. (to appear) and references therein for proposal that information structure rather than O status can have a greater impact on determining word order in various core Bantu, meaning that Bantu word order is less homogeneous than it appears from Fig. 1.

1.3 Significance

- S-Aux-O-V-X is a disharmonic word order and a typologically rare word order pattern
- As other languages with S-Aux-O-V-X word order are found across West/Central Africa (NB: often in alternation with SVO), S-Aux-O-V-X has raised questions about the reconstruction of Proto-Niger-Congo syntax and the role of language contact/areal diffusion (Table 1; see also Güldemann 2008; Hyman 2011; see Mous 2005 for S-Aux-O-V as innovation in Tunen)

PNC reconstruction	Source
*SOV	Givón (1975); Hyman (1975); Williamson (1986)
*SVO	Heine and Reh (1984); Claudi (1993)
*S-Aux-O-V-X/SVO	Gensler (1994, 1997); Gensler and Güldemann (2003)

Table 1: Different proposed reconstructions for Proto-Niger-Congo (PNC)

- S-Aux-O-V-X is also of interest to theoreticians, as an instantiation of FOFC-compliant disharmonic word order within the clausal domain

1.4 My standpoint

- PhD position on Tunen as part of the Bantu Syntax and Information Structure (BaSIS; PI Jenneke van der Wal) project at Leiden University, 2018-2023
- Tunen data from fieldwork in Ndikiniméki/Yaoundé, Cameroon, Feb-May 2019 & Oct 2021-Feb 2022 (+ remote elicitation in 2023, + study of data from older sources Dugast 1971, 1975; Mous 1997, 2003, 2005, 2014; Isaac 2007)
- Methodology = elicitation in controlled discourse context + natural speech, using BaSIS project methodology (downloadable at https://bantusyntaxinformationstructure.com/methodology/)
- + visiting short-term PhD fellowship Sep-Dec 2022 on Consequences of Head-Argument Order on Syntax (CHAOS/C08; PI Gisbert Fanselow†) project as part of SFB 1287 Limits of Variability in Language at Potsdam University, looking at headedness and disharmony across languages

1.5 Outline

- Today: Use analyses of Aux-O-V in other languages as starting point for analysis of Tunen
- But noting that Aux-O-V can derive from different underlying structure, as argued in Africanist literature (see e.g. Claudi 1993; Creissels 2005) and in theoretical syntax literature:

> "**Aux-O-V is relatively common as a surface order, though this does not mean that all surface strings have the same underlying syntax**. In Germanic, Aux-O-V arises as a result of V2, which by hypothesis involves movement of the finite auxiliary to C or verb projection raising in embedded clauses. **The fact that the basic word order in Niger Congo is S-Aux-DO-V-IO strongly suggests that OV is derived by object movement, in an otherwise head-initial grammar**. A similar argument can be made for Iraqw, which actually has a number of different object positions with different case and agreement properties.'
>
> (Sheehan 2013 [NWP verison p149], emphasis added)

2 Derivations of disharmony

2.1 FOFC literature roll-up account for Aux-O-V in Germanic

- SAuxOV patterns are found in embedded clauses in various Germanic varieties (9):
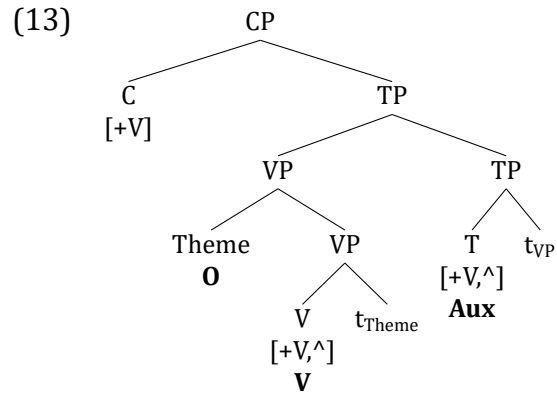
(9) a.   ...das de Hans wil   <u>es</u> <u>huus</u> **chaufe**.
      that the Hans want.3SG.PRES a house buy.INF
      '...that Hans wants to buy a house.'
      (Zurich German; Haegeman & van Riemsdijk 1986, cited in Roberts 2019:115)

    b.   ...az Jonas vil   <u>a</u> <u>hoyz</u> **koyfn**.
      that Jonas want.3SG.PRES a house buy.INF
      '...that Jonas will buy a house.'
      (Yiddish; Haider 2013:119 citing Vikner 2001:66, cited in Roberts 2019:116)

- Previously analysed as **verb projection raising** (e.g. Haegeman and van Riemsdijk 1986), with analyses with underlyingly head-initial and head-final structures, head and phrasal movement (Wurmbrand 2006)

- FOFC approaches to S-Aux-O-V# in Germanic have derived this mixed clausal headedness through a formal caret feature ^, more precisely a feature of a feature/EPP feature that can appear on a head and triggers roll up of its complement to the specifier (see e.g. Biberauer et al. 2014)

- So [+V, ^] triggers movement of the theme complement to the specifier of VP, deriving OV (11) from a Kayneian VO base (i.e., Spec-Head-Comp; Kayne 1994) (10), (11)

(10)   VP $\Rightarrow$ (11)   VP

      V   **O**   **O**   VP
  [+V,^]   V t_{Theme}
    V   [+V,^]
                                           V

- The feature ^ is specific to the given category (here, V) and therefore FOFC applies within an extended projection. The feature ^ starts at the bottom of the projection (Start At The Bottom Generalization; SATBG)

- If all heads have ^, then fully head-final language, with roll-up through the clausal spine (12)

4

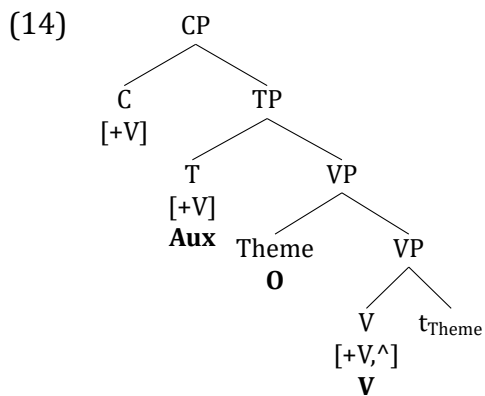- Disharmonic order derived when the ^ feature is on lower heads but not higher ones, resulting in partial roll-up (e.g. (14)). Here, there is a 'stop/go restriction': only contiguous heads from the lowest one can trigger roll-up, thus ruling out FOFC non-compliant orders of the kind in (8)

(12)

```
                         CP
                ┌─────────┴──────────┐
               TP                    CP
         ┌──────┴──────┐          ┌───┴───┐
        VP             TP         C      t_TP
    ┌────┴───┐      ┌───┴──┐   [+V,^]
  Theme     VP     T     t_VP     C
    O     ┌──┴──┐ [+V,^]
          V   t_Theme  Aux
        [+V,^]
          V
```

(13)

```
                    CP
             ┌───────┴────────┐
             C               TP
           [+V]        ┌──────┴──────┐
                      VP             TP
                  ┌────┴───┐      ┌───┴──┐
                Theme     VP     T     t_VP
                  O     ┌──┴──┐ [+V,^]
                        V   t_Theme  Aux
                      [+V,^]
                        V
```
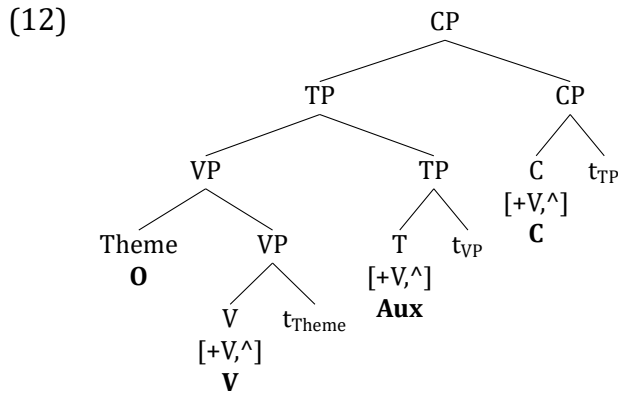
- Aux-O-V when only the V head has the ^ movement trigger:

(14)

```
            CP
        ┌────┴─────┐
        C          TP
      [+V]     ┌────┴────┐
               T         VP
             [+V]    ┌────┴────┐
             Aux   Theme       VP
                     O      ┌───┴───┐
                            V     t_Theme
                          [+V,^]
                            V
```

2.2 Accounts of Aux-O-V in West Africa

- Koopman (1984) = earliest generative analysis (to my knowledge) of S-Aux-O-V-X vs SVO alternation in West Africa, for Vata and Gbadi (Kru), based on V-to-T movement when no Aux

- In Sande et al. (2019)'s (non-Kayneian) analysis of Guébie (Kru, Côte d'Ivoire), a "strict SAuxOV" language, S-Aux-O-V is taken to be the in-situ syntax (with a base-generated head-final VP), while S-V-O derives from V to T movement:[4]

(15) a. e^4 ji^3 $\underline{\text{ɟa}^{31}}$ **li_3**   b. e^4 **li^3** $\underline{\text{ɟa}^{31}}$
          1SG.NOM FUT   coconuts eat   1SG.NOM eat.PFV coconuts
          S   Aux   O   V   S   V   O
          'I will eat coconuts.'   'I ate coconuts.'
          Guébie (Kru; Sande et al. 2019:668)   Guébie (Kru; Sande et al. 2019:672)

---

[4]For the purposes of comparing derivations on this handout, traces can be understood as basically notationally equivalent to a strikethrough (~~example~~) or movement arrows. The superscript numbers in the Guébie examples indicate tones.

(16)

(17)
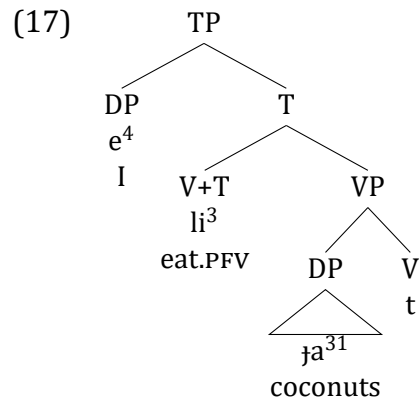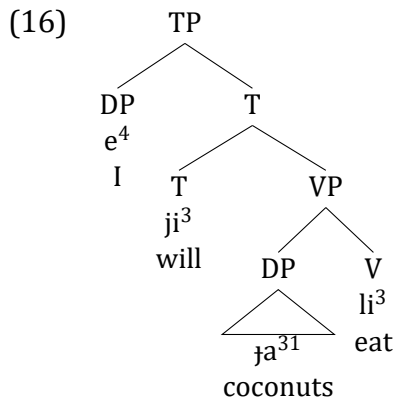
- Empirical prediction: If V always moves to T when it can (i.e. when T is not filled by a tense marker/auxiliary), then should always get SVO when there is no Aux

    → This is the structural explanation for West African S-Aux-O-V-X/SVO word order alternations conditioned by TAM (following Koopman 1984)

    → NB: Because the empirical prediction doesn't always hold, Sande et al. (2019) stipulate a null auxiliary ∅ in certain constructions (serving to block V to T movement)

- Sande et al. (2019) propose that languages vary in having 'strict' vs 'fake' SAuxOV, based on whether verb phrase is underlying head-initial (VO) or head-final (OV), as analysed for 4 languages of West Africa (Table 2), with data collected on 50 other languages

Table 2: Sande et al. (2019)'s structural comparison of 4 SAuxOV languages in West Africa

	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	?

- E.g. In Gwari (Nupoid, Nigeria), general head-initial properties lead Sande et al. (2019) to propose a head-initial VP, which means that there needs to be not just movement of V but also **object shift** in order to derive S-Aux-O-V:

(18) w-a   kú   àshnamá **si**.
3sg-T.PST COMPL:PL yams   buy
'S/he has bought yams.'
(Hyman and Magaji 1970:57, cited in Sande et al. 2019:680)

6 (19)
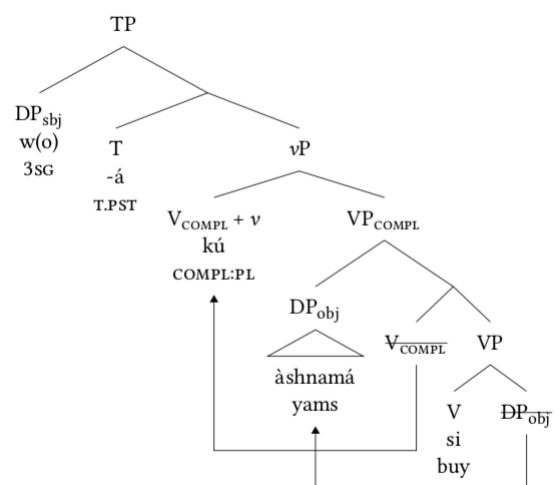
- S-Aux-O-V in Fongbe (Kwa) is similarly analysed as 'fake', this time resulting from a head-initial VP with a nominalised complement (this is supported by morphological evidence):

(20) Ùn ɛ̀ nú dù jí.
1sg fall thing eat.nom on
'I began to eat.' (Lefebvre and Brousseau 2002: 215, cited in Sande et al. 2019:677)

(21) Àsíbá dò [[ví ɔ̀ kpɔ́n] wɛ̄]
Asiba be.at child DEF look.at.NOM POST
'Asiba is looking at the child.' (Lefebvre and Brousseau 2002:215, cited in Sande et al. 2019:685)

(22)
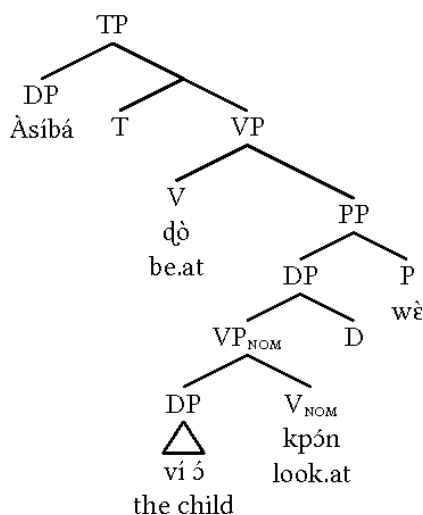
⇒ While all these languages have S-Aux-O-V word orders, they are argued to derive from different underlying structures, so S-Aux-O-V is not a uniform phenomenon

- Instead, Sande et al. (2019) advocate for a **structural typology of Aux-O-V**, i.e., classifications based on underlying syntax and not the surface string Aux-O-V

> "while many typological discussions of word order are based on surface order, **the results in this [paper] clearly demonstrate that syntactic typologies should be based on structural analyses of languages** instead. [...] A **potential problem for [the] claim [that S(-Aux-)O-V-X is a property of the Macro-Sudan Belt] is** that, as we have now seen, **S(Aux)OVX is almost certainly not a single syntactic phenomenon**. In particular, we must be careful to distinguish between the superficial appearance of such a word order with a structure that is actually distinct, as in Gwari and Fongbe, from the existence of genuine mixed clausal headedness in Mande and Kru."
>
> (Sande et al. 2019:693-4, emphasis added)

Variation in analyses of Aux-O-V patterns (to be updated)

- Is the VP underlyingly head-final (e.g. Guébie, Dafing) or head-initial (e.g. Gwari, Fongbe)?
- Does V stay in-situ? (e.g. Guébie SAuxOV)
- Does V move to T? (= Kru-type SVO/S-Aux-O-V-X alternation)
- Does V move to C (via T)? (= Germanic V2)
- Is there V or VP raising? (Kru vs Germanic)
- Is there roll-up movement? (e.g. Germanic, Uralic)
- Is the object nominalised? (e.g. Fongbe)?
- Is there object movement? (e.g. Gwari)
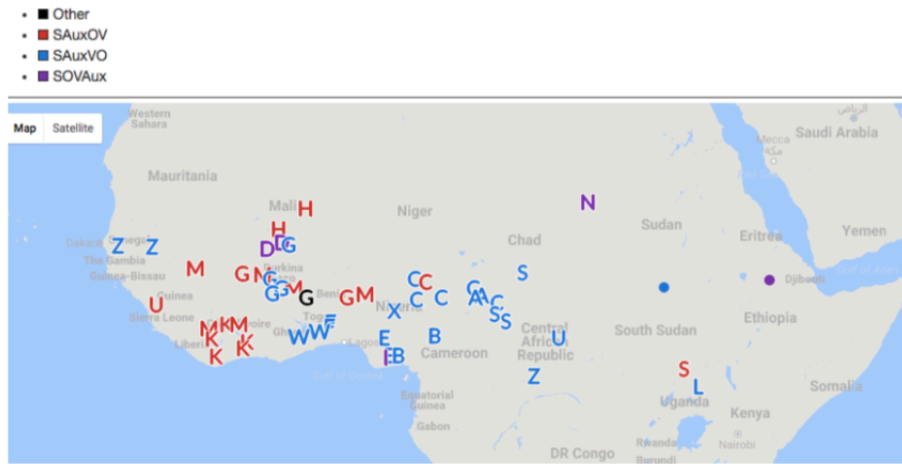
Figure 2: Map showing distribution of S-Aux-O-V word order (in red) in 54 languages of Macro-Sudan Belt (Sande et al. 2019). C= Chadic, G = Gur/Senufo, H = Songhay, K = Kru, M = Mande, U = Mel. NB: The Benue-Congo languages Tunen, Nyokon, Tikar and Ewondo were not in the sample.
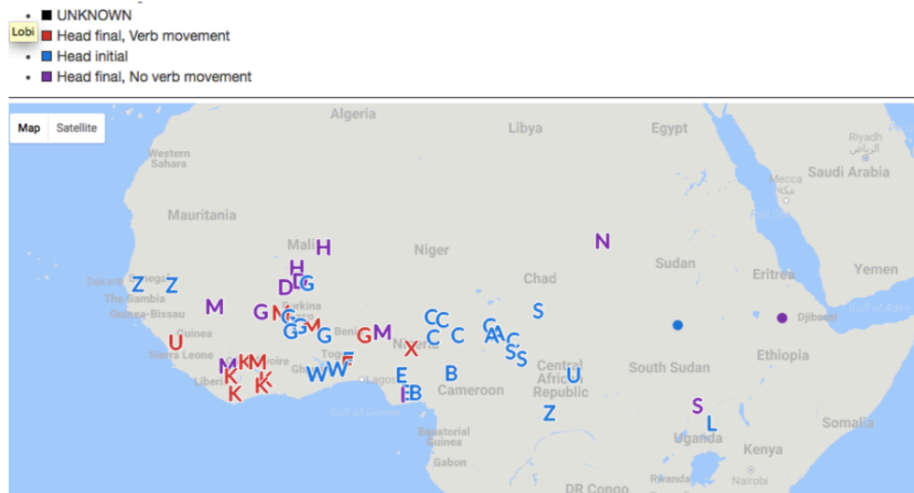
Figure 3: Map showing analysis in terms of headedness and presence/absence of verb movement.

2.3   Tunen headedness

- Does Tunen have head-final syntax beyond the VP?
- Things to test: prepositions vs postpositions, Adv-V vs V-Adv, C-Comp vs Comp-C, etc.
- As Sande et al. (2019) discuss, there is crosslinguistic variation within Niger-Congo: some languages with S-Aux-O-V-X order show head-final properties, e.g. postpositions in Mande; Gen-N order, Adv-V order; others pattern as head-initial
- Ijo languages and Dogon (both SOV, both doubtful as Niger-Congo) are consistently head-final
- But Tunen, Nyokon are consistently head-initial (aside from OV)[5] (Table 3)

---

[5]Table 3 shows Poss-**N** in addition to **N**-Gen order, with Poss-**N** the order found with a possessive pronoun (e.g. *yamíá isǝ́* 'my **father**'). As discussed in Mous (2005), there is evidence that the head-initial type **N**-Poss is the historic order. Note also that while there are sentence-final question particles, following Biberauer (2017) I do not take this to be evidence for head-finality, in that such particles are likely not syntactic heads.

8

Table 3: Headedness properties of Tunen and its neighbour Nyokon (Kerr submittedb)

Property	Tunen result	Nyokon result
Order of N and Mod	N-Mod	N-Mod
Adposition type	Prepositions	Prepositions
Order of N and Poss (pronoun)	Poss-N	Poss-N
Order of N and Gen	N-Gen	N-Gen
Canonical order of O and V	OV	OV/VO
Order of Aux and V	Aux-V	Aux-V
Order of O and V in imperatives	VO (V-IO-DO)	VO (V-DO-IO)
Order of C and Comp	C-Comp	C-Comp
Order of Cop and Compl	Cop-Compl	Cop-Compl
Order of V and manner adverb	V-Adv	V-Adv
Canonical adjunct position	SOV**X**	SOV**X**/SVO**X**
Low subjects (VS)?	✗	✗

- Examples of head-initiality: nominal domain (23)[6], Cop-Compl (24), prepositions (24):

(23) tɔ́ɔ́yɛ **tɔbanána** tɔté⸮té tɔfítitiə tɔ́fandɛ.
/tɔ́ɔ́yɛ **tɔ-banána** tɔ-té⸮téá tɔ-fítitiə tɔ-ᴴfandɛ/
13.DEM.PROX 13-banana 13-small 13-black 13-two
'ces deux petites bananes noires' ('these two small black bananas') [JO, 844]

(24) Context: Where are you?
mɛ **lɛ** ɔ nioní.
/mɛ **lɛ́á** ɔ nɛ-oní/
SM.1SG be PREP 5-market
'Je suis au marché.'
('I am at the market.') [Tunen; PM 102]

(25) Context: 'Where are you?'
mu **nə** a nyí.
SM.1SG COP PREP market
'I am at the market.' [Nyokon; RA 94]

⇒ Tunen is consistently head-initial, except for OV

2.4 Analyses of the Bantu verb

- My focus: how to derive S-Aux-O-V-X in Tunen (Bantu, Cameroon)
- Relevant point of departure: previous structural analyses of Narrow/Core Bantu, e.g. van der Wal (2009, 2022) on Makhuwa-Enahara (Bantu P31, Mozambique) and Bantu more broadly[78]

---

[6]Note that Roberts (2019:177) writes that the combination of C-Aux-O-V with Dem-N-Num "does not seem to be attested", but these data show that this is the order combination found in Tunen (though Roberts elsewhere specifies Dem-(Rel)-N-Num as the relevant subtype).

[7]Other relevant analyses of Bantu: Zeller (2013) approach likewise arguing for head movement of V, on the base of Bantu data; Buell (2005)'s alternative analysis, with object dislocation out of vP followed by remnant phrasal movement for Zulu (Bantu, South Africa).

[8]FV = final vowel, a vowel that can convey aspectual information.

(26) Nlópwáná o-h-<u>oón</u>-**íh-er-íy-á**   epuluutsa
      1.man   SM.1-PFV.DJ-see-**CAUS-APPL-PASS-FV** 9.blouse
      'The man was shown the blouse.'   (Makhuwa (Bantu), van der Wal 2009:168-9)

- The basic idea: V head-moves up iteratively to get derivational suffixes, but stops before T
- Supporting evidence: Bantu derivational affixes are **suffixal** and reflect ordering of spine

(27)

```
                        TP
              ┌─────────┴─────────┐
           o-h-                  AspP
                        ┌─────────┴─────────┐
          [[[[[-oon]ᵢih]ⱼer]ₖiy]ₘa]        vP
                                    ┌───────┴───────┐
                                          PassP
                                  ┌───────┴───────┐
                                 tₘ             ApplP
                                        ┌────────┴────────┐
                                       tₖ              CausP
                                                ┌────────┴────────┐
                                               tⱼ               VP
                                                        ┌───────┴───────┐
                                                       tᵢ            epuluutsa
```
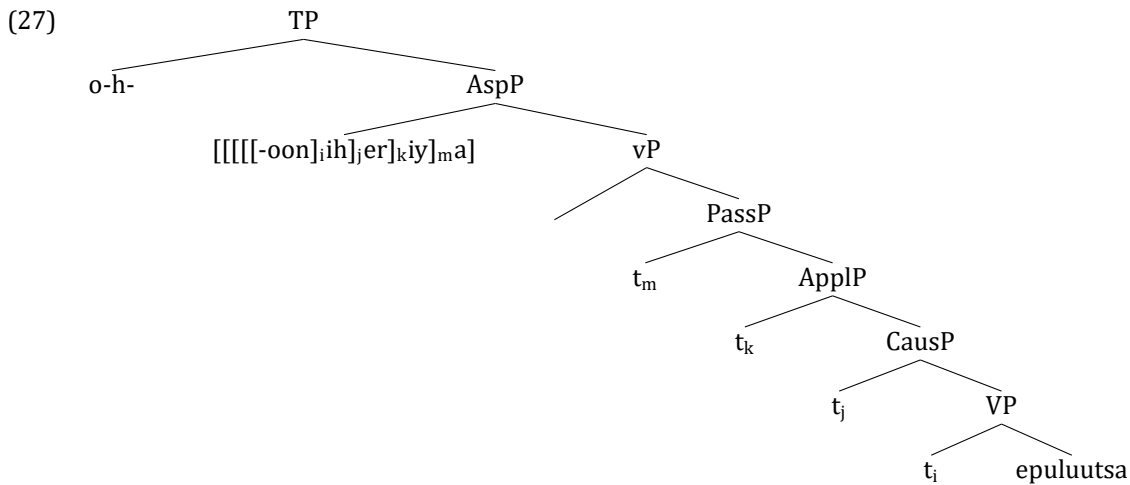
2.5   Extension to Tunen

- Does Tunen have evidence for verb movement?
- Check with **negation test** and **adverb placement test** (Pollock 1989)
- Tunen patterning = Neg-V; O-V-Adv

(28) a.   mɛ**lɛ** aŋɔ́á nimb.
           /mɛ-**lɛ**   aŋɔ́á   nimbə/
           SM.1SG-**NEG** PRON.2SG.EMPH deceive
           'Je ne te trompe pas.'
           ('I'm not lying to you.')

      b.   mɛ**lɛ́**ndɔ tunəni ɔ́kɔ.
           /mɛ-**lɛ**ˊndɔ   tu-nəní ɔ́kɔ/
           SM.1SG-**NEG**-PRES 13-Nen understand
           'Je ne comprends pas la langue Tunen.'
           ('I don't understand the Tunen lan-
           guage.')

(29) mɛ́ndɔ mɔná sɔa **biabia**.   (O-V-Adv)
      /mɛ-ᴴndɔ   mɔ-ná sɔa   **biabia**/
      SM.1SG-PRES 1-child wash slowly
      'Je lave l'enfant doucement.'
      ('I wash the child carefully'.)   [JO 820]

(31) *mɛ́ndɔ **biabia** mɔná sɔa.   (*Adv-O-V)
      /mɛ-ᴴndɔ   **biabia** mɔ-ná sɔa/
      SM.1SG-PRES slowly 1-child wash
      Intd.: 'Je lave l'enfant doucement.'
      (Intd.: 'I wash the child carefully.') [JO 822]

(30) *mɛ́ndɔ mɔná **biabia** sɔa.   (*O-Adv-V)
      /mɛ-ᴴndɔ   mɔ-ná **biabia** sɔa/
      SM.1SG-PRES 1-child slowly wash
      Intd.: 'Je lave l'enfant doucement.'
      (Intd.: 'I wash the child carefully.') [JO 821]

Summary of tests on V height in Tunen

- Tunen has SM-TM cluster as separate phonological word, separated from V by O (Mous 2003:291)

- Tunen negation is higher than V (Neg-V), so V cannot have risen to T; adverbs follow V (V-Adv)

- So has the verb moved at all? (cf Makhuwa analysis above vs Sande et al. 2019 in-situ S-Aux-O-V in West Africa) - need to look at verbal morphology

2.6   Deriving the Tunen verb

- Tunen verbal extensions are **suffixal** (like other Bantu), aside from middle prefix *bé-* (Mous 2003, 2008):

Middle	*bé-*	Reciprocal	*-an/ən*
Applicative	*-ɛn/in*	Short casuative	*-i*
Diminutive	*-ɛl/il, -al/əl*	Long causative	*-əsi*
Positional	*-ɛm/im*	Neuter	*-ɛ/i*
Intensive	*-ɛn/in*	(Impositive	*-ɛ/i)*
Separative	*-on/un*	(Pluractional	*-ak/ək*)

Table 4: Tunen verbal extensions (Mous 2003:289)

- Examples of verbal derivational suffixes:

(32)   indiə ∼ indiəkinə
       indiə ∼ indiə-aka-inə
       give ∼ give-DUR-APPL
       'give'

(33)   táléá ∼ táléáka
       táléá ∼ táléá-aka
       cook ∼ cook-DUR
       'cook'

(34)   fáma ∼ fə́mi ∼ fámálána
       fáma ∼ fáma-i ∼
       go.out ∼ go.out-CAUS ∼
          fáma-al-ana
          go.out-DIM-RECIP
       'go out', 'to bring out', 'to go out again'

- Examples of prefixal middle (see Mous 2008 for detailed discussion on semantics):

(35)   nɛáyɛ́á ni kúnyiə nɛ́ móhókí nɛlɛ́ndɔ miaŋɔ́ **bí**híki.
       /nɛáyɛ́á   nɛ́   kúnyiə nɛ́   ma-hókí   nɛ-lɛ́ndɔ   miaŋɔ́á
       POSS.PRON.1.5 ASSOC.5 teach   ASSOC.5 6-language SM.5-NEG-PRES POSS.PRON.EMPH.1SG
          bɛ́-hikiə/
          MID-like
       'I don't like the way she teaches languages.' (lit. 'Her way of teaching languages doesn't please me.')

- If following analysis of other Bantu (van der Wal 2009, 2022), this means that V must move to a higher position from its base position in order to derive suffixal causative etc.

- but V must be lower than VoiceP to get prefixal middle *bé-*, and V must be lower than T/Neg to get S-TM-O-V order

- NB: Tunen does not have the core Bantu final vowel (FV) as an aspectual marker Mous (2003); the final vowel of the verb is often unpronounced due to utterance-final vowel reduction (Dugast 1971; Mous 2003; Boyd 2015)

(36)

```
              TP
           /      \
          T        VoiceP
                  /      \
              Voice       vP
                        /     \
           V+Caus+Appl+v       ApplP
                              /     \
                           t_k       CausP
                                    /    \
                                  t_j      VP
                                         /    \
                                       t_i      O
```
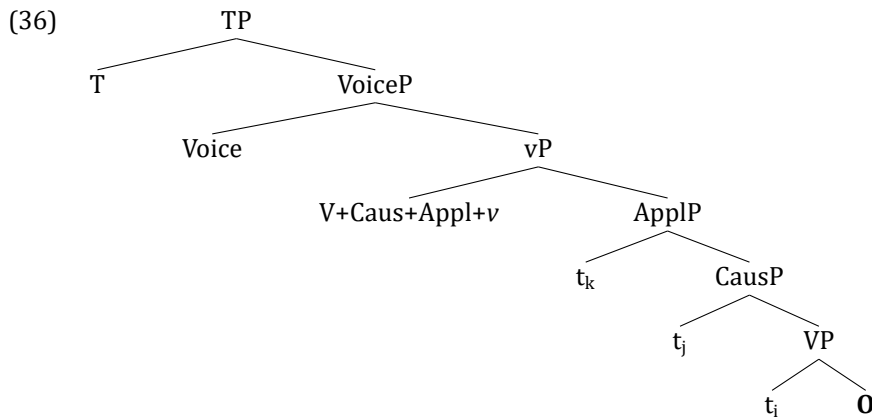
- But unlike for Makhuwa, this is not enough - we need to get OV spell-out

- Note if there is this V movement (and no additional stipulation re: syntax/morphology interface), the object cannot be in the base position (unlike Guébie) – regardless of whether you have a head-initial (37) or head-final (38) VP underlyingly – because then the structure would be linearised as S-Aux-V-O, not S-Aux-O-V:[9]

(37) *

```
            TP
          /    \
        mɛ      T
        I     /   \
            T       vP
           ´ndɔ    /   \
           PRES   v     VP
                 ɔ́kɔ   /   \
                 speak V     DP
                      ɔ́kɔ     △
                    speak   tunəni
                            Tunen
```

(38) *

```
            TP
          /    \
        mɛ      T
        I     /   \
            T       vP
           ´ndɔ    /   \
           PRES   v     VP
                 ɔ́kɔ   /   \
                 speak DP     V
                       △     ɔ́kɔ
                     tunəni  speak
                     Tunen
```
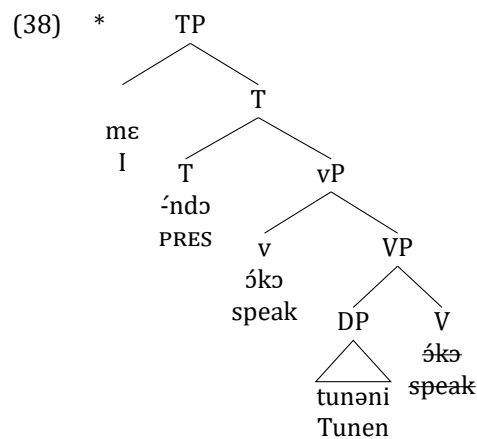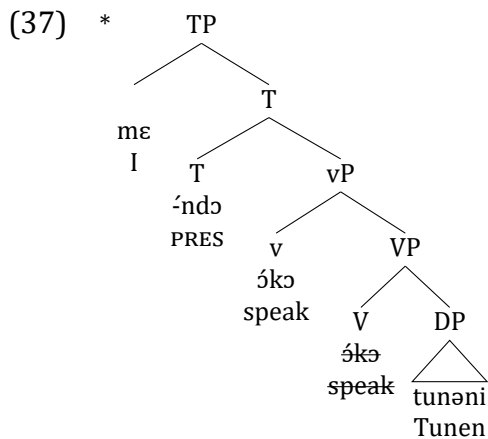
- So to get OV, we also need movement of the object (as suggested by Sheehan 2013 above)[10]

2.7 On object movement

- Can we find a trigger for object movement?

    cf Güldemann (2007) on information status vs placement of objects in Benue-Congo; Struik and Van Kemenade (2020); Struik (2022) on importance of IS in conditioning object placement in diachrony of Germanic varieties (VO base, OV when O moves due to givenness)

---

[9]Asterisks here indicate incorrect structural derivations, i.e. derivations that do not match the surface forms. For simplicity, I do not show the in-situ subject here, nor extra verbal projections.

[10]Alternatively, we need an account of Bantu verbal morphology without V-to-*v* movement, e.g. postsyntactic morphological rules to derive suffixes vs prefixes. See §4.1 Challenge 1. cf Broekhuis (2022) for statement that Germanic OV languages obligatorily have short object shift of nominal objects (O to specVP) and cannot have V-to-*v* movement.

- PhD work on Tunen information structure shows that preverbal position is pragmatically neutral for the object; S-Aux-O-V-X is the canonical word order
- Supporting evidence: S-Aux-O-V-X order is compatible with thetics (39), given objects (40), and (non-exhaustively) focussed objects (55) (Kerr submitteda)

(39) Hot news thetic context (all-new):
You are at the riverside outside the village and see an elephant, which very rarely occurs, so run to tell the others.
mɛnɔ́ misəku siəkin!

/mɛ-nɔ́	**mi-səku**	siəkinə/
SM.1SG-PST1	3-elephant	see.APPL

'Je viens de voir un éléphant !'
('I just saw an elephant!')   [PM, 316]

(40) Truth focus context with given object:
'Do you see the sheep?'
mɛ́nd(ɔ) **ɛndɔ́mbá** sin.

/mɛ-́ndɔ	ɛ-ndɔ́mbá	sinə/
SM.1SG-PRES	7-sheep	see

'Je vois les moutons.'
('I see the sheep.')   [EO 695]

- The SVáO frequently referenced for Tunen on the basis of Mous (1997, 2003) is (i) low-frequency, (ii) not a monoclausal focus construction (certainly not a case of an immediate-after-verb/IAV focus position) (Kerr submitteda)
- NB: Some SVO examples do however exist (with no *á* copula). Could be extraposition as with clausal complements? (see section 3.3)
- → Tunen does not have a S-Aux-O-V-X/SVO alternation with S-Aux-O-V-X as a peripheral strategy; S-Aux-O-V-X is core syntax (*contra* presentation of Güldemann 2008 re: Benue-Congo vs Mande)
- → Object movement therefore appears to be formal movement only, not triggered by IS
- So the verb movement analysis leads us to the following 2-step basic analysis of Tunen:

(41)
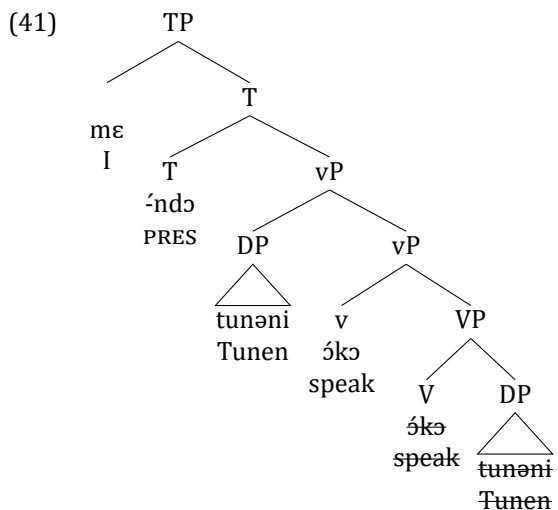
- Ingredients for this analysis:
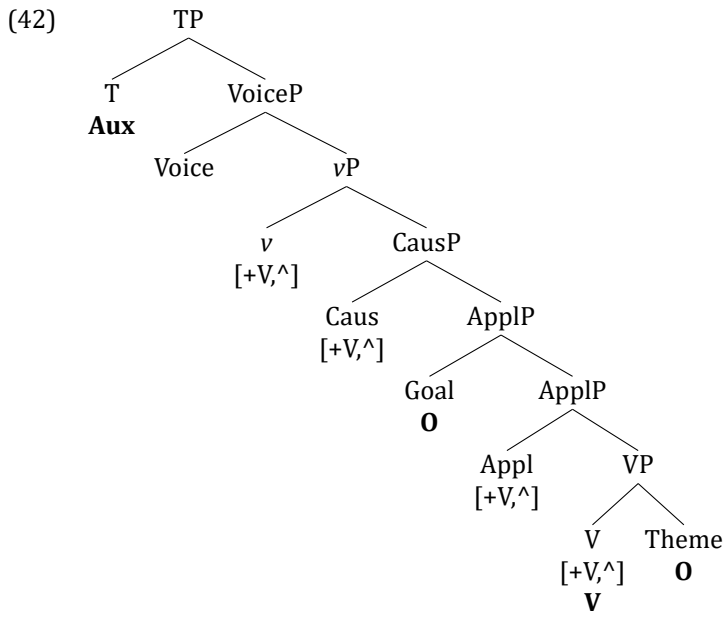
  Head-initial VP

  V movement to *v*P-internal head

  Object movement across V (cf Holmberg's Generalization) for formal reasons (not IS trigger)
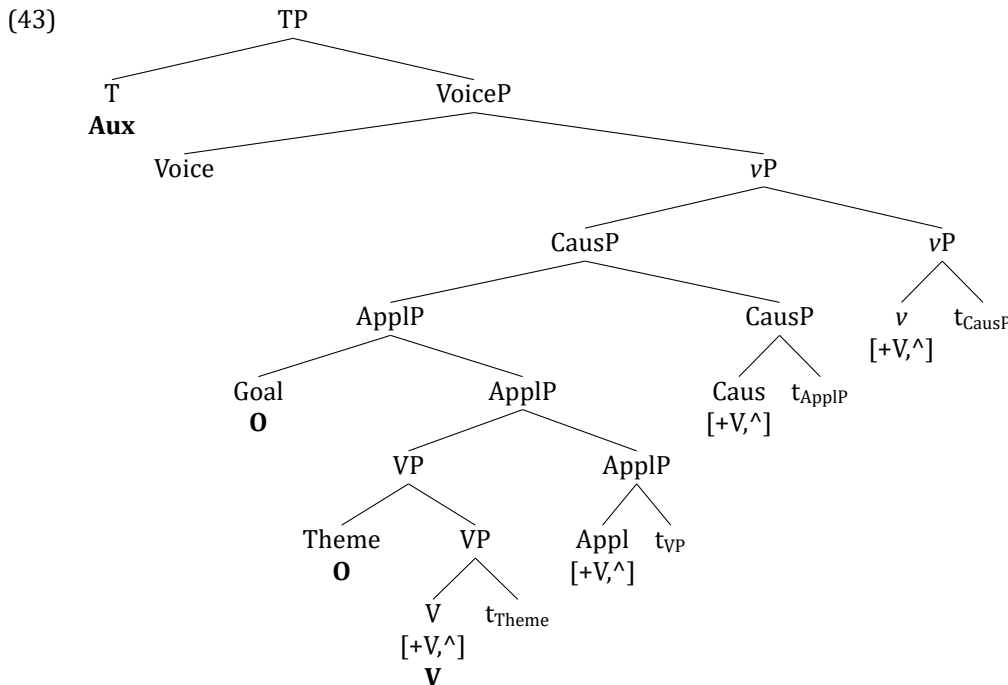
2.8 Proposal 2 (FOFC-style roll-up)

- What about the roll-up movement account, as illustrated for Germanic?
- Proposal for Tunen: SAuxVO base; SAuxOV through roll-up movement caused by ^-feature on [+V] heads up to *v* but excluding Voice

- NB: assuming goal object introduced by low ApplP, to get S-IO-DO-V (option alongside S-DO-V-Prep-IO; *S-DO-IO-V, as in other West African languages that allow multiple preverbal objects)

(42)

```
                    TP
                ┌────┴──────┐
                T          VoiceP
               Aux      ┌────┴────┐
                      Voice       vP
                              ┌────┴────┐
                              v        CausP
                           [+V,^]   ┌────┴────┐
                                  Caus      ApplP
                                 [+V,^]  ┌────┴────┐
                                       Goal      ApplP
                                        O     ┌────┴────┐
                                            Appl        VP
                                           [+V,^]   ┌────┴────┐
                                                    V       Theme
                                                  [+V,^]      O
                                                    V
```

↓

(43)

```
                        TP
                 ┌───────┴────────────┐
                 T                  VoiceP
                Aux        ┌──────────┴──────────────┐
                         Voice                       vP
                                          ┌───────────┴────────┐
                                        CausP                  vP
                          ┌──────────────┴─────────┐       ┌────┴────┐
                        ApplP                     CausP     v      tCausP
                  ┌───────┴────────┐          ┌────┴────┐ [+V,^]
                Goal             ApplP       Caus    tApplP
                 O          ┌──────┴────┐   [+V,^]
                          VP          ApplP
                     ┌─────┴────┐  ┌────┴────┐
                   Theme       VP  Appl     tVP
                    O       ┌───┴──┐[+V,^]
                            V    tTheme
                          [+V,^]
                            V
```

2.9   Alternative analyses

1. Haider (2010, 2013) **Basic Branching Conjecture** (BBC)

   Allows VP to be base-generated as OV

   Similar idea of base-generated OV used for West African S-Aux-O-V-X/SVO by Sande (2017); Sande et al. (2019); applied also to Uralic by Schmidt (in prep.)

14

- In Sande et al. (2019)'s approach, Tunen's cross-categorial head-initiality does not motivate OV as base-generation; alternatively, argue that acquirer can posit OV based on robust OV input
- Note for Tunen, we still need to derive Bantu verbal morphology - if this is through verb movement, base-generation order of VP not enough to capture OV

2. Roberts (2019) **[XP [v Root v]] approach**, where OV is basic and VO derived by verb movement

   Here, *v* is a categoriser, distinct from the *v* that introduces external arguments and Voice (Roberts 2019:159)

   ^-feature of Biberauer et al. (2014) is replaced with a weak category feature; FOFC-relevant movement is driven by labelling (following Chomsky 2013, 2015's Labelling Algorithm).

   Word order variation between languages as cat feature can be weak or strong. If strong and valued, OV, or require movement to be labelled (VO); if unvalued, then head movement, if weak, then roll-up movement (= movement driven by labelling; head movement/roll-up/pied piping)

   Disharmonic word order arises when some but not all heads within an extended projection have a weak category feature (parallel to some but not all heads having ^-feature)

3. **Combination** of roll-up mechanism with head movement of V

   Roberts (2019:163-4, 167, 185fn46) explicitly allows combination of roll-up + head movement, but argues that roll-up must come before head movement
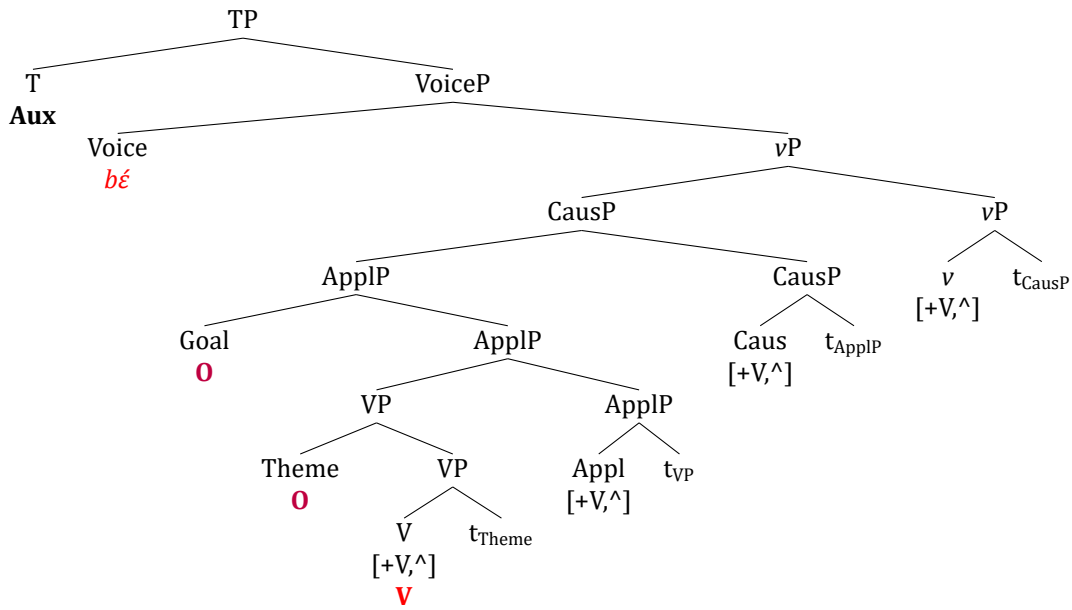
3 Challenges for previous accounts

- We have the basic analytical options: head movement account + object shift, or FOFC-style Kayneian roll-up movement account, + alternative with base-generated OV (+ combos)
- This section: Discussion of empirical challenges as test cases for each analysis in Tunen

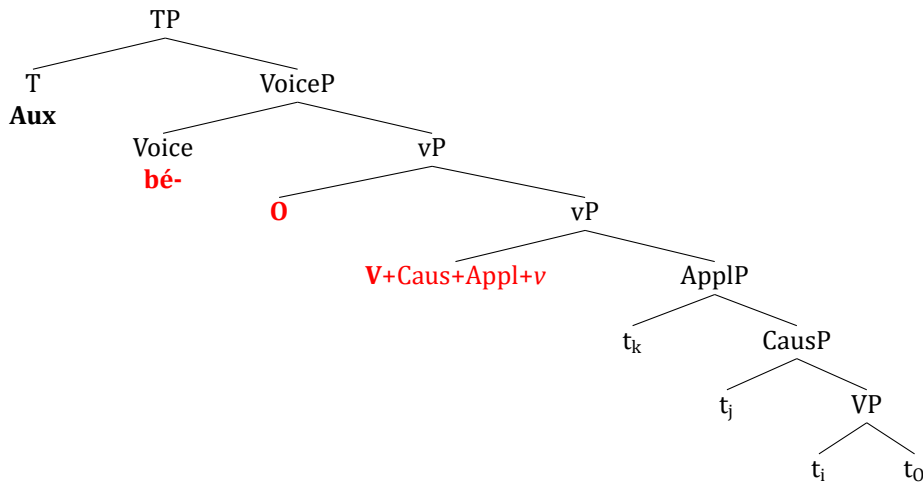## 3.1 Deriving Bantu verbal morphology

- How do we get derivational suffixes and the Voice marker *bé* as a prefix?
- Challenge: Getting *bɛ́* middle to attach as a prefix on V when O intervenes

(44)　a.　nɛáyɛ́á ni kúnyiə nɛ́ móhókí nɛlɛ́ndɔ miaŋɔ́ **bí**híki.

　　　/nɛáyɛ́á　　　nɛ́　　kúnyiə nɛ́　　ma-hókí　　nɛ-lɛ-́ndɔ　　miaŋɔ́á
　　　POSS.PRON.1.5 ASSOC.5 teach　ASSOC.5 6-language SM.5-NEG-PRES POSS.PRON.EMPH.1SG

　　　　bɛ́-hikiə/
　　　　MID-like
　　　'Sa façon d'enseigner les langues ne me plaît pas.'
　　　('I don't like the way she teaches languages.' lit. 'Her way of teaching languages doesn't please me.')　　　　　　　　　　　　　　　　　　　　　　　　[EE+GE+PB 2758]

　　b.　a-ná　　　búáyé　　　　bólmó　**bɛ́**-kɛ́nd-ák-án-ɛ́ná　　wéya　bɛ́mwɛt.
　　　　SM.1-PST2 POSS.PRON.1.14 14.load MID-walk-DUR-RECIP-APPL PRON.1 self
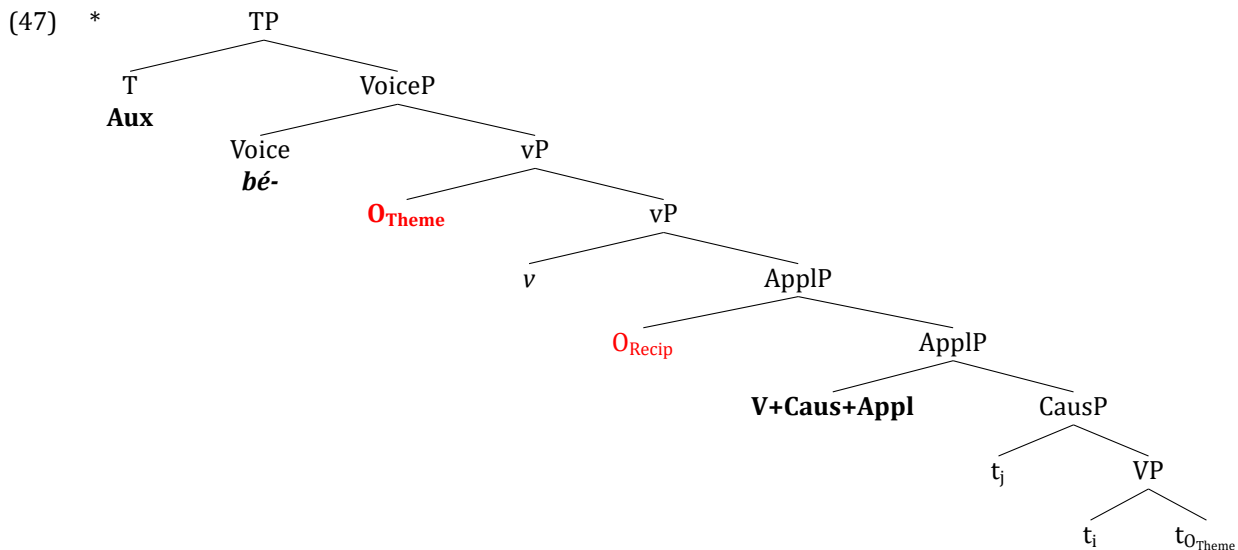　　　　'He carried his load himself.'　　　　　　　　　　(Mous 2008:309, adapted)

(45)

```
                              TP
              ┌───────────────┴───────────────┐
              T                              VoiceP
             Aux            ┌──────────────────┴──────────────────┐
                          Voice                                  vP
                           bɛ́           ┌───────────────────────────┴──────────┐
                                       CausP                                   vP
                         ┌──────────────┴──────────────┐                  ┌─────┴─────┐
                       ApplP                          CausP                v      t_CausP
              ┌──────────┴──────────┐            ┌─────┴─────┐           [+V,^]
            Goal                  ApplP         Caus      t_ApplP
             O              ┌───────┴───────┐   [+V,^]
                          VP              ApplP
                   ┌───────┴───────┐   ┌────┴────┐
                 Theme            VP  Appl     t_VP
                  O          ┌────┴────┐ [+V,^]
                            V       t_Theme
                          [+V,^]
                            V
```

(46)

```
                     TP
         ┌────────────┴────────────┐
         T                       VoiceP
        Aux          ┌─────────────┴─────────────┐
                   Voice                         vP
                    bé-          ┌────────────────┴────────┐
                                 O                         vP
                                          ┌────────────────┴────────┐
                                    V+Caus+Appl+v               ApplP
                                                      ┌───────────┴───────────┐
                                                     t_k                    CausP
                                                               ┌─────────────┴─────┐
                                                              t_j                  VP
                                                                            ┌───────┴───────┐
                                                                          t_i              t_O
```

- Benefit of roll-up account: gets correct IO-DO-V order for double object constructions; head movement account needs to be adapted firstly to identify length of object shift and secondly to because generating recipient in SpecApplP gets *DO-IO-V order rather than IO-DO-V:

(47) *

```
                          TP
              ┌───────────┴───────────┐
              T                      VoiceP
            Aux            ┌───────────┴───────────┐
                         Voice                    vP
                         bé-          ┌────────────┴────────────┐
                                   O_Theme                      vP
                                          ┌──────────────────────┴──────┐
                                          v                            ApplP
                                                       ┌────────────────┴────────┐
                                                    O_Recip                     ApplP
                                                            ┌──────────────────────┴──────┐
                                                       V+Caus+Appl                       CausP
                                                                          ┌────────────────┴────┐
                                                                         t_j                    VP
                                                                                      ┌──────────┴──────┐
                                                                                     t_i             t_{O_Theme}
```

Ditransitive data: IO-DO-V; *DO-IO-VO (regardless of IS context)

(48) Context: 'What is the woman returning to the child?'
muəndú ándɔ **mɔná imítə́** túmbi.   (IO-DO-V)
/mɔ-əndú a-́ndɔ   **mɔ-ná ɛ-mítə́**   túmbiə/
1-woman SM.1-PRES 1-child 7-calebasse return
'La femme remet [le calebasse]_FOC à l'enfant.'
The woman returns [the calebasse]_FOC to the child.'   (Tunen (Bantu); Kerr submitteda)

(49) Context: 'Who is the woman giving a gourd to?' + photo from BaSIS stimuli

   a. anɔ́ **ɔsɔ́kɔ́ hɛtɛ́tɛ́** indi.   (IO-DO-V)
       /a-nɔ́   **ɔsɔ́kɔ́ hɛ-tɛ́tɛ́**   índíə/
       SM.1-PST1 other 19-gourd give
       Elle donne une gourde à l'autre.'
       'She gives a gourd to the other (woman).'

   b. *anɔ́ **hɛtɛ́tɛ́ ɔsɔ́kɔ́** indi.   (*DO-IO-V)
       /a-nɔ́   **hɛ-tɛ́tɛ́   ɔsɔ́kɔ́** índíə/
       SM.1-PST1 19-gourd other give
       Intd.: 'Elle donne une gourde à l'autre.'
       Intd.: 'She gives a gourd to the other (woman).'   (Tunen (Bantu); Kerr submitteda)

• Same IO-DO-V order in other Aux-O-V languages that allow multiple preverbal objects:

(50) a. a-kad   **mə dzɔ** vé.
        he-do.usually me it   give
        'He usually gives it to me.'   (Ewondo (Bantu), Redden 1980:167, cited in Gensler 1994:5)

    b. ɔ se **kei ko** kpa dè dɔɔ.
        he NEG Kei rice bring LOC market
        'He didn't bring rice to Kei at the market.' (Wobé (Kru), Marchese 1986:243, cited in Gensler 1994:5)

    c. ò có **ndú kóná**   dóónɔ̌ng
        he FUT him message pour.forth
        'He will relate the message to him.'   (Kisi (Atlantic), Childs 1988:139, cited in Gensler 1994:5)

    d. mḛ̄ jī-ī   **jàpí ʃìkā** dzé jábò   lø̄.
        1S father-PM Yapi money give market there
        'My father is giving money to Yapi at the market.' (Attie (Kwa), Kouadio 1996, cited in Creissels 2005)

(51) Piere   edtja   **aahtjan bovtsem**   doekedh.
    Per[.NOM] shall.PRS.3SG father.ILL reindeer.ACC sell.INF
    'Per will sell the reindeer to the father.'   (South Sámi (Uralic); Schmidt in prep.:2)

3.2 Aux-O-V with O-V-X

- Like many of the other OV languages in West/Central Africa, and unlike most other Aux-O-V languages outside of Africa, Tunen has S-Aux-O-V-**X** word order, where X refers to obliques (instruments (52a), prepositional objects (52b), locative phrases (1), (52c), manner adverbs (29), time adverbials (52c))

(52) a. mɛka ámɛ siəkinə **na máꜜméá məə́sə máfandέ máam**!
        /mɛ-ka   ámɛ   siəkinə **na   maꜛ̂mɛa**   **ma-ə́sə maꜜfandέ máama**/
        SM.1SG-PST3 PRON.1SG see   with 6-POSS.PRON.1SG.6 6-eye   6-two   DEM.PROX.6
        'Moi j'ai vu avec mes propres yeux !', ('I saw (it) with my own two eyes!')   [PM 1050]

    b. muəndú ándɔ imítə́ túmbiə **ɔ mɔn**.
        /mɔ-əndú a-́ndɔ   ɛ-mítə́   túmbiə **ɔ   mɔ-ná**/
        1-woman SM.1-PRES 7-calebash return PREP 1-child
        'La femme remet la calebasse [à l'enfant]_FOC.'
        ('The woman returns the calebash [to the child]_FOC.')   [JO 1586]

    c. bɛfɔŋɔ békáfámáka **naánɛkɔla (ɔ) έtɔbɔtɔb**.
        /bɛ-fɔŋɔ bέ-ka-fámá-aka   **naánɛkɔla ɔ   ɛ-tɔbɔtɔ́bɔ́**/
        8-cow   SM.8-PST3-arrive-DUR yesterday PREP 7-field
        'Les vaches sont apparues dans le champ hier.' ('The cows appeared in the field yesterday.')
        [JO 2600]

- NB: This combination of Aux-O-V and O-V-X leads Gensler and Güldemann (2003); Güldemann (2008) to argue for this word order as an 'Africa-specific quirk' of common genetic/areal origin, rather than independently innovated (though work by other authors argues for separate developments of this word order, see e.g. Hyman 2011)

- In terms of analysis: Can't simply use the FOFC-style roll-up account, because need to get postverbal adjuncts and ensure that verbal morphology is correctly suffixal

- True Kayneian approach does not allow right adjunction

- And even if you right-adjoin to the VP, the PP ends up before the derivational suffices

  ⇒ To get the right morphology, we either need a different theory of suffixation, or we would need to attach these adjuncts at least as high as *v*P (but no semantic motivation for this)

(53) *

(54) ?

- Head movement + object shift approach can generate O-V-X without problem, as a low adjunct will stay in-situ and be linearised afer the verb

- Alternative analysis: Barbiers Barbiers (2000) on O-V-X in English and Dutch, derived from underlying SOV structure with short verb movement

3.3 Discontinuous DPs (O-V-Mod), V-O(-Mod) and */?O-Mod-V

- Tunen has discontinuous DPs of the construction S-Aux-O-V-Mod (55), found for numerals, quantifiers, adjectives, for objects and subjects

(55) Context: 'What do you see?'
méndɔ **túnɔni** sinə **tɔ́lál**.
/mɛ́-ndɔ   **tɔ́-noni** sinə **tɔ́-lálɔ́**/
SM.1SG-PRES 13-bird see 13-three
'Je vois trois oiseaux.'
('I see three birds.')   [EO 225]

(56) Context: 'Do you see two birds?'
ɛ́ɛ, méndɔ **tunoní** sinə **tɔ́fandɛ**.
/ɛɛ mɛ́-ndɔ   tɔ-noní sinə tɔ́-fandɛ/
yes SM.1SG-PRES 13-bird see 13-two
'Oui, je vois deux oiseaux.'
('Yes, I see two birds.')   [EO 1408]

19

- While discontinuous DPs are often viewed as low-frequency constructions driven by difference in information structure of noun and modifier (e.g. Fanselow and Ćavar 2002 Contiguity Principle), in Tunen, this construction is common (across consultants) and pragmatically neutral

   → No reason to motivate movement of Mod driven by IS features (unlike discontinuous DPs in other languages formed by A'-movement to clausal left periphery)

- Intuition: Mod is stranded in-situ, while O has moved higher via formal movement

- Issue: How to get this in a roll-up account, if ^-driven movement always takes the whole complement?

- There are also examples where the modifier associates with the subject (57), again in various discourse contexts

(57)   Context: QUIS dialogue task: EO has a picture from the end of a storyboard and must find out from PM (who has the rest of the storyboard) what happened before.
   mba **bɛndɔ** bábáka háha **balal**, yaté bándɔ kɛ?
   /mba **bɛ-ndɔ**   bá-bá-aka háaha **ba-ᴴlálɔ́**, yaté bá-ᴴndɔ   kɛa/
   but   2-person 2-be-DUR here   2-three   what SM.2-PRES do
   'Mais il y a trois personnes ici, que font-ils?'
   ('But there are three people here, what are they doing?')   [EO, 581]

- NB: Corpus only has examples for numerals and quantifiers for subjects (for objects, some examples for adjectives as well)

- Q: are the subject splits the same construction, or are they floating quantifier constructions with modifier not base-generated in DP?

   Morphological evidence (noun class agreement) and semantics argue **against** an adverbial account of such modifiers; ability for adjectives to be discontinuous also argues against adverbial account (as least for objects)

- A related issue: O-V-Mod is standard (55), V-O-Mod is accepted (58), and O-Mod-V is generally judged ungrammatical or reduced acceptability (59)

(58)   Context: "How many people do you see?"   (59)   Context: "How many people do you see?"
   (+ picture)   (+ picture)
   mɛ́ndɔ sinə **bɛndɔ báfandɛ**.   ?mɛ́ndɔ **bɛndɔ báfandɛ́** sinə.
   /mɛ́-ndɔ   sinə **bɛ-ndɔ   ba-́fandé/   /mɛ́-ndɔ   **bɛ-ndɔ   ba-́fandé** sinə/
   SM.1SG-PRES see 2-person 2-two   SM.1SG-PRES 2-person 2-two   see
   'Je vois deux personnes.'   'Je vois deux personnes.'
   ('I see two people.')   [JO 541]   ('I see two people.')   [JO 543]

- Why should O-Mod-V be ruled out, if this is just formal movement of V's complement? Why not take the whole DP including the modifier?

- Why should movement be optional, resulting in both O-V-Mod and V-O-Mod orders with no clear interpretational difference?

- → could argue that V-O-Mod always involves extraposition (in parallel to treatment of Vs taking complement-initial embedded clauses in OV languages as always involving extraposition Biberauer et al. 2014:172), or that discontinuous modifiers are reduced relatives ('the birds that are three'), matching O-V-Rel and V-O-Rel availability

4 Conclusion

- Aux-O-V is an interesting case of FOFC-compliant disharmonic word order, with various examples of this surface pattern in Niger-Congo langauges

- S-Aux-O-V-X is a crosslinguistically rare and disharmonic word order pattern found in West/-Central Africa (with Aux-O-V found elsewhere, e.g. Germanic, South Sámi)

    But the languages which have S-Aux-O-V-X differ in the exact type (e.g. nature of Aux, O; general headedness properties) - there are multiple S-Aux-O-V-X word order**s**

    ⇒ Different formal derivations have been proposed to derive the different S-Aux-O-V-X word orders, reflecting different diachronic origins of this word order

- Tunen (Bantu, Cameroon) has Aux-O-V in combination with O-V-X as the canonical word order; the analysis must capture Bantu verbal morphology, IO-DO-V, O-V-X, and discontinuous DPs

> **Variation in analyses of Aux-O-V patterns**
>
> - Is the VP underlyingly head-final (e.g. Guébie, Dafing) or head-initial (e.g. Gwari, Fongbe, Tunen, Nyokon)?
> - Does V stay in-situ? (e.g. Guébie SAuxOV)
> - Does V head-move to a low position (below T)? (= Makhuwa, Tunen(?))
> - Does V move to T? (= Kru-type SVO/S-Aux-O-V-X alternation)
> - Does V move to C (via T)? (= Germanic V2)
> - Is there V or VP raising? (Kru, Makhuwa vs Germanic)
> - Is there roll-up movement? (e.g. Germanic, Uralic)
> - Is the object nominalised? (e.g. Fongbe)?
> - Is there object movement?
>
>   Is object movement driven by information structure? (e.g. [-focus], Ewondo(?))
>
>   Is object movement driven by a formal feature only? (e.g. [+V])

References

Barbiers, S. (2000). The right periphery in SOV languages. In Svenonius, P., editor, *The derivation of VO and OV*. John Benjamins.

Bearth, T. (2003). Syntax. In Nurse, D. and Philippson, G., editors, *The Bantu Languages*, pages 283–306. Routledge.

Biberauer, T. (2017). The final-over-final condition and particles. In Sheehan, M., Biberauer, T., Roberts, I., and Holmberg, A., editors, *The Final-Over-Final Condition: A Syntactic Universal*. MIT Press.

Biberauer, T., Holmberg, A., and Roberts, I. (2014). A syntactic universal and its consequences. *Linguistic Inquiry*, 45(2):169–225.

Boyd, V. L. (2015). *The phonological systems of the Mbam languages of Cameroon with a focus on vowels and vowel harmony*. LOT, Utrecht.

Broekhuis, H. (2022). VO or OV: V to *v* or not to *v*. *Linguistic Variation*.

Buell, L. C. (2005). *Issues in Zulu verbal morphosyntax*. PhD thesis, UCLA.

Chomsky, N. (2013). Problems of projection. *Lingua*, 130:33–49.

Chomsky, N. (2015). Problems of projection: extensions. In *Structures, Strategies and Beyond: Studies in Honour of Adriana Belletti*, page 1–16. Amsterdam: Benjamins.

Claudi, U. (1993). *Die Stellung von Verb und Objekt in Niger-Kongo-Sprachen: Ein Beitrag zur Rekonstruktion historischer Syntax*. Universität zu Köln.

Creissels, D. (2005). S-O-V-X constituent order and constituent order alternations in West African languages. In *Proceedings of the Annual Meeting of the Berkeley Linguistics Society*, volume 31:2, pages 37–52.

Creissels, D. (2018). Current issues in the morphosyntactic typology of Sub-Saharan languages. In Güldemann, T., editor, *The languages and linguistics of Africa*, pages 712–821. de Gruyter Mouton.

Downing, L. J. and Hyman, L. M. (2016). Information structure in bantu. In Féry, C. and Ishihara, S., editors, *The Oxford handbook of information structure*.

Dryer, M. S. (1992). The Greenbergian word order correlations. *Language*, 68:81–138.

Dryer, M. S. (2013). Order of object and verb. In Dryer, Matthew S. & Haspelmath, M., editor, *The World Atlas of Language Structures Online.* Leipzig: Max Planck Institute for Evolutionary Anthropology. (Available online at http://wals.info/chapter/83, Accessed on 2022-02-11.).

Dugast, I. (1971). *Grammaire du Tunen*, volume 8. Éd. Klincksieck.

Dugast, I. (1975). *Contes, proverbes et devinettes des Banen: Sud-Ouest du Cameroun*, volume 12. Société d'études linguistiques et anthropologiques de France.

Fanselow, G. and Ćavar, D. (2002). Distributed deletion. In Alexiadou, A., editor, *Theoretical approaches to universals*, pages 65–107. John Benjamin.

Gensler, O. D. (1994). On reconstructing the syntagm S-Aux-O-V-Other to Proto-Niger-Congo. *Proceedings of the Twentieth Annual Meeting of the Berkeley Linguistics Society: Special Session on Historical Issues in African Linguistics*, pages 1–20.

Gensler, O. D. (1997). Grammaticalization, typology, and Niger-Congo word order: Progress on a still-unsolved problem [review of Claudi 1993]. 18:57–93.

Gensler, O. D. and Güldemann, T. (2003). S-Aux-O-V-Other in Africa: Typological and areal perspective. *Workshop on Distributed Predicative Syntax (S P O V X), 4th World Congress of African Linguistics (WOCAL), Rutgers University, June 2003*.

Givón, T. (1975). Serial verbs and syntactic change: Niger-Congo. In Li, C. N., editor, *Word Order and Word Order Change*, pages 47–112. Austin: University of Texas Press.

Good, J. (2017). Niger-Congo languages. In Hickey, R., editor, *The Cambridge handbook of areal linguistics*, pages 471–499. Cambridge: Cambridge University Press.

Good, J. (2020). Nige-Congo, with a special focus on Benue-Congo. In Vosser, R. and Dimmendaal, G. J., editors, *The Oxford handbook of African languages*, pages 138–160. Oxford: Oxford University Press.

Greenberg, J. H. (1963). Some universals of grammar with particular reference to the order of meaningful elements. *Universals of language*, 2:73–113.

Güldemann, T. (2007). Preverbal objects and information structure in Benue-Congo. In E. O. Aboh, Hartmann, K. and Zimmermann, M., editors, *Focus strategies in African languages*, pages 83–112. Berlin/New York: De Gruyter.

Güldemann, T. (2008). The Macro-Sudan belt: Towards identifying a linguistic area in northern sub-Saharan Africa. In Heine, B. and Nurse, D., editors, *A linguistic geography of Africa*, pages 151–185. Cambridge: CUP.

Haegeman, L. and van Riemsdijk, H. (1986). Verb projection raising, scope, and the typology of rules affecting verbs. *Linguistic Inquiry*, 17(3):417–466.

Haider, H. (2010). *The syntax of German*. Cambridge: CUP.

Haider, H. (2013). *Symmetry breaking in syntax*. Cambridge: CUP.

Hawkins, J. (1983). *Word order universals*. New York: Academic Press.

Heine, B. and Reh, M. (1984). *Grammaticalization and reanalysis in African languages*. Hamburg: Helmut Buske.

Holmberg, A. (2017). Introduction. In Sheehan, M., Biberauer, T., Roberts, I., and Holmberg, A., editors, *The Final-Over-Final Condition: A Syntactic Universal*. MIT Press.

Hyman, L. (2011). The Macro-Sudan Belt and Niger-Congo reconstruction. *Language dynamics and change*, 1:3–49.

Hyman, L. M. (1975). On the change from SOV to SVO: Evidence from Niger-Congo. In Li, C. N., editor, *Word order and word order change*, pages 113–147. Austin: University of Texas Press.

Isaac, K. M. (2007). Participant reference in Tunen narrative discourse. *Unpublished M. Phil Thesis. Graduate Institute of Applied Linguistics*.

Kayne, R. S. (1994). *The Antisymmetry of Syntax*. Cambridge, Mass.: MIT Press.

Kerr, E. J. (submitteda). The expression of information structure in Tunen (A44). Chapter accepted pending revisions.

Kerr, E. J. (submittedb). On OV and VO at the Bantu/Bantoid borderlands. Paper accepted pending revisions.

Kerr, E. J., Asiimwe, A., Kanampiu, P., Nshemezimana, E., Li, Z., and van der Wal, J. (to appear). Bantu word order between discourse and syntactic relations. *Linguistique et Langues Africaines*, 9.

Koopman, H. J. (1984). *The syntax of verbs: From verb movement rules in the Kru languages to Universal Grammar*. PhD thesis, Tilburg University.

Kouwenberg, S. (1992). From OV to VO linguistic negotiation in the development of Berbice Dutch creole. *Lingua*, 88(3):263–299.

Mous, M. (1997). The position of the object in Tunen. In *Object positions in Benue-Kwa*.

Mous, M. (2003). Nen (A44). *The Bantu Languages*, pages 283–306.

Mous, M. (2005). The innovative character of object-verb word order in Nen (Bantu A44, Cameroon). *Studies in African Comparative Linguistics with Special Focus on Bantu and Mande. Tervuren: MRAC*, pages 411–24.

Mous, M. (2008). Voice in Tunen: The so-called passive prefix *bé*. *Studies in Slavic and General Linguistics*, 33:303–312.

Mous, M. (2014). TAM-full object-verb order in the Mbam languages of Cameroon. *Preverbal Domain (s)*, page 72.

Nikitina, T. (2011). Categorial reanalysis and the origin of the S-O-V-X word order in Mande. *Journal of African Languages and Linguistics (JALL)*, 32:251–273.

Pollock, J.-Y. (1989). Verb movement, universal grammar, and the structure of IP. *Linguistic inquiry*, 20(3):365–424.

Roberts, I. (2019). *Parameter hierarchies and Universal Grammar*. Oxford: Oxford University Press.

Sande, H., Baier, N., and Jenks, P. (2019). The syntactic diversity of SAuxOV in West Africa. In Emily Clem, P. J. and Sande, H., editors, *Theory and description in African Linguistics: Selected papers from the 47th Annual Conference on African Linguistics*, page 667–701. Berlin: Language Science Press.

Sande, H. L. (2017). *Distributing Morphologically Conditioned Phonology: Three Case Studies from Guébie*. PhD thesis, University of California Berkeley.

Schmidt, A. (in prep.). South Sámi in the typology of SAuxOV languages. Unpublished manuscript, University of Potsdam.

Sheehan, M. (2013). Explaining the Final-over-Final Constraint: formal and functional approaches. In Biberauer, T. and Sheehan, M., editors, *Theoretical approaches to disharmonic word orders*, pages 407–44.

Stanley, C. (1997). *Description Morpho-Syntaxique de la langue Tikar (parlée au Cameroun)*. Société Internationale de Linguistique (SIL).

Struik, T. (2022). *Information Structure Triggers for Word Order Variation and Change: the OV/VO alternation in the West-Germanic Languages*. PhD thesis, Radboud Universiteit Nijmegen.

Struik, T. and Van Kemenade, A. (2020). On the givenness of OV word order: a (re) examination of OV/VO variation in Old English. *English Language & Linguistics*, 24(1):1–22.

van der Wal, J. (2009). *Word order and information structure in Makhuwa-Enahara*. PhD thesis, Leiden University.

van der Wal, J. (2015). Bantu syntax. *Oxford handbooks online*.

van der Wal, J. (2022). *A featural typology of Bantu agreement*. Oxford: Oxford University Press.

Williamson, K. (1965). *A grammar of the Kolokuma dialect of Ịjọ*. West African Mongraphs 2. Cambridge: University Press.

Williamson, K. (1986). Niger-Congo: SVO or SOV? *Journal of West African Languages*, 16:5–14.

Wurmbrand, S. (2006). Verb clusters, verb raising, and restructuring.

Zeller, J. (2013). In defence of head movement: evidence from Bantu. In Cheng, L. and Corver, N., editors, *Diagnosing syntax*, pages 87–111. Oxford University Press Oxford.

Glosses and abbreviations

Glosses: á = high-toned *a*; a = low-toned *a*; ᴴ = floating high tone; ᴸ = floating low tone; 1, 2, 3... = Bantu noun class marker; 1s(ɢ), 1ᴘʟ = 1st person singular, plural; 2s(ɢ) = 2nd person singular; ᴀᴘᴘʟ = applicative; ᴀssᴏᴄ = associative (=connective) marker; ᴄᴀᴜs = causative; ᴄᴏᴘ = copula; ᴅᴇꜰ = definite, ᴅᴇᴍ = demonstrative; ᴅɪᴍ = diminutive; ᴅᴜʀ = durative; ᴇᴍᴘʜ = emphatic (pronoun); ᴅᴊ = disjoint verb form; ꜰᴏᴄ = focus marker; ꜰᴜᴛ = future tense; ꜰᴠ = final vowel; ɪɴꜰ = infinitive; Iᴘꜰ0 = imperfective "non-passé"; ʟᴏᴄ = locative; ᴍɪᴅ = middle; ɴᴇɢ = negation; ɴᴏᴍ = nominal; ɴᴍʟᴢ = nominaliser; ᴘᴀss = passive; ᴘsᴛ1 = first-degree past tense (just now); ᴘsᴛ2 = second-degree past tense (hodiernal); ᴘsᴛ3

= third-degree past tense (yesterday); PERF = perfect; PFV = perfective PM = ?; PRES = present tense; Po = postposition; POSS = possessive; PREP = preposition; PRON = pronoun; PROX = proximal; RECIP = reciprocal; RED = reduplicant; REP = repetitive; SM = subject marker; TAM = tense/aspect(/mood) marker. **Abbreviations:** Aux = auxiliary; C = complementiser node (pragmatic domain); Cop = copula; Comp = complement clause; Compl = complement clause; DO = direct object; DP = determiner phrase; EN = English; Gen = genitive; IO = indirect object; IS = information structure; MSB = Macro-Sudan Belt; mvt = syntactic movement; NOM = nominalised; O = object; PP = prepositional phrase; S = subject; T = tense node (inflectional domain); TP = tense phrase (inflectional domain); V = verb; V2 = verb-second, vP = verbal projection above VP and below voice domain, VP = verb phrase; X = obliques

Appendix

Overview of S-Aux-O-V-X word orders

- S-Aux-O-V-X patterns like what we saw for Tunen in (1) are rare, but have been found in different languages in West/Central Africa, with comparable orders in the area and outside Africa:
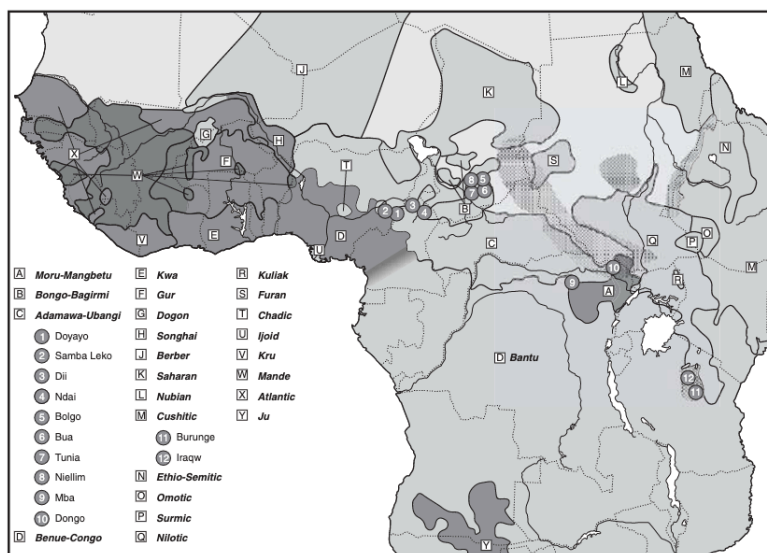

Figure 4: Map of areas in Africa in which (some) S-O-V-X word orders are found (Güldemann 2008:163)

(60) a. **S(-Aux-)O-V-(X) word orders in Africa**
      Mande languages S-Aux-O-V-X (Claudi 1993; Gensler 1994; Creissels 2005; Nikitina 2011); Senufo branch of **Gur** S-Aux-O-V-X/SVO (Gensler 1994); **Kru** languages S-Aux-O-V-X/SVO (Gensler 1994); *Kisi* (**Atlantic** Childs 1988, cited in Gensler 1994); **Benue-Congo** (*Tunen* (Bantu A44, Cameroon) S-Aux-O-V-X; (Dugast 1971; Mous 1997, 2005)) *Nyokon* (Bantu A45, Cameroon) S-Aux-O-V-X/SVO; (Mous 2005); *Ewondo* (Bantu A70, S-Aux-O-V-X for pronoun objects only; Redden 1980, cited in Gensler 1994); *Tikar* (Bantoid, Cameroon) S-Aux-O-V-X/SVO (Stanley 1997); **Eastern Songhay** (*Zarma*, *Gao Songhay*; Creissels 2005; Güldemann 2008); parts of **Adamawa-Ubangi** (Güldemann 2008); **Moru-Mangbetu** (Güldemann 2008); some **Khoisan** (e.g. *!Ora* S-Aux-O-V#) and **southern Cushitic** (Güldemann 2008)

      b. **Other SOV word orders in Africa**
      Ijoid languages in Southern Nigeria S-X-O-V-Aux# (Williamson 1965; Givón 1975); **Dogon** languages in Mali SOV, *Bangime* (**isolate**, Mali) SOV/SVO (Heath & Hantgan 2018); (no longer spoken) *Berbice Dutch* **creole** based on Kalabari (Eastern Ijo) and Dutch OV→VO development (Kouwenberg 1992)

c. **Other comparable word orders outside of Africa**
South Sámi (**Uralic**): S-Aux-O-V# (Schmidt in prep.); **Germanic** (Indo-European) V2 languages with S-Aux-O-V "or so-called verb-projection raising/VPR structures which involves a head-initial TP and a head-final VP": *Swiss German dialects, Dutch dialects, spoken Afrikaans; Middle Dutch, Old High German, Old English, Old Norse* (Sheehan 2013:410); **Kashmiri** (Indo-European) (Gensler and Güldemann 2003); various languages with S-O-V-X word order mentioned in Gensler and Güldemann (2003), to which Potsdam C08 project adds *Cabecár* (**Chibchan**): S-O-V-X (Stavros Skopeteas p.c.)

- There is significant empirical variation in S-Aux-O-V-X word order patterns in West/Central Africa (cf Creissels 2005) and it has been argued that its presence in West Africa has been somewhat overstated (Hyman 2011; Creissels 2018)
- In brief, 3 main types of variation, both in how languages are described and in terms of their properties:

  [i] What counts as Aux? Did it derive from a verb or something else?

  [ii] What counts as O? (single vs multiple, pronominal only or all nominals, locative objects?)

  [iii] Does S-Aux-O-V-X alternate with SVO or is it robust across TAM/IS contexts? In other words, is it robust/core syntax or a marked word order pattern?

(61) mòolu ye <u>kinoo</u> **dii** n na.
people PAST food give me to
'The people gave me food.'   (Mandinka (Mande); Creissels 1983:134, cited in Gensler 1994:3)

(62) a. ń **nìngéé** fíí-mà **í** **má**.
1s cow give-TAM 2s Po
'I will give you a cow.'

b. ń **í** kíí-mà **nìngéé** rá.
1s 2s give-TAM cow Po
'I will give you a cow.'
(Soso (Mande), Creissels 2005)

(63) a-kad <u>mə</u> dzɔ **vɔ́**.
he-do.usually me it give
'He usually gives it to me.'   (Ewondo (Bantu), Redden 1980:167, cited in Gensler 1994:5)

(64) a. mù nə̀ɔ́: **yìl** <u>wóó</u> <u>nìtān</u>
SM.1SG COP take small stone
'I take a small stone.'

b. ù <u>kìfá</u> <u>ús</u> **yíl**
SM.1 stick short take
'He took a short stick.'
(Nyokon (Bantu), Mous 2005:5)

(65) a. à tǎ <u>nye</u> **yìli**.
he IPF0 house sweep
'Il balaie la maison.' ('He is sweeping the house.')   (Tikar (Bantoid); Stanley 1997:103)

b. mùn **kònnd-â** <u>kwìn</u>.
I add-PERF salt
'J'ai ajouté du sel.' ('I have added salt.')
(Tikar (Bantoid); Stanley 1997:139)