Tunen syntax and information structure

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CHAPTER 6

OV word order and derivational disharmony

6.1 Introduction

A well-known property of Tunen syntax is SOV word order (Dugast 1971; Bearth 2003; Mous 1997, 2003, 2005, 2014). More precisely, the word order can be described as S-Aux-O-V-X (where X refers to other elements besides S and O). While this surface order is robust within Tunen, it is a typologically-rare pattern that is found only in some languages of West/Central Africa (Gensler and Güldemann 2003; Creissels 2005; Güldemann 2008). Bantu languages and Niger-Congo languages more generally have a canonical VO profile (Heine 1976; Bearth 2003; Good 2017:476), making Tunen's OV order interesting from a comparative perspective. The presence of OV order is also interesting from a diachronic perspective as a possible instance of VO→OV word order change, which is generally considered rarer than the inverse OV→VO pattern (see e.g Givón 1977:242; Kiparsky 1996:140; Roberts 2021:482).

Previous work on OV word order in Tunen has described it as an information structure (IS)-conditioned variant of an unmarked VO order (e.g. Güldemann 2007, based on data from Mous 1997, 2003, 2005). In this chapter I investigate the influence of IS on the order of the object and verb in more detail by using controlled elicitation and natural speech data (cf. Chapter 3). On the basis of this empirical investigation, I argue that the influence of IS on Tunen word order has been previously overstated, and argue instead for an analysis with S-Aux-O-V-X as the pragmatically-neutral word order that should therefore be considered unmarked.

I then turn to providing the first formal analysis of OV word order in Tunen. By drawing upon comparable analyses for other languages, I present a model that accounts for the disharmonic S-Aux-O-V-X word order as deriving from a harmonic base structure. I therefore argue that disharmony arises during the derivation, as caused by movement operations. While the main focus of this chapter is this empirical and theoretical investigation into Tunen's synchronic syntax, I finish with some reflections on typology and diachrony, situating OV in Tunen within the broader context of word order variation in West/Central Africa and crosslinguistically.

This chapter is structured as follows. In section §6.2 I show how S-Aux-O-V-X word order in Tunen is consistent across TAM and IS contexts, and then show in more detail which material can fall in each of the slots. In section §6.3 I introduce S-Aux-O-V-X as a disharmonic word order, i.e., a case of mixed headedness, and illustrate three formal models of this pattern. Section §6.4 shows how these analyses can be adapted for Tunen, and sections §6.5-§6.6 evaluate the analyses based on different empirical diagnostics. Section §6.7 discusses how the analysis of Tunen fits into a broader structural typology of languages with disharmonic word order and section §6.8 reflects on the likely diachronic origin of Tunen's unusual word order, considering the implications of the formal model proposed for debates within the Africanist literature on the origins of OV in Niger-Congo and mechanisms of word order change more generally. Finally, section §6.9 concludes.

6.2 Empirical investigation

This section will show that OV is the basic word order in Tunen, consistent across TAM contexts (section §6.2.1) and found with a variety of different IS contexts (section §6.2.2). I show more specifically that Tunen has S-Aux-O-V-X basic word order, where the O slot can be filled by multiple objects and both pronominal and DP objects (section §6.2.5). In so doing, I draw comparison with other languages of West/Central African languages that have S-Aux-O-V-X word order patterns.[1]

6.2.1 On consistency across TAM contexts

There are many aspects of variation within languages of West/Central Africa with so-called *S-Aux-O-V-X* word order, meaning that it is better to consider them as different word order patterns. One aspect of variation is the extent to which this order

[1]Note that I am not committing to an analysis whereby Tunen's word order is related to the word order patterns in these languages. We will see in sections §6.7 and §6.8 that there is good reason to think that these word order patterns derive from different structural configurations and have grammaticalised independently.

is dependent on TAM context. In some languages, S-Aux-O-V-X is found robustly across TAM contexts, while in other languages, S-Aux-O-V-X exists in alternation with S-V-O order. This is discussed for West African languages by Creissels (2005):

> "[Unlike Mande,] the constituent order patterns of [Gur/Kru/Atlantic] languages are not uniform. They have in common that the variation [...] is conditioned by TAM or polarity: the use of a constituent pattern other than S-V-O-X is commonly restricted to clause types characterized by the presence of overt predicative markers immediately after the subject [with variation between languages as to which TAM/polarity values trigger an alternative constituent order]."
>
> (Creissels 2005:§4.1)

An example of a TAM-based SVO/S-Aux-O-V alternation is given in the Guébie (Kru) dataset in (275) below, where the future tense has an auxiliary *ji*^{3} and OV order, while the perfective has no overt auxiliary and VO order.[2]

(275) a. e^{4} ji^{3} ɲa^{31} **li^{3}**
1SG.NOM FUT coconuts eat
'I will eat coconuts.' (Guébie (Kru); Sande et al. 2019:668)

b. e^{4} **li^{3}** ɲa^{31}
1SG.NOM eat.PFV coconuts
'I ate coconuts.' (Guébie (Kru); Sande et al. 2019:672)

By contrast, Mande languages have S-(Aux)-O-V(-X) word order consistently across TAM contexts; Creissels (2018:783) describes the Mande type of S-O-V-X order as "rigid and invariable" and Nikitina (2011:251) similarly writes that it is "a typologically unusual rigid S-O-V-X word order pattern". The consistency of S-Aux-O-V-X order across TAM contexts is illustrated for Bambara in (276) below.[3]

[2]Here and throughout this chapter, I indicate the object(s) by underlining and indicate the main verb by bold font. Sources are otherwise unchanged, unless indicated otherwise. Note that the superscript numbers in the Guébie examples indicate tones.

[3]The source does not provide glosses or segmentation; I add a gloss line 'Subject Aux O V-tr' (where 'V-tr' indicates a transitive verb) following Nikitina (2011:261). Note that the 'Aux' component is referred to as a 'predicative marker' (PM) in Creissels (2005), following Mandeist tradition. I will come back to the definition of 'Aux' in section §6.2.4.

(276) a. mùsó ↓bé jégé **sàn.**
Subject Aux O V-tr
'The woman is buying fish.'

b. mùsó ↓té jégé **sàn.**
Subject Aux O V-tr
'The woman is not buying fish.'

c. mùsó ↓yé jégé **sàn.**
Subject Aux O V-tr
'The woman bought/has bought fish.'

d. mùsó ↓má jégé **sàn.**
Subject Aux O V-tr
'The woman did not buy fish.'

e. mùsó ↓bénà∼↓ná jégé **sàn.**
Subject Aux O V-tr
'The woman will buy fish.'

f. mùsó ↓ténà jégé **sàn.**
Subject Aux O V-tr
'The woman will not buy fish.'

g. mùsó ↓ká jégé **sàn.**
Subject Aux O V-tr
'The woman should buy fish.'

h. mùsó kàná jégé **sàn**
Subject Aux O V-tr
'The woman should not buy fish.'

(Bambara (Mande); Creissels 2005:§1.3)

Turning now to Tunen, we see that the basic pattern matches the Mande pattern rather than the West African languages with a TAM-conditioned word order alternation, in that S-Aux-O-V-X word order in Tunen is robust across TAM contexts, as previously shown in Mous (1997, 2005) and exemplified in (277) below.[4]

[4]Glosses are adapted for consistency, tones added to transcription line, and a translation line is added.

(277) a. bá-ŋɔ bɛ-kana **tála** ɔ yɔkɔ.
SM.2-FUT 8-basket put PREP 7.chair
'They will put baskets on the chair.'

b. bá-ná bɛ-kana **tála** ɔ yɔkɔ.
SM.2-PST2 8-basket put PREP 7.chair
'They put baskets on the chair.'

c. bá-ka bɛ-kana **tála** ɔ yɔkɔ.
SM.2-PST3 8-basket put PREP 7.chair
'They put baskets on the chair.'

d. abáka mɛ bɛ-kana **tál** ɔ yɔkɔ.
SM.1.be.DUR SM.1SG 8-basket put PREP 7.chair
'I (habitually) put baskets on the chair.'

Tunen (Mous 1997:125, adapted)

These examples show S-Aux-O-V-X word order in affirmative matrix clauses in Tunen. Note that this word order is found equally in negative clauses, as shown previously by Mous (1997) (278) and confirmed in my field data (279)-(280).

(278) a. bá-lɛ́-ndɔ bɛ-kana **tál** ɔ yɔkɔ.
SM.2-NEG-PRS 8-basket put PREP 7.chair
'They do not put baskets on the chair.'

b. bá-sa bɛ-kana **tál** ɔ yɔkɔ.
SM.2-NEG.PST 8-basket put PREP 7.chair
'They did not put baskets on the chair.'

c. bá-soŋo bɛ-kana **tál** ɔ yɔkɔ.
SM.2-NEG.FUT 8-basket put PREP 7.chair
'They will not put baskets on the chair.'

Tunen (Mous 1997:125, adapted)

(279) mɛ lɛ aŋɔ́á **nimb**.
/mɛ **lɛ** aŋɔ́á nimbə/
SM.1SG **NEG** PRN.EMPH.2SG deceive
'Je ne te trompe pas.'
'I'm not lying to you.' [PM 1038]

(280) a sá bɔla **ɔ́k**
/a sá bɔ-la ɔ́kɔ/
SM.1 NEG 14-thing understand
'Il n'a rien compris.'
'He hasn't understood anything.' [EO 1484]

While some languages such as certain Germanic varieties have OV order only in embedded clause environments (to be seen in section §6.3), S-Aux-O-V-X word order is found for Tunen in both main clause and embedded clauses (281)-(282), with VO order in the embedded clause ungrammatical (282b).

(281) mé ndɔ **manya** ɔwá Matéŋɛ a ka hiəfulə **fanak**.
/mɛ ᴴndɔ **manya** ɔwá Matéŋɛ a ka hɛ-əfulə **fana-aka**/
SM.1SG PRS 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]

(282) a. Malíá a ná láá ásɛa Jɔhánɛs(ɛ) á ndɔ bilíbílíbí **nyɔ** ɔ wayɛ́á ɔ́mbɛ́l.
/Malíá a ná láá a-sɛ́á Jɔhánɛsɛ a ᴴndɔ
1.Maria SM.1 PST2 say SM.1-say 1.Johannes SM.1 PRS
bɛ-líbílíbí **nyɔ** ɔ wayɛ́á ɔ-mbɛ́la/
8-chilli.pepper cultivate PREP PRN.POSS.1.3 3-house
'Maria a dit que Johannes cultive des pilipilis chez lui.'
Maria said that John grows chillies at home.' [JO 2450]

b. *Malíá a ná láá ásɛa Jɔhánɛs á ndɔ **nyɔ** bilíbílíbí.
/Malíá a ná láá a-sɛ́á Jɔhánɛsɛ a ᴴndɔ **nyɔ**
1.Maria SM.1 PST2 say SM.1-say 1.Johannes SM.1 PRS cultivate
bɛ-líbílíbí/
8-chilli.pepper
Intd.: 'Maria a dit que Johannes cultive des pilipilis.'
Intd.: 'Maria said that John grows chillies.' [JO 2451]

Finally, examples (283) show that S-Aux-O-V(-X) word order is found in irrealis as well as realis clauses, showing its robustness across clause types in Tunen.

(283) a. bá bɛ-kana **tálaka** ɔ yɔkɔ
SM.2.SBJV 8-basket put.DUR PREP 7.chair
'May they put baskets on the chair.' Tunen (Mous 1997:125, adapted)

b. bá mɛkɔndɔ́ **sanak**.
/bá mɛ-kɔndɔ́ sána-aka/
SM.2.SBJV 4-pistachio break-DUR
'Qu'elles cassent les pistaches.'
'May they break the pistachios.' [EE 1709]

c. ábá bá sɔ́ ŋɔ bəsú **lúkə**, bá tuə́n.
/ábá bá sɔ́ ŋɔ bəsú lúkə bá tuə́nə/
if SM.2.SBJV NEG FUT PRN.EMPH.1PL feed SM.2 stay
'Si elles ne vont pas nous nourrir, qu'elles restent.'
'If they don't feed us, then that's on them/so be it.' [EE 1701]

Interestingly, Tunen's direct neighbour Nyokon (Bantu A45, Cameroon) and near neighbour Tikar (Bantoid, Cameroon) (cf. Chapter 2 Fig. 2.5) have a TAM-dependent S-Aux-O-V-X/S-V-O alternation. This difference in TAM dependency was shown in previous work by Mous (1997, 2005), as in the difference between (277) and (284a) below, with further discussion in Mous (2022) and Kerr (to appear).

(284) a. mù nəə́: **yìl** wóó nìtān
SM.1SG COP take small stone
'I take a small stone.'

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

As I note in Kerr (2024:320-322), the Cameroonian Bantoid language Tikar, spoken 50-150km to the Northeast of Tunen and Nyokon, has a similar syntactic profile to Nyokon, also showing a TAM-dependent S-Aux-O-V-X/S-V-O alternation.

(285) a. à tă nye **yìli**.
he IPFO house sweep
'Il balaie la maison.' ('He is sweeping the house.')

b. mùn **kònnd-â** kwìn.
I add-PERF salt
'J'ai ajouté du sel.' ('I have added salt.')
(Tikar (Bantoid); Stanley 1997:103, 139, adapted)

We therefore see that Tunen is unusual for a Benue-Congo language in having S-Aux-O-V-X robustly across all TAM contexts. In this sense, Tunen patterns with Mande languages of West Africa, which have S-Aux-O-V-X across all TAM contexts. However, that is not to say Tunen syntax is identical to that of Mande languages, as there are various other syntactic properties important to distinguish between the two types (Creissels 2005; Nikitina 2011). I will return to the relationship between Tunen and other African languages with OV word order in sections §6.7-§6.8.

Having seen that S-Aux-O-V-X is consistent across TAM contexts and clause types, we can turn now to investigate the potential effect of IS on OV vs VO order.

6.2.2 On consistency across IS contexts

OV word order in Benue-Congo languages has been observed for a subset of objects that fulfil an information-structural property such as being given or extrafocal (Güldemann 2007). For example, the Cameroonian Bantu language Ewondo synchronically has an alternation between pronominal objects being preverbal (OV) while full DP objects are postverbal (VO) (286), as also found in the neighbouring variety Eton (287). As pronominal objects are typically used for given referents (cf. Chapter 2 section §2.2), this alternation can be treated as driven by IS.

(286) a-kad mə dzɔ **vɔ́**.
he-do.usually me it give
'He usually gives it to me.'
(Ewondo (Bantu); Redden 1980 via Gensler 1994:6)

(287) a. **àvé** mâ múŋá í↓págâ.
|à-H-vé-H mà N-úŋá ì-págà|
I-PST-give-NF 1SG.NPRR 1-child 7-present
'He gave my child a present.'

b. mèèy ɲí dɔ̂ **vé**
|mə-è:j ɲí dɔ̋ **L-vɛ́**|
1SG-FUT I.PPR V.PPR INF-give
'I will give it to him.' (Eton (Bantu); Van de Velde 2008:300, 302)

While no full account of the interaction between syntax and IS exists for a Mbam language, in Wilkendorf's (2001) unpublished work on the Nomaándé language (a Western Mbam language bordering Tunen to the South-East; Guthrie no. A46), there is similarly a phenomenon where full noun phrase objects are postverbal while pronominal objects are preverbal, as in (288a) vs. (288b)-(288c).[5]

(288) a. Ɛ ŋa mɛ́ **mua** me-nyífé.
SM.1SG PRS PRN.1SG drink 6a-water
'I drink water.'

b. U ŋeé wuúci **súbé-ke**.
SM.1 PST3 PRN.1 hit-DUR
'He hit him.'

c. U ŋe mí wuúci **tóŋie**.
SM.1 PST3 PRN.1SG PRN.1 show
'He showed it to me.' (Nomaándé (Bantu); Wilkendorf 2001:8-9)

In Aghem, a Southern Bantoid language of Cameroon, both OV and VO orders are possible for full noun phrase objects due to the immediate-after verb (IAV) position being a focus position in the language (Hyman 2003a; Watters 1979; Chapter 2 section §2.4.2). In this case, OV order is used when the object is given and focus is on a different constituent, while VO is used in order to focus the object. The OV/VO difference is therefore also considered to be driven by information structure.

(289) a. fíl á mɔ̀ á'zɔ́ɔ **zí** kí-bɛ́.
friends 3P PST yesterday eat CL-fufu
'The friends ate FUFU (not yams) yesterday.'

b. fíl á mɔ̀ bɛ́-'kí **zí** á'zɔ́ɔ.
friends 3P PST fufu-CL eat yesterday
'The friends ate fufu YESTERDAY (not two days ago).'

c. fíl á máà bɛ́-'kí á'zɔ́ɔ **zí**.
friends 3P PST.PF fufu-CL yesterday eat
'The friends DID TOO eat fufu yesterday.'
(Aghem (Bantoid); Watters 1979:148-50, Güldemann 2007:94)

[5] I have adapted the glosses for the subject marker, tense marker, and pronouns for consistency with the conventions used for other Bantu languages in this chapter.

Tunen has previously been argued to have a comparable IS-conditioned alternation between OV and VO order, where VO is considered to be the unmarked pattern and OV a marked strategy for extrafocal objects (Güldemann 2007, based on Mous 1997, 2003, 2005). However, Güldemann notes that the IS-determination is less clear in Tunen than for other Benue-Congo languages such as Aghem (Güldemann 2007:96, 98). Furthermore, while work by Mous (1997, 2014) covers the position of the object in some detail, most examples available are provided without discourse context, making it hard to fully evaluate the possible effect of IS on Tunen. In this subsection I therefore test the extent to which such an IS-driven account applies synchronically to Tunen using new field data, starting by testing the discourse contexts compatible with OV word order.

If OV order is pragmatically-neutral, it should be compatible with a variety of IS contexts. If OV order is conditioned by an IS factor e.g. extrafocality, on the other hand, it should be restricted to those IS contexts. I therefore tested for OV versus VO order in a variety of IS contexts, following the BaSIS methodology (as discussed in Chapter 3). As seen in Chapter 5, the results can be summarised as showing that OV order is compatible with a variety of IS contexts and therefore should be considered pragmatically-neutral. For example, the Tunen example in (290) below shows SOV for term focus on the direct object (with the recipient object preceding the theme object), while the next examples show SOV in an out-of-the-blue discourse context, where there is no focus on the object (291)-(292), and SOV with VP focus (293).

(290) Context: 'What did the woman give to the other woman?'
a nɔ́ ɔsɔ́kɔ́ hɛtété **indi**.
/a nɔ́ ɔsɔ́kɔ́ hɛ-tété **índíə́**/
SM.1 PST1 1.other 19-gourd give
'Elle a donné [une gourde]$_{FOC}$ à l'autre.'
'She gave [a gourd]$_{FOC}$ to the other.' [PM 1541]

(291) Context: You enter the room and see a broken window. Someone announces...
Biə́lɛ a ná itúbə́ **san**.
/Biə́lɛ a ná ɛ-túbə́ **sána**/
1.Pierre SM.1 PST2 7-window break
'Pierre a cassé la fenêtre.'
'Pierre broke the window.' [EE+EB 1669]

(292) Context: You are at the riverside outside the village and see an elephant, which very rarely occurs, so run to tell the others.
mɛ nɔ́ misəku **siəkin** !
/mɛ nɔ́ misəku **siəkinə**/
SM.1SG PST1 3.elephant see.DUR
'Je viens de voir un éléphant !'
'I just saw an elephant!' [PM 316]

(293) Context 1: What did Maria do? (VP focus)
Context 2: What did Maria apply? (term focus on object)
Malíá a ná biləliə **fɔfɔ́kiə.**
/Malíá a ná bɛ-ləliə **fɔfɔ́kíə**/
1.Maria SM.1 PST2 8-varnish anoint.DUR
'Maria a [oint le vernis]$_{FOC}$.', 'Maria a oint [le vernis]$_{FOC}$.'
'Maria [applied the varnish]$_{FOC}$.', 'Maria applied [the varnish]$_{FOC}$.' [JO 2518]

We therefore see that OV in Tunen is found across multiple different discourse contexts, including both focal and extrafocal contexts, suggesting that it is in fact a pragmatically-neutral word order.

An additional test for effect of givenness on word order is whether pronominal objects pattern differently to lexical DP objects, as seen for Ewondo, Eton, and Nomaándé in (286), (287) and (288) above. In Tunen, we see that pronominal objects behave like full noun phrases, i.e., are canonically in a preverbal position (**O**V). This is exemplified in (294), where the class 1 pronoun *wéɛya* 'her' appears before the verb, just as the lexical DP objects did in the previous examples. Example (295) shows the use of OV order with personal pronouns in natural speech, and (296) illustrates OV word order for pronominal objects from the object pronoun series (Chapter 4 section §4.3.8).

(294) mɔndɔ ɔwá mɔ́ná á ndɔ naa a nɔ́ wɛ́ɛya **ákánana** ɔ ndɔ́kɛt.
/mɔ-ndɔ ɔwá mɔ-ná a ^{H}ndɔ náá a nɔ́ wɛ́ɛya **ákánana**
1-person REL.1 1-child SM.1 PRS be_sick SM.1 PST1 PRN.1 leave.APPL
ɔ ndɔ́kɛta/
PREP 7.doctor
'L'homme dont la fille est malade l'amène à la clinique.'
'The man whose child is sick took her to the clinic.' [PM 2179]

(295) Context: "Afterwards, when I arrived at the town square, they were dancing the *ɛŋganda*, dancing the *ɛŋganda*, dancing the *ɛŋganda*,"
á↓há mɛ́nɔ́ aŋɔ́á **yama**, mbaá ósɛ ámɛ́á á ɛlísa wə̀ən, mɛ́ ↓ká ámɛ weéya **hólí**.

á[L]há	mɛ́	nɔ́	aŋɔ́á	**yama**	mbaá	ɔ-sɛ́á	ámɛ	á
thus	SM.1SG.DEP	PST2	PRN.2SG	notice	thus	SM.2SG-say	PRN.1SG	COP
ɛlísa	wə̀ni	mɛ́	ka	ámɛ	wɛ́ɛya	**hólíá**/		
1.Elisabeth	DEM.DIST.1	SM.1SG.SBJV	PST3	PRN.1SG	PRN.1	greet		

'C'est ainsi que je t'ai aperçu, ainsi tu m'as dit «voilà Elisabeth, va la saluer».'
'And so I noticed you, and so you said to me "Elisabeth is over there, go and greet her".' [EO 1008]

(296) Context: "As for small mangoes, the small ones we get here in Cameroon,"
ɛbáka ɔ maáta **hikəkiə**?

/ɛ-bá-aka	ɔ	maáta	**hikəkiə**/	
SM.7-be-DUR	SM.2SG	PRN.OBJ.6	like	

'tu les aimes ?'
'do you like them?' [PM 950]

From this, we see that OV word order is available both for focal and non-focal objects, and both for pronominal and non-pronominal objects, meaning that S-Aux-O-V-X should be considered the pragmatically-neutral word order in Tunen.

An alternative analysis along the lines of what is proposed by Güldemann (2007) is that VO is the unmarked order in Tunen and OV is marked. While in other languages such as Aghem the preverbal object position can be captured in terms of being extrafocal, to extend this analysis to Tunen, one is forced to group information focus together with given objects. While it could be argued that OV is marked as 'non-contrastive', such a term is conceptually problematic in that it refers to a diverse class of objects and relates to the absence of a feature rather than membership of a natural class. I therefore consider it more accurate to consider OV to be unmarked and derive any deviations through the unified IS feature of 'contrast'. Note here the discussion from Chapter 5 of how such an analysis may account for contrastively-focussed VO patterns described in Mous (1997, 2005), which we saw are infrequent in Tunen, with contrastive term focus on the object more generally expressed through a biclausal reverse pseudocleft.

In the following sections I discuss in more detail the Tunen-specific nature of the S-Aux-O-V-X template, given that it is known that there is syntactic variation

within languages that have S-Aux-O-V-X word order on the surface (Creissels 2005, 2018; Sande et al. 2019, a.o.). I first show that the S slot is properly considered the position for subjects, rather than just the position for topics. While the nature of the verb (V) slot is uncontroversial as the main finite verb of the clause, other languages with Aux-O-V(-X) order have been shown to vary in the nature of the Aux, O, and X components. I therefore discuss each of these slots in turn.

6.2.3 On the nature of the S slot

Given that there is an intrinsic relationship between subjecthood and topicality (see e.g. Chafe 1976; Li and Thompson 1976; cf. Chapter 2 section §2.2), it is worth considering whether the *S* slot of S-Aux-O-V-X is best characterised in terms of the grammatical role relation of *subject* or in terms of the discourse role relation of *topic* (which would then recast the word order as Top-Aux-O-V-X). This can be done by investigating word order in environments where the subject is non-topical, as found by testing thetics and quantified subjects (Van der Wal 2021).

The thetic test considers whether the S slot can be filled in thetic constructions. As thetics differ from categorial sentences in having no topic-comment split (Sasse 1987, 1996; Chapter 2 section §2.2), a subject in a thetic sentence is necessarily non-topical. In Tunen, the S slot can be filled in thetics (297),[6] thus providing evidence that this slot is compatible with non-topical subjects.

(297) a. Context: Out-of-the-blue (thetic)
nguə́yilə yɛ́ ná mubúmə́bumə kumun.
/**nguə́yilə** yɛ́ ná mɔ-búmə́bumə kumunə/
9.lion SM.9 PST2 1-hunter attack
'Un lion a attaqué un chasseur.'
'A lion attacked a hunter.' [PM 1753]

b. Context: You walk into a room and see a broken window. Someone announces:
Biə́lɛ a ná itúbə́ san.
/**Biə́lɛ** a ná ɛ-túbə́ sána/
1.Pierre SM.1 PST2 7-window break
'Pierre a cassé la fenêtre.'
'Pierre broke the window.' [EE+EB 1669]

[6] As the focus in these subsections are slots other than O and V, for these subsections I use boldface to indicate the slot of interest.

The quantified subject test relies on the fact that certain phrases cannot be topicalised, such as 'someone' or quantificational phrases like 'each person'. In Tunen, these phrases can appear in the S slot (298), (299), showing again that this slot is not restricted to topics.

(298) Context: You are inside the house and hear a knock outside (but don't see who is there).
mɔndɔ a lɛ́ u niki.
/**mɔ-ndɔ** a lɛ́á ɔ nɛ-kí/
1-person SM.1 be PREP 5-door
'Quelqu'un est à la porte.'
'Somebody is at the door.' [EO 404]

(299) a. **bɔlɛ́á tíá** bɔ́ báka na hinoní (hímoti).
/**bɔ-lɛ́á tíá** bɔ́ bá-aka na hɛ-noní (hɛ́-mɔtɛ́)/
14-tree each SM.14 be-DUR with 19-bird (19-one)
'Chaque arbre a un oiseau.' (∀ > ∃)
'Each tree has one bird.' (∀ > ∃) [JO 1288]

b. **baná bɔ́kim** bá ná masɔ́ma kiak !
/**ba-ná bá-kimə** bá ná ma-sɔ́ma kɛa-aka/
2-child 2-all SM.2 PST2 6-homework do-DUR
'Tous les enfants ont fait leurs devoirs !'
'All the children did their homework!' [EE+EB 1816]

This evidence therefore shows that the S slot of the Tunen S-Aux-O-V-X template should be defined in terms of subjecthood rather than in terms of topicality.

6.2.4 On the nature of the Aux slot

One possible point of confusion and problem of comparison between languages described as having S-Aux-O-V-X word order patterns is that there is variation in the literature as to the definitional criteria used for the *Aux* slot within this S-Aux-O-V-X template.

A narrow definition of an auxiliary requires it to have verbal origin. We will see in section §6.8 that in many languages it is unclear whether auxiliaries derived from verbal sources; for some Mande languages it is in fact clear that the auxiliary component (termed 'predication marker' in Mande linguistics) is derived from a *non*-verbal source (see e.g. Creissels 2005; Kastenholz 2003).

In Tunen, the origin of the tense markers that appear in the Aux slot is unclear. I note in Kerr (2024) that verbs considered to be common sources for the grammaticalisation of TAM forms crosslinguistically show no clear relationship to Tunen's tense-marking system. In other words, I did not find evidence to support a V→Aux grammaticalisation pattern in Tunen (section §6.8). Nurse (2008) similarly reports uncertainty in the origin of TAM forms of zone A Bantu languages, showing that more research is needed on the diachrony of Tunen's TAM forms in order to determine a verbal origin. For our current purposes, because it cannot be shown that Tunen tense markers originate from verbs, the definition of 'Aux' must be agnostic with respect to verbal origin. I therefore adopt such a permissive definition, while maintaining the use of 'Aux' in S-Aux-O-V-X so as to be consistent with the general term used in the literature. However, if one adopts the definition of auxiliary to require verbal origin, then the formulation of the template would more properly be S-TAM-O-V-X, where TAM indicates a tense/aspect complex. Note however that subject marking, negation and directional affixes also form part of the Tunen TAM complex, as shown in (300)-(301), so the most accurate template would be S-SM(-NEG)-TAM(-AND/VEN)-O-V-X. I use 'Aux' as a shorthand for this SM-NEG-TAM-AND/VEN cluster.[7]

(300) « muití émbɔ́ma **á ndɔ nda** hulək. »
/mɔ-ití ^{H}=ɛ-mbɔ́ma a **^{H}ndɔ nda** húlə́-aka/
1-owner ASSOC=7-field SM.1 PRS VEN
'« Le propriétaire du champ va venir. »'
'"The owner of the field is coming."' [JO 1755]

(301) **mɛ lɛ́ ndɔ** tunəni ɔ́kɔ.
/mɛ lɛ ^{H}ndɔ tu-nəni ɔ́kɔ/
SM.1SG NEG PRS 13-Nen understand
'Je ne comprends pas la langue tunen.'
'I don't understand Tunen.' [JO 804]

Given that a non-verbal definition of auxiliary is adopted here, we may ask what true auxiliary verbs look like in Tunen. Here, we see an S-TAM-Aux-O-V-X pattern, whereby the auxiliary can be analysed as verbal (S-TAM-V-(O-)V-X), as with *tíkə́*

[7] Note here the discussion in Chapter 4 regarding the use of the Tunen community orthography convention of separating elements of the TAM cluster by whitespace, without analysing these as functioning in the grammar as separate words, i.e., as a commitment to a higher degree of morphosyntactic analyticity.

'stay' (Dugast 1971); (302). In complex tenses with the *-báka* habitual, there is a second subject marker on the main verb (303), showing that both the auxiliary verb *-báka* and the main verb are verbal.

(302) tɔ ná **tíkə́** sáá.
/tɔ ná **tíkə́** sáá/
SM.1PL PST2 stay come
'Nous arriverons.'
'We will follow.' [PM 1058]

(303) **mɛ báka mɛ ákaka** ɔ nioní yiilə té.
/**mɛ** **bá-aka** **mɛ** **ákaka** ɔ nɛ-oní yiilə téá/
SM.1SG be-DUR SM.1SG leave PREP 5-market Wednesday every
'Je vais au marché chaque mercredi.'
'I go to the market every Wednesday.' [PM 192]

As these auxiliaries behave syntactically as verbs, I do not cover them further in this chapter (cf. Chapter 4 section §4.4.4).

6.2.5 On the nature of the O slot

An important aspect of variation between languages described as having S-Aux-O-V-X constituent order is the definitional criteria for the *O* slot, which has been shown in the literature on African languages to vary in the four dimensions given in (304) below.

(304) **Dimensions of variation in the O slot in languages of West/Central Africa**

i. Number of O: single preverbal O or multiple allowed
ii. Syntactic type of O: pronominal only or also lexical NP
iii. IS of O: extrafocal, focal, contrastive
iv. Thematic type of O: theme, recipient/beneficiary, locative object

In addition to these four dimensions of variation, work on object placement crosslinguistically discusses three additional dimensions of variation, as in (305).

(305) **Other dimensions of variation in the O slot cross-linguistically**

v. the definiteness of the object

vi. the heaviness of the object

vii. the status of the object as (un-)incorporated

I therefore turn to these after discussing the first four dimensions, which are most relevant for the languages of West/Central Africa.

Previous work by Gensler and Güldemann (2003) takes the canonical S-Aux-O-V-X word order pattern as containing a single object in the O slot. Such a classification has been taken over in broader crosslinguistic work on Aux-O-V, where a syntactic typology of Aux-O-V word orders is presented in which a type "African SAuxOVX" or "real SAuxOVX" is taken as having a *single* preverbal object. However, languages like Tunen allow for *multiple* preverbal objects, meaning that Aux-O-V in African languages should not be considered to be restricted to single objects (or, alternatively, that there exists multiple types of Aux-O-V languages in Africa).

Looking at variation in the number of objects permitted in the O slot, we can start by observing that in some Senufo/Gur languages, the theme object is preverbal and the goal object is postverbal, marked by an adposition (Givón 1975; Claudi 1993; Gensler 1994), a pattern also found in the Mande language Mandinka (306).

(306) a. u a kù **kàn** mìì-á.
s/he PERF it give me-to
'S/he gave it to me.'
(Supyire (Gur), Carlson 1991:217, cited in Gensler 1994:6)

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

According to Creissels (2005), other Mande languages have a strict requirement of having a single preverbal object, but vary in the thematic role that that object can have. He writes that languages such as Soso never have more than one nominal between S and V, but this preverbal object can either be theme or the goal, with any other object appearing postverbally and obligatorily marked as oblique (as shown by the postpositions in (307)).

(307) a. ń nìngéé **fíí-mà** í má.
1SG cow give-TAM 2SG PO
'I will give you a cow.'

b. ń í **kíí-mà** nìngéé rá.
1SG 2SG give-TAM cow PO
'I will give you a cow.' (Soso (Mande), Creissels 2005:ex5, adapted)

While these languages with a single preverbal object in the O slot support the presentation of 'African' S-Aux-O-V-X of Gensler and Güldemann (2003) as having a single preverbal object, other languages in the literature are reported to allow multiple (non-oblique) preverbal objects. In these cases, the order is always Goal-Theme (never Theme-Goal) (Gensler 1994). This availability of multiple preverbal objects is illustrated below for Ewondo (Bantu (Benue-Congo); Redden 1980), Wobé (Kru; Marchese 1986, cited in Gensler 1994), Kisi (Atlantic; Gensler 1994), and Attie (Kwa; Kouadio 1996); (308).

(308) a. a-kad mə dzɔ **və́**.
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 **dóónɔ̆ng**
he FUT him message pour.forth
'He will relate the message to him.'
(Kisi (Atlantic), Childs 1988:139, cited in Gensler 1994:5)

d. mɛ̰̄ jī-ī jàpí ʃìkā **dzé** jábò lə̄.
1S father-PM Yapi money give market there
'My father is giving money to Yapi at the market.'
(Attie (Kwa); Kouadio 1996, Creissels 2005:§4.3)

Tunen similarly allows multiple preverbal objects as one of the means of forming a ditransitive (see Chapter 4 section §4.5.2; Chapter 5 section §5.2.6).[8] The order

[8]The second form of a ditransitive is to have the recipient/beneficiary object in postverbal posi-

of objects follows the strict Goal-Theme order found in other languages, and is not affected by IS (being focal/non-focal), as shown in the following dataset and also discussed in Chapter 5 (cf. Kerr to appear).

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

a. a nɔ́ ɔsɔ́kɔ́ hɛtétɛ́ **indi**.
/a nɔ́ **ɔsɔ́kɔ́ hɛ-tétɛ́** índíə́/
SM.1 PST1 1.other 19-gourd give
'Elle donne une gourde à [l'autre]$_{FOC}$.'
'She gives a gourd to [the other (woman)]$_{FOC}$.'

b. *a nɔ́ hɛtétɛ́ ɔsɔ́kɔ́ **indi**.
/a nɔ́ **hɛ-tétɛ́ ɔsɔ́kɔ́** índíə́/
SM.1 PST1 19-gourd 1.other give
Intd.: 'Elle donne une gourde à [l'autre]$_{FOC}$.'
Intd.: 'She gives a gourd to [the other (woman)]$_{FOC}$.'
(Tunen (Bantu) [PM 1541, 1542])

(311) Context: 'What is the woman returning to the child?'
muəndú á ndɔ mɔná imítə́ **túmbi**.
/mɔ-əndú a ^{H}ndɔ **mɔ-ná ɛ-mítə́** túmbiə/
1-woman SM.1 PRS 1-child 9-calabash return
'La femme remet [la calebasse]$_{FOC}$ à l'enfant.'
The woman returns [the calabash]$_{FOC}$ to the child.'
(Tunen (Bantu); [JO 1587])

This S-Aux-O$_{Goal}$-O$_{Theme}$-V-X order applies equally in negative contexts, as in (312) below.

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tion, in which case it must be obliquely marked (309), thus fitting the canonical S-Aux-O-V-X word order pattern. The availability of these two options matches the crosslinguistically common ditransitive alternation (Malchukov et al. 2010).

(309) Context: "Who is the woman returning the calebasse to?"
muəndú á ndɔ imítə́ **túmbiə** ɔ mɔn.
/mɔ-əndú a ^{H}ndɔ ɛ-mítə́ túmbiə **ɔ mɔ-ná**/
1-woman SM.1 PRS 9-calabash return PREP 1-child
'La femme remet la calebasse [à l'enfant]$_{FOC}$.'
'The woman returns the calabash [to the child]$_{FOC}$.' ([JO 1586]; Kerr to appear)

(312) mé sá mɔ́ná bɔ́la **indi.**
/mɛ sá mɔ-ná bɔ-la índíə́/
SM.1SG NEG 1-child 14-thing give
'Je n'ai rien donné à l'enfant.'
'I haven't given the child anything.' [EO 1485]

We therefore see that Tunen differs from some West African languages in that it allows multiple preverbal objects in the O slot of the S-Aux-O-V-X template.

Note that locative objects by contrast are always obliquely marked and postverbal.[9] This differs from languages such as Attie which also allow locative objects to occupy the preverbal O slot.

(313) a. mɛ̰ jī-ī jàpí ʃìkā **dzé** jábò lə̄
1SG father-PM Yapi money give market there
'My father is giving money to Yapi at the market.'

b. jàpí-ī kpɔ̄ɛ̂ pjà nɑ̰̄
Yapi-PM forest.DEF in walk
'Yapi is walking in the forest
(Attie (Kwa); Kouadio 1996; Creissels 2005:§4.3, adapted)

Adding this to what we have seen in the previous subsections, we can summarise that the O slot in Tunen can contain lexical noun phrases and pronominal objects, focal and non-focal objects, and theme and goal objects, but cannot contain locative objects.

We can turn now to the other factors said to influence object placement crosslinguistically, namely (v) the definiteness of the object, (vi) its heaviness, and (vii) its status as incorporated or unincorporated with the verb (305). Starting with definiteness, we can differentiate the nature of the objects along the definiteness hierarchy in (314), which may correlate with differences in linguistic expression, as shown for example in differential positioning of definite and indefinite objects (see e.g. Diesing 1992; Enç 1991).

(314) **Definiteness hierarchy:**
Personal pronoun > Proper name > Definite NP > Indefinite specific NP > Non-specific NP (Aissen 2003:437)

[9] A small number of inherently-licensed (i.e., not overtly obliquely-marked) locative objects are also found postverbally in Tunen (Mous 2003; Kerr to appear; cf. Appendix Text 2 fn15).

As we saw in Chapter 4 section §4.3.11 and as is standard for a Bantu language, Tunen has no obligatory marking of definiteness or specificity, with unmodified nouns compatible with both definite and indefinite interpretations, dependent on discourse context (see also Kerr 2020). This applies to preverbal objects, which means that objects in the O slot can be interpreted as definite or indefinite (315).

(315) mɛ́ ndɔ mɔ́ndɔ **si**.
/mɛ ᴴndɔ mɔ-ndɔ siə/
SM.1SG PRS 1-person search
'Je cherche {quelqu'un/une personne/la personne}.'
'I'm looking for {someone/a person/the person}.'
[JO 898]; (Kerr 2020:246)

While bare nouns are thus ambiguous in terms of definiteness in Tunen, we can also test the definiteness of the object by overtly marked definites and overtly marked indefinites. Firstly, examples (316) and (317) show that the preverbal object can be definite. Example (316) shows that a discourse-linked (D-linked) object, visibly definite due to the possessive pronoun *wáyíə́* 'his', must be preverbal and cannot be postverbal, while examples (317a)-(317b) show that proper nouns and pronouns (both taken to be inherently definite and thus at the top of the definiteness hierarchy; Aissen 2003; Abbott 2006) are also preverbal.

(316) Context: 'What happened?'

a. yəmisə́ a ka wə́yíə́ mɔtɔ́á **lú**.
/yamíá-isə́ a ka wə́yíə́ mɔ-tɔ́á **lúə**/
PRN.POSS.1SG.9-9.father SM.1 PST3 PRN.POSS.1.3 3-car sell
'Mon père a vendu sa voiture.'
'My father sold his car.' [JO 2445]

b. *yəmisə́ a ka **lúə** wə́yíə́ mɔtɔ́á.
/yamíá-isə́ a ka **lúə** wə́yíə́ mɔ-tɔ́á/
PRN.POSS.1SG.9-9.father SM.1 PST3 sell PRN.POSS.1.3 3-car
Intd.: 'Mon père a vendu sa voiture.'
Intd.: 'My father sold his car.' [JO 2446]

(317) a. mɛ́ ndɔ Biə́lə **sin** isiŋak.
/mɛ ndɔ Biɛlɛ **sinə** isiŋaka/
SM.1SG PRS 1.Pierre see now
'Je vois Pierre maintenant.'
'I see Pierre now.' [EO 1412]

b. Context: You are telling a story about a man called Emmanuel.
mɔndɔ a ná wɛ́ɛya **tanák**.
/mɔ-ndɔ a ná wɛ́ɛya **taná-aka**/
1-person SM.1 PST2 PRN.1 wound-DUR
'L'homme/Quelqu'un l'a blessé.'
'The man/Somebody injured him.' [EB+JO 2682]

Turning now to overt marking of indefinites, example (318) shows that objects marked by the specific indefinite determiner *-mɔtɛ́* (for which see Chapter 4 section §4.3.11 and Kerr 2020) are preverbal. Examples (319) further show that indefinites under negation are also preverbal. We therefore see that the preverbal object position is compatible with indefiniteness.

(318) Context: You are looking for your friend Daniel.
mɛ́ ndɔ wɔmɔtɛ́ mɔ́ndɔ **si**. neayá nínyə á Təniɛl.
/mɛ ^{H}ndɔ ɔ́-mɔtɛ́ mɔ-ndɔ **siə** neayá nɛ-nyə á Təniɛ́lɛ/
SM.1SG PRS 1-one 1-person search PRN.POSS.1.5 5-name COP 1.Daniel
'Je cherche une certaine personne. Son nom est Daniel.'
'I'm looking for someone. His name is Daniel.' [JO 891]; (Kerr 2020:246)

(319) a. Context: EO describes a picture of a fisherman (Max Planck stimulus)
ɔ háa a sá bɔla **halɛn**
/ɔ háaha a sa bɔ-la **halɛna**/
PREP DEM.PROX.LOC SM.1 NEG 14-thing catch
'Ici il n'a rien attrapé.'
'Here he hasn't caught anything.' [EO 1483]

b. a sá mɔndɔ **sin**.
/a sá mɔ-ndɔ **sinə**/
SM.1 NEG 1-person see
'Il n'a vu personne.'
'He hasn't seen anybody.' [EO 1485]

These definite and indefinite-marking tests show that OV word order in Tunen is not restricted in terms of definiteness or specificity of the object, being found for objects across the definiteness hierarchy. The O slot should therefore be taken as a general object position not restricted by definiteness.

Turning now to the possible role of heaviness on the material found in the O slot, we can note already from (316a) and (318) above that preverbal objects can be modified, showing that they are syntactically larger than a single noun. Further evidence that preverbal objects can be heavy is given in (320) and (321) below.

(320) Context: Your friend asks what happened at church.
mɔtát a ná imbánu yɛ fəkin né Yásəs ɔ Yɛrúsalɛm **nɔŋɔnak**.

/mɔ-táta	a	ná	ɛ-mbánu	yɛ	fəkinə	né	Yásəsu	ɔ
1-pastor	SM.1	PST2	9-news	ASSOC.9	5.entrance	5.ASSOC	Jesus	PREP

Yɛrúsalɛmɛ	**nɔŋɔnɔ-aka**/
Jerusalem	tell-DUR

'Le pasteur a raconté des nouvelles de l'entrée de Jésus à Jerusalem'.
'The pastor told the news of Jesus' entrance into Jerusalem.' [DM 166]

(321)

a	ná	wɛéya	mamanɛna	má	misí	məkimə	**ínánía**	na
SM.1	PST2	PRN.1	6.kingdom	ASSOC.6	3.ground	3.all	show	with

túábúá	tuúmə.
PRN.POSS.2.13	13.splendour

'He showed him all the kingdoms of the world and all their splendour.'
(Matthew 4.8; CABTAL 2019:7)

Note that while modified noun phrases can be preverbal in this way, discontinuous modification is also possible, as will be discussed in more detail in Chapter 7. The relevant point for this section is that the O slot in Tunen is not restricted in terms of definiteness or syntactic size or prosodic weight, with the O slot filled by a syntactic phrase rather than a single head.

The final potential factor influencing object placement from (305) is whether the object may be treated as incorporated into the verb through the process of noun incorporation. Noun incorporation here refers to the creation of a new lexical item V from the combination of a noun and a verb (O+V).

There are several arguments against an analysis of OV constructions in Tunen as instances of noun incorporation. Firstly, there is no clear morphophonological

evidence that the object is integrated into the verb in Tunen, with no morphosyntactic evidence for detransitivisation of the verb (as found for example with incorporated objects in the Mande language Soninke; Creissels 2018:750). Secondly, the noun component of a noun incorporation structure cannot be definite, referential, or specific (Mithun 1984), while we have seen in (315)-(317b) above that Tunen preverbal objects may be definite. Nouns in incorporated structure cannot be modified by definiteness markers, demonstratives, or numerals (Mithun 1984), whereas the preverbal object in Tunen can. Similarly, proper names are considered not to be incorporated (Mithun 1984:864), while in Tunen we have seen that the O slot can be filled by a proper noun (317a). Fourthly, noun incorporation results in set lexical meanings, while in Tunen we see that OV is productive, found across verbs and nouns and not seeming to be limited to certain combinations. There is no indication in previous lexicographic work on Tunen for Tunen to have verbs derived from N+V combinations with set lexical meanings (Dugast 1967), nor any indication from my consultants that the object and verb are considered one lexical item by Tunen speakers.[10] Moreover, noun incorporation is primarily used to background arguments (Mithun 1984:863), while we have seen above that the preverbal object in Tunen may be focal, i.e., non-backgrounded (section §6.2.2). Finally, noun incorporation is found crosslinguistically more frequently with certain predicates (e.g. 'to make', 'to eat' are preferred over 'to look at', 'to hear'; Mithun 1984:863), while in Tunen, OV word order is consistent across different predicate types (including those considered less likely to incorporate). Noun incorporation is therefore not at all motivated as an account of OV word order in Tunen.

To sum up this subsection, we have seen that the preverbal object slot in Tunen is used for objects across discourse contexts, can be filled by multiple objects, is found for objects across the definiteness hierarchy, and can be filled by heavy objects. The only type of object not allowed in the O slot is locative objects, which are always postverbal and typically obliquely marked. When multiple objects appear preverbally, they are always in strict Goal-Theme order, matching what is found for other languages in West/Central Africa with multiple preverbal objects (308) and differing from the single preverbal type of S-Aux-O-V-X language described in Gensler and Güldemann (2003).

[10] Such an indication would be visible, for example, if when working 'mot-à-mot' (word-by-word) in the transcription process for elicitation sessions, the consultant were to pronounce the object and a verb as one word. This was not the case in my field sessions, with the object and verb pronounced as separate lexical items.

6.2.6 On the nature of the V slot

The *V* slot of the Tunen S-Aux-O-V-X pattern corresponds to the main verb of the sentence. The verb does not take inflectional prefixes, with this inflectional information instead appearing on the Aux element; this is referred to as *split predication* (e.g. Gensler and Güldemann 2003; Güldemann 2022; see Chapter 4 section §4.4). However, the two slots are adjacent in intransitive sentences which lack an O element, meaning that some sources on Tunen transcribe the Aux and V components as one word.

The Tunen verb can take derivational suffixes, traditionally referred to as 'extensions' in Bantu studies (see Chapter 4 section §4.4). Examples are the causative suffix and the middle voice marker, which is unusually a prefix rather than a suffix (Mous 2008) (322).

(322) mi ná Sisília **bíhólí**.
/mɛ ná Sisília **bɛ́**-hólíə́/
SM.1SG PST2 1.Cecile MID-thank
'Je remercie Cecile.'
'I thank Cecile.' [JO 516]

These derivational affixes will be discussed further in section §6.4.1 below, where they will be important for the theoretical analysis of the position of the verb in Tunen clausal syntax.

6.2.7 On the nature of the X slot

The postverbal *X* (or 'Other') slot can be filled by a variety of material, including locative phrases, time expressions (323), prepositionally-marked objects (324), comitatives and instruments (325), adverbs (326), and discontinuously-positioned nominal modifiers (395).

(323) Context: Out-of-the-blue (thetic).
bɛfɔŋɔ bɛ́ ká fámáka **naánɛkɔla (ɔ) ɛ́tɔbɔtɔb**.
/bɛ-fɔŋɔ bɛ́ 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]

(324) Context: "Who is the woman returning the calabsh to?"
muəndú á ndɔ imítə́ túmbiə **ɔ mɔn**.
/mɔ-əndú a ᴴndɔ ɛ-mítə́ túmbiə **ɔ** **mɔ-ná**/
1-woman SM.1 PRS 9-calabash return PREP 1-child
'La femme remet la calebasse [à l'enfant]$_{FOC}$.'
'The woman returns the calabash [to the child]$_{FOC}$.' [JO 1586]

(325) Context: EO: "- He wrote '*God hates the wicked*'."
PM: "I also saw it."
EO: "'*God hates the wicked*'."
mɛ ka ámɛ siəkinə **na má↓mɛ́á məəsə máfandɛ́ máam**!
/mɛ ka ámɛ siəkinə **na** **máᴸmɛ́á** **ma-ə́sə** **má-fandɛ́**
SM.1SG PST3 PRN.1SG see.DUR with PRN.POSS.1SG.6 6-eye 6-two
máama/
DEM.PROX.6
'Moi j'ai vu avec mes propres yeux !'
'I saw (it) with my own two eyes!' [PM 1050]

(326) Context: Despite being born outside Ndiki, Papa Daniel is considered Munen (i.e., a local).
a ka nyɔɔkɔ háaha ɔ uwəsú **mɔŋɛŋ**.
/a ka nyɔ-aka háaha ɔ uwəsú **mɔŋɛ́ŋa**/
SM.1 PST3 work-DUR DEM.PROX.LOC PREP PRN.POSS.EMPH.1PL much
'Il a beaucoup travaillé ici chez nous'.
'He worked a lot here in our region.' [EO 1043]

(327) Context: 'What do you see?'
mɛ́ ndɔ **tunɔní** sinə **tɔ́lál**.
/mɛ ᴴndɔ **tɔ-noní** sinə **tɔ́-lálɔ́**/
SM.1SG PRS 13-bird see 13-three
'Je vois [trois oiseaux]$_{FOC}$.'
'I see [three birds]$_{FOC}$.' [EO 225]

Note here that multiple constituents are possible in the postverbal domain, as seen for example in (323) and (326). In general, the order of elements in the postverbal domain (i.e., the X slot) appears to be flexible; there are preferences rather than

strict ordering restrictions. I leave the exact nature of such preferences for more detailed study and note for our current purposes that these postverbal elements are syntactic adjuncts (with the exception of modifiers in discontinuous DPs, to be covered further in Chapter 7).

Finally, note that clausal complements also follow verbs (and cannot appear preverbally), as illustrated in (328) below, repeated from (281) above.

(328) mɛ́ ndɔ **manya** [ɔwá Matéŋɛ a ka hiəfulə **fanak**].
/mɛ ᴴndɔ **manya** ɔwá Matéŋɛ a ka hɛ-əfulə **fana-aka**/
SM.1SG PRS 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]

This means that 'object' is used to refer to nominal objects; I do not consider clausal complements further here, besides showing in section §6.4.2 (cf. Kerr 2024) that their head-initiality provides some evidence in favour of assuming that the Tunen verb phrase is also head-initial underlyingly.

6.2.8 Section summary

To sum up the empirical section of this chapter, we have seen that Tunen S-Aux-O-V-X word order is consistent across TAM contexts and IS contexts and found in both affirmative and negative clauses and both main and embedded clause types. The S refers to subjects (which may be topical or non-topical), Aux refers to the TAM cluster (which is not necessarily derived from a verbal source), O refers to objects, and X refers to other material. The O slot may be filled by multiple objects in a ditransitive construction, and does not vary by definiteness, specificity, or heaviness. As seen in Chapter 5, VO word order does exist in Tunen but is marginal and is not the unmarked word order; rather, S-Aux-O-V-X is the pragmatically-neutral and the canonical word order. Here, 'pragmatically-neutral' can be considered as multifunctional (i.e., available in multiple IS contexts) or as underspecified, and 'canonical word order' is used synonymously with 'basic word order' or 'prototypical word order'.[11]

Note that we have seen so far that in its basic S-Aux-O-V-X pattern across TAM and IS contexts, Tunen matches more closely the Mande-type profile than the TAM /IS-based alternation proposed by Güldemann (2007) for the Benue-Congo group to which Tunen belongs genealogically (cf. Chapter 2 section §2.5.2). Interestingly,

[11]Throughout this thesis, I follow the BaSIS project convention of using 'word order' rather than 'constituent order', although the second term is also applicable (cf. Kerr et al. 2023).

Tunen differs here from its neighbouring Bantu/Bantoid languages Nyokon, Tikar, Nomaándé, Ewondo, and Eton. I will return in sections §6.7-§6.8 to reflecting on what this more detailed understanding of Tunen means for the comparative and historical picture. First, I will continue the investigation of Tunen by developing a formal analysis of its synchronic syntax.

6.3 Derivations of disharmony: Background

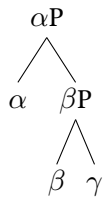
6.3.1 S-Aux-O-V-X as a disharmonic order

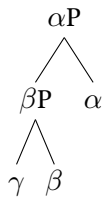
So far, we have seen that Tunen is unusual for a Bantu language in having OV word order, specifically the pattern S-Aux-O-V-X. We can note now that its clausal syntax of S-Aux-O-V-X is disharmonic: the tense/auxiliary component is head-initial (Aux-**VP**) while the verb phrase is head-final (O-V). This particular type of disharmony is therefore an instantiation of a head-initial structure dominating a head-final one. Disharmonic word order patterns like this are interesting from a comparative linguistic perspective, given that it is generally assumed that languages prefer cross-categorial harmony, i.e. consistency in headedness across the grammar (see e.g. Greenberg 1963; Hawkins 1983; Dryer 1992).

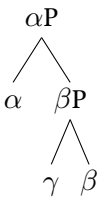
While typologically rare, this Aux-O-V clausal word order pattern is consistent with the Final Over Final Condition (FOFC), a proposed structural universal ruling out certain types of disharmonic word order patterns (329).

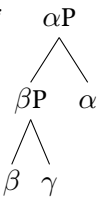
(329) **The Final-Over-Final Condition (FOFC)**
"*[αP [βP β γ] α], where β and γ are sisters and α and β are members of the same extended projection"
i.e., "A head-final phrase αP cannot immediately dominate a head-initial phrase βP, if α and β are members of the same extended projection."
(Holmberg 2017:1; see also Biberauer et al. 2014; Biberauer 2017b:190)

FOFC is illustrated in the tree structures below. Structures (330) and (331) are harmonic structures: (330) is consistently head-initial (a head-initial αP dominates a head-initial βP) while (331) is consistently head-final (a head-final αP dominates a head-final βP). Structures (332) and (333), by contrast, are disharmonic – the phrases αP and βP differ from each other in their direction of headedness. FOFC states that only tree (332) with a head-initial αP dominating a head-final βP is possible, with structure (333) with head-final αP dominating a head-initial βP ungrammatical (as indicated by the asterisk).

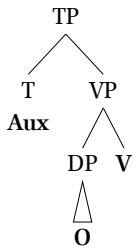
(330) 

(331) 

(332) 

(333) * 

Tunen's Aux-O-V order can be taken as an instantiation of the possible disharmonic structure (332), with TP substituted for αP and VP for βP, as in (334).

(334) 

The main research question for this section is how Tunen's S-Aux-O-V-X word order should be derived formally. Given that we have seen here that Aux-O-V is a disharmonic pattern, a relevant comparison point for a formal analysis are other languages with such disharmonic word order, many of which have been studied in the generative syntax literature in relation to FOFC. I argue that FOFC in turn makes predictions about the diachronic origin of Tunen's OV syntax that can be applied to the West/Central Africa context, which I will come back to in section §6.8 below after considering the formal analyses.

6.3.2 Formal models of Aux-O-V disharmony

In the rest of this section, I show how three different types of formal models have been proposed to account for disharmonic Aux-O-V derivations crosslinguistically: (i) roll-up movement accounts, as applied to Aux-O-V disharmony in Germanic, (ii) base-generation of head-final VP, as invoked in analyses of Aux-O-V in West African languages, and (iii) head movement accounts, as applied for analyses of the Bantu verb, which then must be modified by the additional mechanism of object movement to derive Aux-O-V. After presenting each type of analysis, I will discuss how they can be adapted for Tunen as a basic analysis, and then consider more specific empirical facts that help tease the different analyses apart.[12]

[12] I use 'formal models' here as a shorthand for formal models in the generative approach to syntax, and I assume the background knowledge on generative syntax presented in Chapter 2 section §2.3.

6.3.3 Analysis type 1: Roll-up movement in Germanic

S-Aux-O-V word order patterns are found in embedded clauses in various Germanic varieties (see Roberts 2019 and references therein), as illustrated in (335a) below. Note here that the verb is final in the clause, meaning that the word order pattern is more specifically S-Aux-O-V#.

(335) a. ...das de Hans wil es huus **chaufe**.
that the Hans want.3SG.PRS a house buy.INF
'...that Hans wants to buy a house.'
(Zurich German; Haegeman and van Riemsdijk 1986, cited in Roberts 2019:114)

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

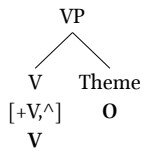
Aux-O-V in Germanic is an example of a FOFC-compliant disharmonic word order of the kind seen in section §6.3.1. above. The pattern has been discussd in terms of *verb-projection raising* (VPR; Haegeman and van Riemsdijk 1986; Dros-Hendriks 2018), where the object can interrupt an auxiliary-verb cluster (e.g. the object *es huus* 'a house' interrupting the verb cluster *wil chaufe* 'wants to buy' in (335a)). Aux-O-V in Germanic has generated a large number of formal analyses in the literature. These analyses employ different mechanisms, including (combinations of) base-generation of VO, base-generation of OV, phrasal movement of the object, verb/auxiliary movement to C (generating V2 or Aux-O-V when the auxiliary raises to C) and remnant movement of the VP from which the V has raised (see e.g. Koster 1975; Zwart 1993, 1997; Svenonius 2000).

In this section I consider a recent formal approach to deriving S-Aux-O-V# disharmony in Germanic through roll-up movement, i.e., progressive application of Comp-to-Spec movement.[13] This roll-up movement operation is formalised in Biberauer et al. (2014) as a formal feature ^, more precisely a feature of a feature. This

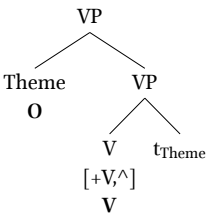
[13]The reasons not to go through all the different analyses attested primarily focus on practical constraints on the length of this chapter. However, the arguments I will present for and against the three analyses covered in this chapter can be extended to many of the alternative analyses proposed for Germanic Aux-O-V. For example, the discussion regarding verbal suffixation and the motivations for head movement (to be seen in analysis type 3) can be applied to analyses where the whole VP moves, and base-generation of OV versus VO will be shown in discussion of analysis type 2 to be irrelevant due to empirical diagnostics of movement in Tunen (ruling out derivation of Aux-O-V word order from a base structure).

^-feature is akin to an [EPP] feature in that its appearance triggers movement, and this movement is formally-conditioned rather than having any semantic import (Sheehan 2013; Sheehan et al. 2017; Roberts 2019). Such movement is considered to be driven by licensing and thus sometimes referred to as *L*(*icensing*)*-movement*.

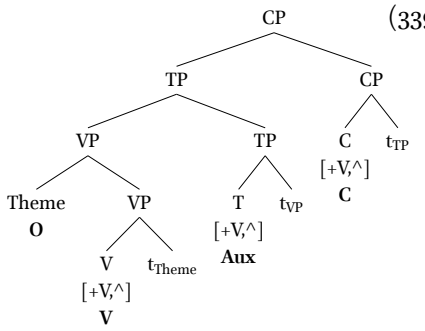
The roll-up account works as follows. When the ^-feature appears on a head, it obligatorily triggers roll-up of its complement to its specifier. Within the verbal domain, the featural specification [+V, ^] thus triggers movement of the theme complement to the specifier of VP, deriving OV (337) from a Kayneian VO base (i.e., Spec-Head-Comp; Kayne 1994) (336).

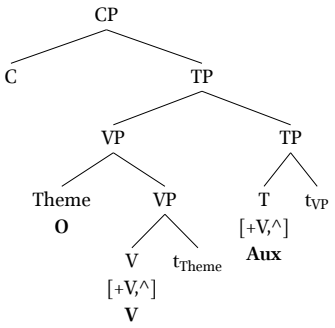
(336) 

⇒

(337) 

The ^-feature is specific to the given category (here, V), and so FOFC applies within an extended projection (here, the extended projection of the verb, i.e., the clausal domain). One key point is that the presence of a ^-feature must always start at the bottom of the projection (*Start At The Bottom Generalization*/SATBG; Roberts 2019:140-141). The ability for languages to vary in word order is thus captured by variation in spread of this ^-feature up the heads of the tree. If the ^-feature applies to all heads within an extended projection, then the structure has successive roll-up yielding harmonic head-finality (338). Disharmonic structures of the Aux-O-V kind are derived when the ^-feature stops at a certain point within the extended projection, resulting in partial roll-up (e.g. (339)). Importantly, there is a 'stop/go restriction': only contiguous heads from the lowest one can trigger roll-up. This stop/go restriction rules out FOFC non-compliant orders of the kind in (333).

(338) 

(339) 

While Aux-O-V has been studied in much more detail for Germanic, previous work in the formal syntactic literature has suggested that the Niger-Congo cases of Aux-O-V[14] likely differ from the Germanic cases:

> "**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**."
>
> (Sheehan 2013 [NWP verison p149], emphasis added)

I therefore turn now to which analyses have been proposed specifically for the Niger-Congo cases of Aux-O-V, starting with base-generation accounts.

6.3.4 Analysis type 2: Base-generation of Aux-O-V in West Africa

We saw in section §6.2 above that various different languages of West and Central Africa have Aux-O-V word order. This raises the question as to whether formal analyses proposed for these cases of Aux-O-V can be extended to account for the type of Aux-O-V found in Tunen.

Koopman (1984) is to my knowledge the earliest generative analysis of S-Aux-O-V-X vs SVO alternation in West Africa, as applied to the analysis of Vata and Gbadi (Kru). Her analysis derives the variation between the two word order patterns by the presence or absence of an Aux element in T, which blocks or allows V-to-T movement. A similar notion of V-to-T movement that is blocked in certain TAM configurations is employed in Sande (2017) and Sande et al.'s (2019) analysis of Guébie (Kru, Côte d'Ivoire). Here, 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.[15] Note here that the analysis is non-Kayneian in allowing base-generation of head-finality, in contrast to Koopman's (1984) approach, which assumes Spec-Head-Complement underlying order.

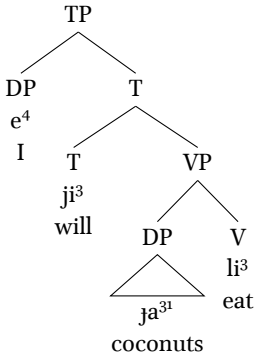
[14] Note that Mande languages are presumably considered here as part of Niger-Congo, although within Africanist linguistics they are nowadays considered a separate family or at least considered of unproven relationship (see Güldemann 2018:189-192 for a recent overview).

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

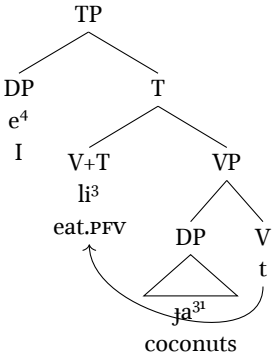
(340) a. e^{4} ji^{3} ɟa^{31} **li$_{3}$**
1SG.NOM FUT coconuts eat
'I will eat coconuts.' Guébie (Kru; Sande et al. 2019:668)

b. e^{4} **li^{3}** ɟa^{31}
1SG.NOM eat.PFV coconuts
'I ate coconuts.' Guébie (Kru; Sande et al. 2019:672)

(341)



(342)



If V always moves to T when it can (i.e., when T is not filled by a TAM marker/auxiliary), then there is an empirical prediction that there should always be SVO when there is no auxiliary element. This is the formal explanation for West African S-Aux-O-V-X/SVO word order alternations conditioned by TAM proposed in analyses following Koopman (1984).[16]

While V-to-T movement combined with base-generation of OV order is proposed for some West African languages, in Gwari (Nupoid), general head-initial properties lead Sande et al. (2019) to propose a different derivation of S-Aux-O-V from a base-generated head-initial VP.

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

[16] Note that, because the empirical prediction doesn't always hold in every language, authors such as Sande et al. (2019) are forced to stipulate a null auxiliary ∅ in certain constructions, serving to block V-to-T movement.

S-Aux-O-V in Fongbe (Kwa) is similarly analysed by Sande et al. (2019) as underlyingly head-initial ('fake'/'apparent' SAuxOV languages in their terminology), this time resulting from a head-initial VP with a nominalised complement, as supported by language-internal morphological evidence for nominalisation of the apparent 'V' element (344a)-(344b).

(344) a. Ùn **è** nú **ɖù** jí.
1SG fall thing eat.NOM on
'I began to eat.'

b. Àsíbá **ɖò** [[ví ɔ̀ **kpɔ́n**] wɛ̄]
Asiba be.at child DEF look.at.NOM POST
'Asiba is looking at the child.'

(Fongbe (Kwa); Lefebvre and Brousseau 2002:215, cited in Sande et al. 2019:677, 685)

The most significant conclusion here is that while all these languages have S-Aux-O-V word order on the surface, they are argued to derive from different underlying structures. This means that S-Aux-O-V is not a uniform phenomenon in West African languages; there are multiple different S-Aux-O-V word orders. Sande et al. (2019) therefore propose a structural classification of 'strict'/underlying versus 'fake'/apparent S-Aux-O-V languages. This strict/fake distinction based on whether verb phrase is base-generated as head-initial (VO) or head-final (OV), as illustrated for 4 languages of West Africa (Table 6.1).[17]

	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/Apparent	VO	GenN	Pre	V-Adv	Yes
Fongbe	Fake/Apparent	VO	NGen	Pre/Post	V-Adv	?

Table 6.1: Sande et al.'s (2019) structural comparison of 4 S-Aux-O-V languages in West Africa.

[17] As pointed out to me by Ines Fiedler, the classification Pre/Post is somewhat misleading as there is language-internal evidence for only one element being a true adposition. I leave the table here as presented in Sande et al. (2019) [cf. the 2017 version]. Note that while in the main text they focus on these four languages, they provide a table with a structural comparison of 54 languages in their appendix (Sande et al. 2019:696-698).

Parameters of variation for Aux-O-V versus VO derivations in West African languages thus include (i) whether the VP is base-generated as OV or VO, (ii) whether there is V-to-T movement, and (iii) whether there is a nominalised complement.

Looking beyond African languages, proposals of Aux-O-V via base generation have been made by Haider (2010, 2013) in terms of the Binary Branching Conjecture (BBC), which proposes that the VP is underlyingly head-final. This base-generation account therefore differs from Antisymmetric approaches following Kayne (1994), in which all XPs are underlyingly head-initial, with head-finality derived through movement (see e.g. Svenonius 2000 for the applications of this kind of analysis in different languages, primarily but not all from the Germanic family, and see Pregla in prep., 2023 for extension to Uralic languages, e.g. South Sámi).

6.3.5 Analysis type 3: Verbal head movement in Bantu

A final relevant type of analysis for S-Aux-O-V-X word order in Tunen is analyses proposed for other Bantu languages, which typically rely on the mechanism of verbal head movement. While not having been previously extended to S-Aux-O-V-X word orders, such analyses are a relevant point of comparison given they have been widely used in the analysis of Bantu languages to which Tunen is closely related.

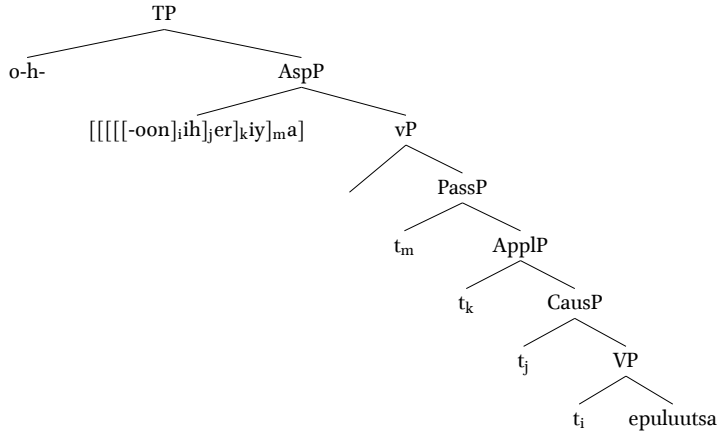
Bantu verbs are often analysed as involving V movement to a head lower than T—see amongst others Buell (2005); Carstens (2005); Myers (1990); Ngonyani and Githinji (2006); Julien (2002); Van der Wal (2009, 2022). The motivation for postulating verb movement is that various derivational markers are *suf* fixal. Under approaches to the morphology/syntax interface adopting the Mirror Principle (Baker 1985), the morphology reflects the order of operations in the syntax (cf. Chapter 2 section §2.3). Under such syntacticocentric accounts, suffixal morphology is derived through movement, while the prefixes on the verb are taken to be the spell-out of heads in their base positions. The whole verbal structure is then spelled out as a single phonological word at the phonological interface (PF) (Van der Wal 2020).

To illustrate the verb movement account, consider the canonical Bantu agglutinative verb form, as exemplified by the Makhuwa example in (345). Here, the verb root *oón* 'see' is modified by inflectional prefixes for subject and tense marking, and has multiple derivational suffixes (termed 'extensions' in the Bantuist literature; see e.g. Bearth 2003). The canonical Bantu word order considered from a grammatical role perspective is SVO (Downing and Marten 2019), seen in the Makhuwa example in (345) with the class 9 theme object *epuluutsa* 'blouse' following the verb.

(345) Nlópwáná o-h-oón-**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 of the Bantu verb movement analysis is that V head-moves up iteratively to get derivational suffixes, but stops before T, thus deriving the subject and tense marking as prefixes and the derivational extensions as suffixes (346). Supporting evidence is that the Bantu derivational affixes reflect the ordering of heads along the clausal spine.[18]

(346)



(Van der Wal 2009:169)

Alternative accounts along the same lines are provided in Ngonyani (2000); Wasike (2007); Zeller (2013b) (as cited in Van der Wal 2022), who propose further V movement to Aux/T (see also Buell 2005; Carstens 2005; Myers 1990; Ngonyani and Githinji 2006; Julien 2002). While different authors propose a different set of XPs in the verbal domain and slight differences in verb height, the basic underlying factor is that the Bantu verb is derived through head movement. The relevant question for Tunen, then, is whether there is evidence for verbal head movement, and if so, to what degree. A secondary question is how such a verbal head movement account

[18]This is a simplified presentation of the analysis; various discussions relating to post-syntactic readjustment rules have been made in the literature on Bantu verbal derivation, based on deviations from the so-called CARP template (see e.g. Hyman 2003b; Good 2005, 2016; Zeller 2017). As these discussions rely on differences in scope order of the derivational suffixes, which are not the focus for the current section aimed at presenting the basics of verbal head movement as an analysis of the Bantu verb, I leave them aside for now (to be returned to in section §6.5.1).

for Bantu languages with VO word order can be extended to the OV word order found in Tunen.

6.4 A basic analysis for Tunen

6.4.1 Determining V height

The first relevant question for an analysis of Tunen verbal syntax is how high the verb is in the structure - is there verb movement, and if so, to what height?

Classical tests used as evidence for V height include (i) the negation test, and (ii) the adverb placement test (Pollock 1989). I will show that these tests indicate that there is no V-to-T movement in Tunen (and, by extension, no higher verb movement, given the Head Movement Constraint; Travis 1984). Next, I will discuss how Tunen's verbal morphology is compatible with a low level of verb movement, thus arguing against base-generation accounts of OV (analysis type 2).

6.4.1.1 Negation test

The negation test looks at whether the main exponent of negation (taken to be a functional head) precedes the verb (**Neg**-V) or follows it (V-**Neg**). The former order is found in English, while the latter order surfaces in French (347). These data are classically taken as evidence that the languages differ in terms of whether the verb has moved to T, i.e. to a higher syntactic position than Neg (assuming a [TP [NegP [VP]]] base structure).

(347) a. I do **not** eat apples. (English, Neg-V)

b. Je ne mange **pas** de pommes. (French, V-Neg[19])

Applying this test to Tunen, we see a consistent Neg-V order (348a), which therefore provides evidence that the Tunen verb has not moved to the T position (assuming that negative morphology is spelled out in a Neg head in the inflectional domain; Pollock 1989 *et seq.*).[20] The object is consistently above the verb, leading to Neg-O-V order (348b).

[19] The main negation is *pas*; *ne* is ignored for analysis. Supporting evidence for this is that *ne* is dropped in spoken French (see work on the Jespersen's cycle).

[20] Aside from following the assumptions made for English and French, this approach is motivated for Tunen given that the NEG morpheme is the sole and obligatory marker of negation and always appears in a fixed slot within the Aux cluster, preceding the TAM marker. I illustrate the negation test for forms with *lɛ* NEG here, but the same applies also to negation markers in other TAM contexts (for which see Chapter 4 section §4.4.4.

(348) a. mɛ **lɛ** aŋɔ́á nimb. (Tunen, Neg-O-V)
/mɛ **lɛ** aŋɔ́á nimbə/
SM.1SG **NEG** PRN.EMPH.2SG deceive
'Je ne te trompe pas.'
'I'm not lying to you.' [PM 1042]

b. mɛ **lɛ́** ndɔ tunəni ɔ́kɔ. (Tunen, Neg-O-V)
/mɛ **lɛ** ᴴndɔ tɔ-nəni ɔ́kɔ/
SM.1SG **NEG** PRS 13-Nen understand
'Je ne comprends pas la langue Tunen.'
'I don't understand the Tunen language.' [JO 804]

As both the object and verb follow the negation in Tunen, we can put a structural upper bound on V height at T. The next section will investigate the structural lower bound for V height, i.e., investigating whether the verb has moved at all.

6.4.1.2 Adverb placement test

Under basic theories of syntactic structure, the theme object is generated as the complement of V, meaning that they are sisters and form a constituent. Therefore, if an adverb intervenes between the object and the verb, this can be taken as indication of movement (regardless of the base-generated order being ascending or descending). In this way, adverb placement has been used as additional evidence for V-to-T movement applying in French but not in English (349) (Pollock 1989).

(349) a. I often **eat** apples. (English, Adv-V)

b. Je **mange** souvent des pommes. (French, V-Adv)

When applying the adverb placement test to Tunen, we see that manner adverbs are consistently postverbal (V-Adv; (350)), with Adv-V ungrammatical (351).

(350) Malíá a ná nyɔ́kɔ́ **biabia**. (Tunen, V-Adv)
/Malíá a ná nyɔ́-aka **biabia**/
1.Maria SM.1 PST2 work-DUR **slowly**
'Maria a travaillé lentement.'
'Maria worked slowly.' [JO 2560]

(351) *ɛndánáná yɛ́ ↓ná **biabia** yɔlaka (Tunen, *Adv-V)
/ɛ-ndánáná yɛ́ ná **biabia** yɔ́la-aka/
7-ice SM.7 PST3.REL **slowly** melt-DUR
Intd.: 'La glace a fondu lentement.'
Intd.: 'The ice melted slowly.' [JO 2558]

While the adverb follows the verb as it does in French, note that the rest of the construction is different. The Tunen tense marker precedes the adverb (mɛ́ **ndɔ**), and the object also precedes it (Tunen O-V-Adv vs French V-Adv-O). The examples below show the same V-Adv/*Adv-V patterning with transitive predicates, where the object must precede the verb and adverb.

(352) a. mɛ́ ndɔ mɔná sɔa **biabia.** (Tunen, O-V-Adv)
/mɛ ᴴndɔ mɔ-ná sɔ́á **biabia**/
SM.1SG PRS 1-child wash slowly
'Je lave l'enfant doucement.'
'I wash the child carefully.' [JO 820]

b. *mɛ́ ndɔ mɔná **biabia** sɔa. (Tunen, *O-Adv-V)
/mɛ ᴴndɔ mɔ-ná **biabia** sɔ́á/
SM.1SG PRS 1-child slowly wash
Intd.: 'Je lave l'enfant doucement.'
Intd.: 'I wash the child carefully.' [JO 821]

c. *mɛ́ ndɔ **biabia** mɔná sɔa. (Tunen, *Adv-O-V)
/mɛ ᴴndɔ **biabia** mɔ-ná sɔ́á/
SM.1SG PRS slowly 1-child wash
Intd.: 'Je lave l'enfant doucement.'
Intd.: 'I wash the child carefully.' [JO 822]

The following example from natural speech supports an analysis in which adverbs are in the postverbal X position (S-Aux-O-V-X), like other adjuncts, as they can follow other postverbal material (here, the locative phrase *háaha ɔ uwəsúə́* 'here in our region').

(353) Context: Despite being born outside Ndiki, Papa Daniel is considered a Munen (i.e., a local).
a ka nyɔɔkɔ háaha ɔ uwəsú **mɔŋɛŋ**.
/a ka nyɔ-aka háaha ɔ uwəsú **mɔŋéŋa**/
SM.1 PST3 work-DUR DEM.PROX.LOC PREP PRN.POSS.EMPH.1PL much
'Il a beaucoup travaillé ici chez nous'.
'He worked a lot here in our region.' [EO 1043]

The adverb placement test is therefore compatible with some verb movement in Tunen, but Tunen differs from French in having O-V-Adv and not V-Adv-O order. Here, relevant questions are whether the verb has moved past the adverb (i.e., [V[Adv[V̶]]]) and whether the object is in its base position. If the verb has moved, to correctly derive Tunen OV rather than VO order, we need an additional movement mechanism to account for the position of the object.

Summing up, the negation and adverb placement tests have shown that Tunen has a SM-TAM cluster as a 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, and adverbs follow V (V-Adv). We therefore have evidence against V-to-T movement, putting an upper bound on verb movement. We can now turn to the lower bound on verb movement, asking whether the verb has moved at all. Addressing this question concerns the difference in the base generation analysis of OV word order proposed by Sande et al. (2019) for West African languages (analysis type 2) and the verbal head movement account proposed for Bantu languages (analysis type 3). As the head movement account for Bantu was motivated on the basis of Bantu verbal morphology, we can turn now to deriving verbal morphology in Tunen.

6.4.1.3 Verbal morphology

We saw in section §6.3 above that suffixal verbal morphology in Bantu is often used in the literature as evidence for partial V movement. Turning now to Tunen, we can ask whether there is similar verbal morphology that can be used to motivate a syntactic analysis involving head movement of the verb from its base position.

While Tunen patterns with Northwestern Bantu and Bantoid languages in having phonological reduction (see e.g. Marten 2020), and while the inflectional information is split from the verb by the theme object, the verb nevertheless shows morphological overlap with other Bantu languages. Dugast (1971), Mous (2003) and Kongne Welaze (2010) show that Tunen has a variety of verbal extensions, which, like in Narrow Bantu, are suffixal. There is however one interesting exception, namely the prefix *bé-*, which Mous (2008) analyses as a middle marker (transcribed as *bé-*

in his orthography). The full inventory of Tunen extensions is given in Table 6.3 below, repeated from Chapter 4 Table 4.22.

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

Table 6.3: Tunen verbal extensions (adapted from Mous 2003:289).

The following examples extracted from the Tunen field corpus (Kerr in prep.) illustrate how verbal derivation is achieved by suffixation in Tunen.

(354) índíə ∼ índíə**kinə**
índíə ∼ índíə-**aka**-**inə**
give ∼ give-DUR-APPL
'give', 'give to'

(355) tálɛ́á ∼ tálɛ́**áka**
tálɛ́á ∼ tálɛ́á-**aka**
cook ∼ cook-DUR
'cook'

(356) fáma ∼ fəm**i** ∼ fám**álána**
fáma ∼ fáma-i ∼ fáma-**al**-**ana**
go.out ∼ go.out-CAUS ∼ go.out-DIM-RECIP
'go out', 'to bring out', 'to go out again'

Examples (357) and (358) provide illustration of the prefixal middle marker *bɛ́-*, the semantics of which are discussed in further detail in Mous (2008).

(357) nɛáyɛ́á ni kúnyiə nɛ́ móhókí nɛ lɛ́ ndɔ miaŋɔ́ **bí**híki.
/nɛáyɛ́á nɛ́ kúnyiə nɛ́ ma-hókí nɛ lɛ ᴴndɔ
PRN.POSS.1.5 ASSOC.5 teach ASSOC.5 6-language SM.5 NEG PRS
miaŋɔ́á **bɛ́**-hikiə/
PRN.EMPH.1SG 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]

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

While not all the Proto-Bantu derivational suffixes are found synchronically in Tunen—a notable absence being a reflex of the Proto-Bantu passive suffix *-*ʊ/-ibʊ* (for which see Stappers 1967; Schadeberg 2003a; Guérois to appear)—the inventory in Table 6.3 and the data above nevertheless show that Tunen employs a Bantu derivational suffixal system. I assume that the suffixes are productive in Tunen, i.e., built in the Narrow Syntax (rather than simply being lexically specified). A structural analysis therefore needs to derive suffixal morphology in Tunen, just as for Narrow Bantu.

Aside from the lack of certain extensions and the fact that the middle marker is prefixal, a further interesting difference from the verbal morphology systems of canonical Bantu is that the final vowel (FV) on the verb in Tunen does not encode aspectual distinctions (Mous 2003; cf. Good 2022). This lack of aspectual distinction in the FV is an important difference from the Narrow Bantu languages such as Makhuwa in terms of the implications for the formal analysis. While previous authors have postulated V-to-Asp movement in order to derive the Narrow Bantu verb form with aspectual encoding in the FV, I propose based on this difference in aspectual encoding that for Tunen, the movement stops at a lower head along the clausal spine than Asp. Specfically, I propose that this head is *v*. This difference in height of verb movement between Narrow Bantu and Tunen has interesting consequences for deriving the differences between Tunen's syntax and the canonical SVO Bantu language, which I will discuss further in §6.5-6.8. We can conclude the current investigation into V height in Tunen with the conclusion that the verb does move in Tunen, but only to a low position below T.

6.4.2 Determining headedness

Having seen in section §6.3.4 above that syntactic headedness can be used to motivate OV versus VO underlying order, we can ask whether Tunen has head-final syntax beyond the VP. In other words, to what extent does OV in Tunen reflect a general tendency for head-final syntax? Properties to test in this respect are features identified in crosslinguistic typological work on headedness variation (e.g. Greenberg 1963; Hawkins 1983; Dryer 1992), such as having prepositions vs postpositions, Adv-V vs V-Adv order, and C-Comp vs Comp-C order.

As Sande et al. (2019) discuss, and as builds on a long literature on word order variation in West Africa (see e.g. Heine 1976; Claudi 1993; Creissels et al. 2008), there is crosslinguistic variation within Niger-Congo and nearby languages with respect to these headedness diagnostics. Some languages with S-Aux-O-V-X order show consistent head-final properties, e.g. postpositions in Mande, Gen-N order, Adv-V order, while other S-Aux-O-V-X languages pattern more generally as head-initial.

In contrast to the West African S-Aux-O-V-X languages with head-final properties (the 'real' S-Aux-O-V languages in Sande et al.'s (2019) structural typology), Tunen is consistently head-initial (aside from OV), as summarised in Table 6.5.[21]

Property	Expectation if head-initial	Tunen pattern
Order of N and Mod	N-Mod	N-Mod
Adposition type	Prepositions	Prepositions
Order of N and Poss (pronoun)	N-Poss	Poss-N
Order of N and Gen	N-Gen	N-Gen
Canonical order of O and V	VO	OV
Order of Aux and V	Aux-V	Aux-V
Order of O and V in imperatives	VO	VO (V-IO-DO)
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	SVOX	SOVX
Low subjects (VS)?	(possible)	✗

Table 6.5: Headedness properties of Tunen (Kerr 2024:12, adapted)

This head-initiality is illustrated for the nominal domain in (359),[22] and for Cop-Compl order and prepositions in (360).

[21] Table 6.5 shows Poss-**N** in addition to **N**-Gen order, with Poss-**N** the order found with a possessive pronoun (e.g. *yamíá **isɔ́*** 'my **father**') (Chapter 4 sections §4.3.7,4.3.8). As discussed in Mous (2005) (cf. Kerr 2024), there is evidence that the head-initial type **N**-Poss is the historic order. Note also that while there is a sentence-final question particle (Chapter 4 section §4.5.8), following Biberauer (2017b) I do not take this to be evidence for head-finality, in that such particles are likely not syntactic heads.

[22] 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).

(359) tɔ́ɔ́yɛ **tɔbanána** tɔté$^{\downarrow}$té tɔfítitiə tɔ́fandɛ.
/tɔ́ɔyɛ **tɔ-banána** tɔ-té$^{\text{L}}$téá tɔ-fítitiə tɔ́-fandé/
DEM.PROX.13 13-banana 13-small 13-black 13-two
'ces deux petites bananes noires'
'these two small black bananas' [JO 844]

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

To show the variation in headedness between Tunen and head-final Aux-O-V languages of West Africa, compare S-Aux-[O-V]$_{\text{NOM}}$-**V** in Kru and Mande (361) with the S-Aux-V-[O-V]$_{\text{NOM}}$ patterning in Tunen (362).[23]

(361) a. e^{4} ji^{3} [ɲa^{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.' Guébie (Kru), (Sande et al. 2019:672)

b. wúrú-$^{!}$ú $^{!}$ní [ʃwó-$^{!}$ó ɲì mí-í] **dàmnà**
dog-DEF PFV meat-DEF [unglossed] eat-DEF begin
'The dog began eating the meat.'
Dafing (Mande); (Sande et al. 2019:675)

(362) miɔkɔ́ a lé **ɔ́sɔ** [ɔ bɛŋgwɛtɛ ɔ ɔbáta].
miɔkɔ́ a lɛ **óso** [ɔ bɛ-ŋgwɛtɛ ɔ ɔ-báta]
9.chicken SM.1 NEG can PREP 8-potato PREP INF-collect
'La poule, elle ne pouvait pas ramasser ses patates.'
'The chicken wasn't able to collect up her potatoes.'
[JO 1764]; (Kerr 2024:318)

The headedness diagnostics therefore show that Tunen consistently patterns as a head-initial language, with the exception of having OV word order. For this reason,

[23]These headedness diagnostics are discussed further in Kerr (2024), with a full list of supporting data provided in the appendix.

I will adopt an analysis where disharmonic S-Aux-O-V-X word order is derived from an underlying head-initial structure (compatible with Kayne 1994).

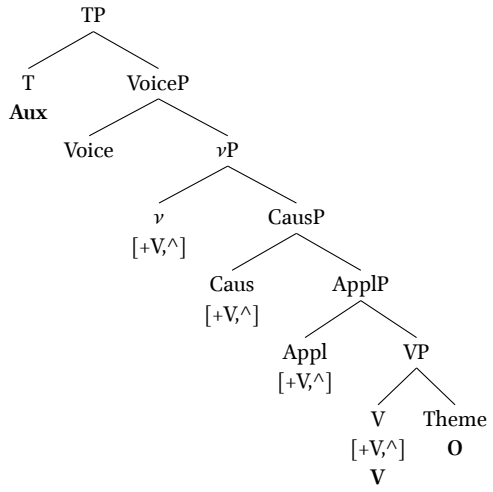
To sum up, we have seen that Tunen shows evidence for some degree of V movement, but only to a head lower than T (which I proposed to be *v*, noting a difference in encoding of aspectual distinctions in the FV that argue against a V-to-Asp account as proposed for other Bantu languages such as Makhuwa). While Tunen shows head-finality in the verb phrase, other headedness diagnostics show a consistent head-initial syntax, supporting an analysis in which the syntax is underlyingly head-initial (in contrast to analyses of certain West African languages with Aux-O-V word order in which the syntax is underlyingly head-final; Sande et al. 2019). With these basic empirical facts in place, we can turn to consider what the three types of analysis introduced above would look like as applied to Tunen.

6.4.3 Analysis type 1: Tunen Aux-O-V by FOFC-style roll-up

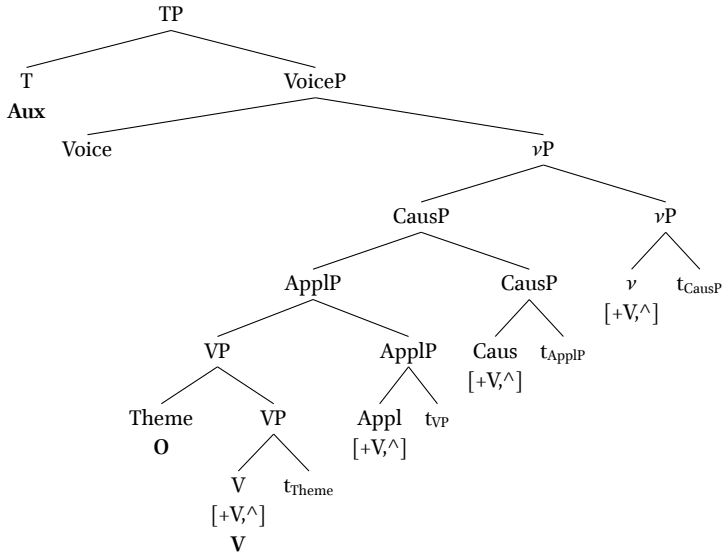
Before turning to more advanced diagnostics, we can consider what a basic analysis would look like for each of the three analysis types introduced in section §6.3.2 above, starting with the roll-up movement account as applied to Tunen.

As we have seen general head-initiality, and as follows Antisymmetric theoretical assumptions of Kayne (1994), this analysis posits a harmonically head-initial S-Aux-V-O base word order for Tunen, with S-Aux-O-V derived through roll-up movement caused by ^-feature on [+V] heads up to *v* (and crucially not extending further to T and C). The underlying tree structure in (363) therefore results in the structure in (364) through roll-up movement, which then generates the correct Aux-O-V order when linearised at PF.

(363) →



(364)



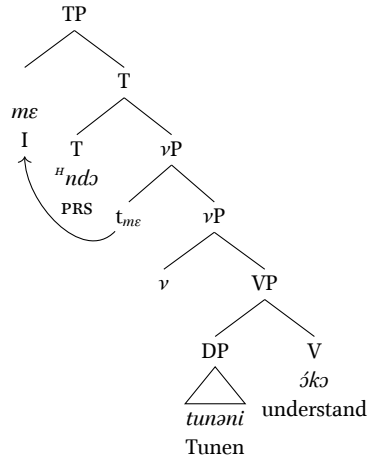
I will discuss the details of this roll-up analysis for Tunen and its empirical predictions in section §6.5, after first illustrating the basic analysis for analysis types 2 (base-generation) and 3 (verbal head movement + object movement).

6.4.4 Analysis type 2: Tunen Aux-O-V by base-generation

We saw above that certain approaches derive Aux-O-V disharmony through base-generation of head-final VPs, as in Sande et al.'s (2019) derivation of so-called 'fake'/apparent S-Aux-O-V languages of West Africa, in other accounts following the Basic Branching Conjecture of Haider (2010, 2013), and in other approaches that allow base-generation of OV (e.g. Barbiers 2000; Koster 1975 for Dutch OV). For example, the analysis of a simple transitive sentence in Tunen such as (365) would be as in (366), where the VP is underlyingly head-final.

(365) mɛ́ ndɔ tunəni ɔ́kɔ.
/mɛ ᴴndɔ tɔ-nəni ɔ́kɔ/
SM.1SG PRS 13-Nen understand
'Je comprends la langue tunen.'
'I understand Tunen.' [JO 801]

(366)



For ease, I represent the subject here simply as the subject marker *mɛ*; a more detailed discussion of the syntax of subjects will follow in section §6.5.3 and Chapter 8 section §8.4.2. Following standard analyses, the subject is base-generated within the *ν*P phase, where it receives its *θ*-role, and then moves to a higher position for case reasons, resulting in S-TAM order. I represent the base-generation position of the external argument as Spec*ν*P for current purposes, but will update this later in section §6.5.3 in discussion of subjects and VoiceP.

Returning to the point at hand regarding the headedness of the VP, the basic data have already raised issues for this kind of a base-generation analysis of OV in Tunen, given that we have seen evidence for verb movement. This means that the verb cannot in fact be in-situ as it is in (366), and so it would still be linearised as VO (unless the Tunen verbal morphology is derived by other means). I will return to the question of verbal morphology as test 1 in section §6.5.1. First, let us complete our set of analyses by illustrating the verb movement analysis (analysis type 3).

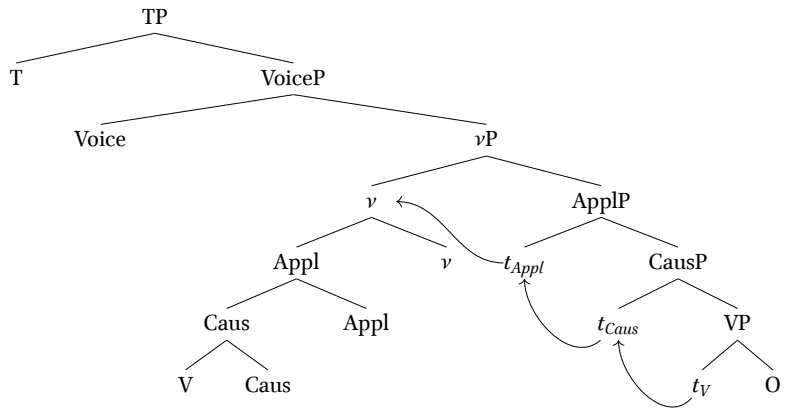
6.4.5 Analysis type 3: Tunen Aux-O-V by verbal head movement

6.4.5.1 Tunen verb movement

If we follow the analysis of other Bantu languages as deriving suffixes through verb movement (e.g. Ngonyani 2000; Wasike 2007; Zeller 2013a; Van der Wal 2009, 2022; section §6.3.2), this means that the Tunen verb must also move to a higher position in order to derive derivational suffixes. We saw above that Tunen differs from core Bantu in having a prefixal middle voice marker (Mous 2008), which I propose is located in Voice. I also pointed out that Tunen does not encode aspectual distinctions on the final vowel, which I formalise as the lack of V-to-Asp movement (in contrast

to analyses of Narrow Bantu in which the verb has been taken to move to an aspectual head, e.g. Van der Wal 2009, 2022 for V-to-Asp movement in Makhuwa). In an account whereby syntax directly reflects morphology, this means that the verb in Tunen must move to a position lower than Asp and lower than Voice, which I take to be *v*. This results in the head movement analysis shown in (367) below.[24,25]

(367)



This verb movement account provides the correct spell-out of a prefixal middle with other derivational affixes as suffixal. However, unlike for Makhuwa, this account by itself is insufficient, as we also need to get OV spell-out in Tunen.

In sum, then, the verb movement account can generate Tunen verbal morphology, but to get the correct OV word order, the account of Bantu verbal morphology must be adapted to include movement of the object (as suggested already by Sheehan 2013; section §6.3.3 above).[26] Analysis type 3 therefore needs to be modified for Tunen by the addition of object movement.

[24] I differ from Van der Wal (2009, 2022) in showing the complex heads formed by each stage of verb movement, in order to be explicit about the theory of suffixation assumed here; this complex head movement is the same as what was proposed in Van der Wal (2009, 2022), following Julien (2002).

[25] As current purposes are focussed on deriving the correct clausal word order, rather than the make-up of the Aux component, I do not show the fully articulated inflectional domain, using TP as a simplified representation.

[26] Alternatively, we need an account of Bantu verbal morphology without V-to-*v* movement, e.g. postsyntactic morphological rules to derive suffixes vs prefixes. I will come back to this analytical possibility in section §6.5 below.

6.4.5.2 The addition of object movement

Given we require object movement to derive OV in a verb movement account, we can ask whether there is a trigger for object movement in Tunen.[27] Relevant work on object position has proposed that information-structural considerations can motivate differences in object position (i.e., object movement, in transformational frameworks). The idea of object position varying dependent on IS status is key in Güldemann's (2007) descriptive work on object placement in Benue-Congo, where the proposal is that languages have unmarked VO order but can have OV word order when the object is "extrafocal". Similar calls for IS as key for object placement have been formalised in the literature on OV/VO variation in Germanic, for example in recent work by Struik and Van Kemenade (2020), Struik (2022), and Struik and Schoenmakers (2023), who argue for IS-conditioned object placement in the diachrony of Germanic varieties. The basic proposal from a generative perspective is that some Germanic languages had VO base word order, with OV an alternative pattern derived via object movement triggered by givenness.

For Tunen, however, we have already seen that IS does not drive OV word order synchronically, as OV word order was found in section §6.2 above to be compatible with a variety of IS contexts, namely information focus on the object, all-new/thetics, predicate-centred focus, and given objects. S-Aux-O-V-X was therefore argued to be taken as the pragmatically-neutral order that should therefore be analysed as the unmarked order in Tunen.

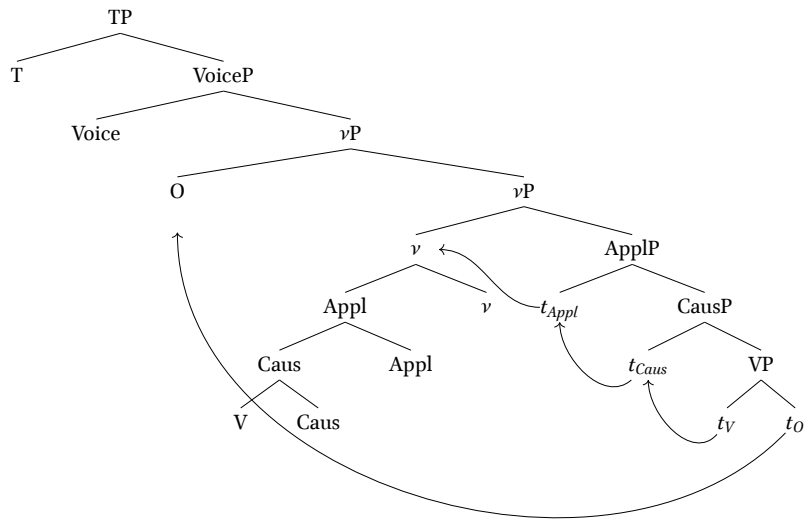
The point to make here in terms of the implications for the formal analysis is that Tunen does not show synchronic evidence for IS as a factor conditioning OV order. Instead, OV should be taken as the unmarked order. This means that object movement in Tunen is formally-conditioned, rather than triggered by an IS feature such as [-given] (cf. Chapters 2 section §2.3 on crosslinguistic variation in the use of discourse features in Narrow Syntax, to be returned to in Chapter 8).

This leads us to the following 2-step analysis of Tunen syntax, as building from previous analyses of Bantu in deriving suffixation through head movement, with

[27] Throughout this thesis, I use the term "object movement" as a neutral term, rather than using "object shift" or "object scrambling", which some authors use for a more specific type of object movement that does not necessarily correspond to what is seen in Tunen (see Broekhuis 2023 for relevant discussion of the use of these terms in work on Germanic and Scandinavian languages). For example, we saw in section §6.2 above that the 'O' slot in Tunen is not restricted by definiteness or specificity, unlike what is found in some languages with object scrambling, and we also saw that both nominal and pronominal expressions appear preverbally in Tunen, unlike what is found in Scandinavian object shift (Holmberg 1986; Vikner 1990; Johnson 1991). The specific type of object movement I will end up proposing for Tunen matches what some authors classify as "short object movement" or "short object shift".

the additional mechanism of object movement used to derive OV order:

(368)



For now, I postulate that the landing site of object movement is Spec*v*P, as shown in (368), matching analyses of object movement in other languages (see e.g, Broekhuis (2022) for Germanic). In section §6.5.3 I will discuss arguments for SpecVoiceP as an alternative landing site.

6.5 Teasing apart the analyses

So far, we have seen three basic analytical options for deriving Tunen's disharmonic S-Aux-O-V-X clausal word order: (i) a roll-up movement account, (ii) an account with base-generation of OV order in the verb phrase, and (iii) an account with verbal head movement combined with object movement. I showed that verb movement diagnostics provide evidence against the base-generation proposal (analysis type 2), and thus exclude it from further discussion. In this section, I consider some more complex parts of Tunen syntax that can be used to tease apart the two remaining analyses, highlighting where certain analyses make incorrect empirical predictions.

6.5.1 Test 1: Deriving Bantu verbal morphology

The first major consideration for a theoretical model of OV syntax in Tunen is how to derive the correct derivational morphology, namely derivational suffixes with

the middle marker *bɛ́* as a prefix, as discussed in section §6.4.1 above.

We have already seen that Tunen matches the typical Narrow Bantu profile of having suffixal derivational markers. This can be derived in analysis type 1 through progressive roll-up movement up the clausal spine (with [+V, ^-feature] on all heads up until *v*) and an approach to morphological spell-out that takes all the heads as suffixes. The basic pattern can similarly be derived in analysis type 3 through the mechanism of verbal head movement, which results in complex head formation of all heads up until *v*, which are then spelled out as a single morphological word.

The key challenge for a full formal account is deriving the *bɛ́* middle marker in Tunen. I proposed above that *bɛ́* is the spellout of a Voice head, based on its semantics. The test then for the analyses is how to account for the fact that *bɛ́* attaches as a prefix on V when O intervenes, as in (369), under the background assumption that VoiceP directly dominates *v*P in the clausal spine ([VoiceP Voice [*v*P]]; (Kratzer 1994, 1996) *et seq.*).

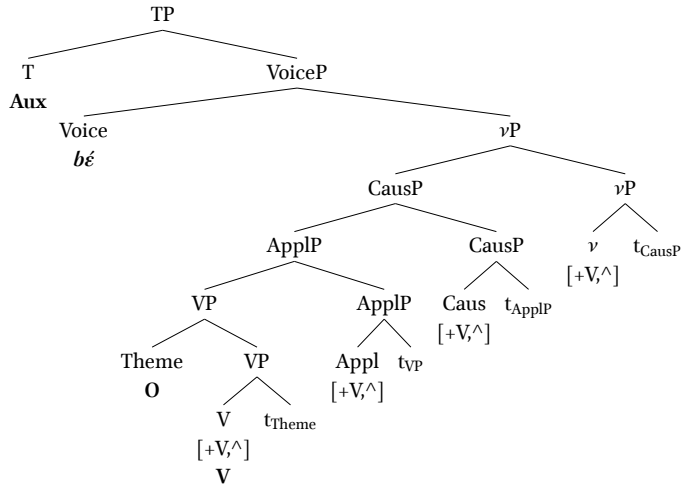
(369) a. nɛáyɛ́á ni kúnyiə né móhókí nɛ lɛ́ ndɔ miaŋɔ́ **bí**híki.
/nɛáyɛ́á né kúnyiə né ma-hókí nɛ lɛ ᴴndɔ
PRN.POSS.1.5 ASSOC.5 teach ASSOC.5 6-language SM.5 NEG PRS
miaŋɔ́á **bɛ́**-hikiə/
PRN.EMPH.1SG MID-like
'Sa façon d'enseigner les langues ne me plaît pas.'
'I don't like the way she teaches languages.' (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
SM.1 PST2 PRN.POSS.1.14 14.load MID-walk-DUR-RECIP-APPL PRN.1
bɛ́mwɛt.
self
'He carried his load himself.' (Mous 2008:309, adapted)

Here, the pronominal object *miaŋɔ́* 'me' in (369a) and the modified DP object *búáyé bólmó* 'his load' in (369b) occur in the preverbal O slot, with the *bɛ́* middle marker following as a prefix attached to the verb.

This order of object and prefix is a challenge for the roll-up analysis (analysis type 1) introduced above and repeated in (370) (with the voice prefix indicated as the head of the VoiceP), because such an analysis without any additional modification predicts the middle prefix to be linearised before the object rather than as a prefix to the verb.

(370)

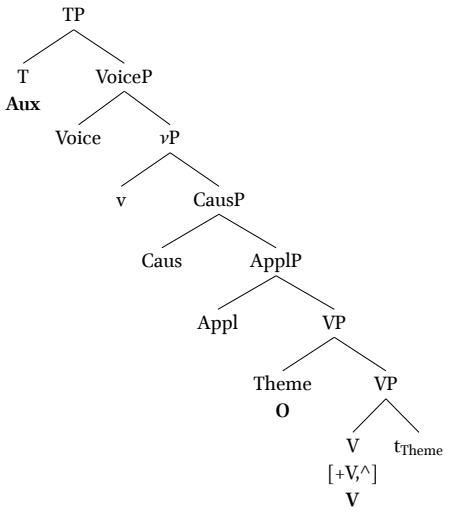


The roll-up account must therefore be adjusted in order to correctly derive *bɛ́* as a prefix on the verb (Aux-O-*bɛ́*-V) rather than as a marker preceding the object (*Aux-*bɛ́*-O-V).

One possible adjustment to the model is to have postsyntactic morphological readjustment rules. Such rules have been motivated in other Bantu languages in order to account for differences in scope readings for derivational suffixes, notably the causative, applicative, reciprocal, and passive (see discussion of the CARP template in e.g. Hyman 2003b; Good 2005, 2016; Zeller 2017). These readjustment rules can take multiple forms. One fairly extreme approach would be to have no syntactic movement operations for the purposes of affixation, and rather sort out all of the affixation in the morphology. In the roll-up movement account considered here, this would mean that only V would have a ^-feature movement trigger, with Compl-to-Spec movement of the object to SpecVP the only roll-up movement, as schematised in (371) overleaf.

This style of approach therefore puts the brunt of the work in the morphology and requires a more detailed theory of the morphological component. A syntacticocentric approach that retains the idea that syntax reflects morphology could alternatively have higher roll-up movement to SpecVoiceP, as shown in (372), the last stage of which then being "undone" in the morphology by readjusting what would be a middle suffix into a middle prefix.

(371)



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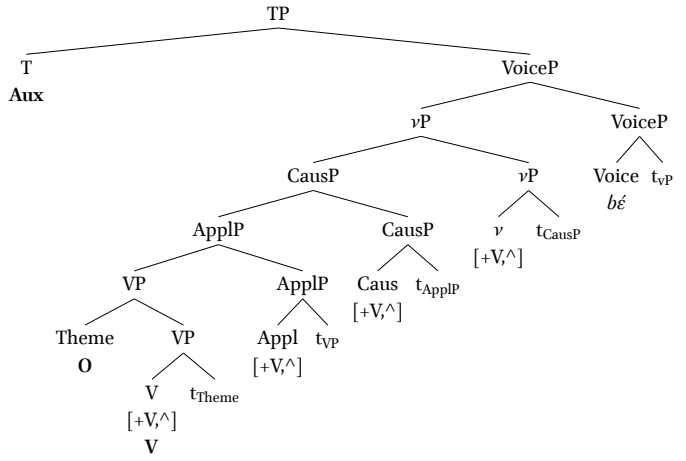


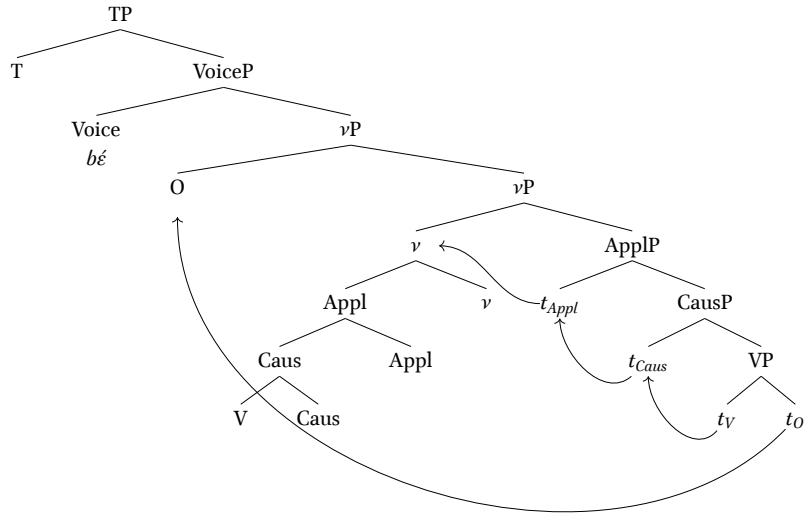
An alternative account would be to question whether the derivational suffixes are syntactic heads and propose instead that they are clitics. One possible argument against such an account is that it means that the Tunen verb would be derived differently from the canonical Bantu verb, despite appearing the same on the surface and related historically. Another issue with such a phonological account is that the object should be a possible host for a voice clitic, but the voice prefix is only ever found on the verb. Proposing that the Tunen tense markers are clitics has further issues, given that subject markers must then be taken as pronominals, as if they were also clitics there would be no host (cf. Chapter 8 section §8.4.2 on diachronic

variation in the syntactic status of subject markers). Finally, there is no variation in placement of the suffixes, as may be expected if they are clitics, again making such an account less appealing. I therefore assume for current purposes that the suffixes are indeed syntactic heads.

A final possible fix for the roll-up analysis would be to make the stipulation that the voice prefix lowers via the mechanism of affix lowering. While this is a possible analysis, it requires the additional mechanism of affix lowering and is therefore less desirable on metatheoretical grounds. We therefore see that there is no analysis of the O-*bé*-V construction under the roll-up movement account in Tunen that does not involve unwelcome stipulation.

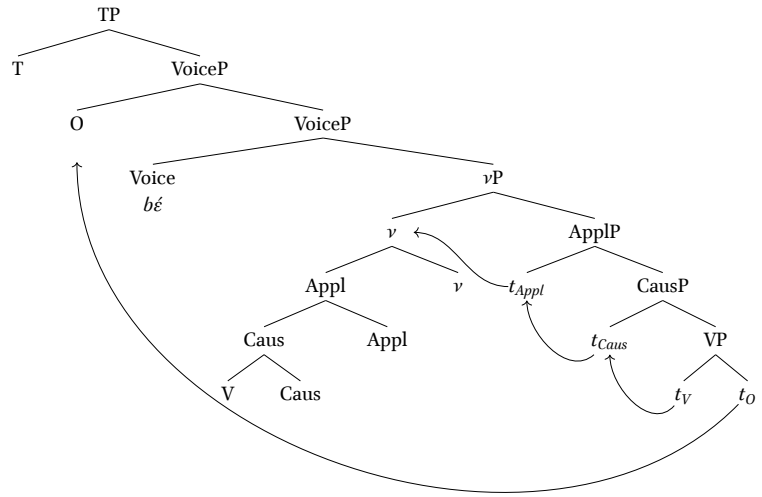
Turning to the verbal head movement + object movement analysis (analysis type 3), we saw above that this analysis was proposed on the basis of Tunen's morphology, and thus correctly derives the order of affixes, as shown in the tree in (373).

(373)



However, this analysis has the same issue as the roll-up account with deriving *bé* as a middle prefix that attaches to the verb and not to the direct object. In other words, the structure in (373) predicts the incorrect linearisation *bé*-O-V rather than the attested O-*bé*-V order. A solution to this problem would be if the object were to move to a position higher than Voice, which I postulate to be SpecVoiceP. This results in the revised structure shown in (374) below.

(374)



This structure then derives the correct O-*bɛ́*-V spell-out. Postulating SpecVoiceP instead of *v*P as the landing site of object movement has important consequences regarding the analysis of the subject, which we will come back to in section §6.5.3 below. For now, we can conclude this section by noting that we have seen that Tunen's verbal morphology causes issues for the roll-up movement analysis (analysis type 1), while being correctly accounted for on the head movement + object movement account (analysis type 3) under the proposal that the object moves to SpecVoiceP.

6.5.2 Test 2: Aux-O-V with O-V-X

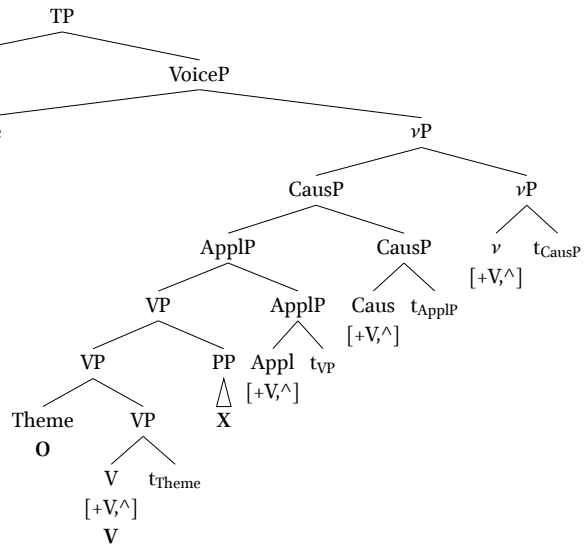
We saw above that Tunen has not only the disharmonic word order Aux-O-V but also a postverbal 'Other' position (O-V-X). This distinguishes Aux-O-V in Tunen from Aux-O-V in the Germanic varieties seen above, which were verb-final (Aux-O-V#). This combination of Aux-O-V with O-V-X means that the roll-up movement analysis based originally on Germanic data (analysis type 1) must be adapted in order to account for the Tunen data.

In this section, I will consider how to model postverbal obliques, as common material within the X slot. An initial theoretical question is how adjuncts are modelled. Here, I assume that adjuncts can be left- or right-adjoined (matching common practice and analyses of other Bantu languages such as Zulu, but differing from the Antisymmetric system of Kayne 1994 in which only left-adjunction is permissi-

ble). The motivation for right adjunction is simplicity of analysis, as left-adjunction would require additional roll-up movement and the postulation of XPs which serve solely as the landing sites of the movement, which I consider more cumbersome than base-generation of right-adjunction.

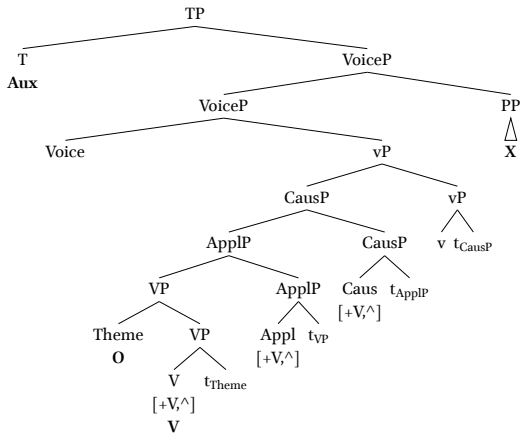
Let us start with the roll-up analysis (analysis type 1). At first sight, right-adjoining adjuncts in Tunen captures their postverbal linearisation as Aux-O-V-X. However, the issue for the roll-up analysis is that a VP-adjunct adjoined to the right would form part of the complement of higher heads with the [V+,^] specification (which were motivated on the basis of Tunen verbal morphology, as discussed in the previous section), and so will be subsumed under the roll-up movement operation. This falsely predicts that a PP adjunct appears *before* the derivational extensions, as shown in (375), where the PP adjunct is predicted to be linearised before the applicative and causative affixes rather than appearing in the X slot.

(375) *



The question then is whether the roll-up approach can be adjusted so as to linearise obliques as following the verbal extensions, i.e., in the postverbal X slot. To get the right morphology, we either need a different theory of suffixation (thus requiring a departure from the syntacticocentric model of the syntax-morphology interface adopted here and discussed in section §6.5.1 above), or we would need to attach these adjuncts at least as high as *v*P so that they are unaffected by roll-up movement, as shown in (376).

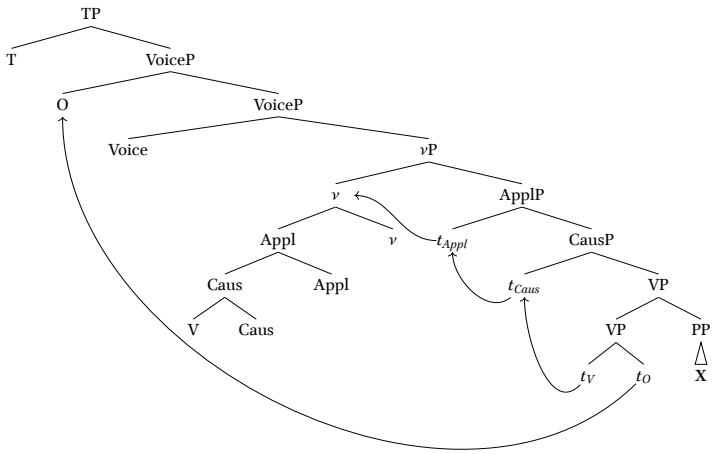
(376)



While the structure in (376) linearises correctly as (S-)Aux-O-V-X, an issue is that there is no semantic motivation for high adjunction at the VoiceP level instead of the VP level used in other analyses of Bantu syntax. Similarly to the postsyntactic morphological readjustment rules/use of affix lowering in test 1, fixing the roll-up account in this way therefore requires additional stipulation.

Analysis type 3 on the other hand can capture the postverbal adjunct placement, as the Aux-O-V order is derived through verbal head movement and object movement, which crucially do not affect any VP-adjuncts. This means that the PP adjunct may simply be left in-situ, as shown in (377).[28]

(377)



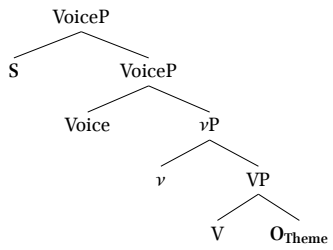
[28]Note by the by that this approach would also derive the correct linearisation for the data

The combination of Aux-O-V with O-V-X is therefore better-captured in the head movement + object movement analysis (analysis type 3) than in the roll-up movement analysis (analysis type 1). Attaching PP adjuncts to a higher position as a fix to the roll-up analysis makes empirical predictions regarding the interpretation of these adjuncts that could be tested in further work.

6.5.3 Test 3: In-situ subjects

So far, we have only considered the position of the object and the verb, without considering the subject in any detail. In generative approaches, the subject as external argument of the verb is assumed to be base-generated in the verbal domain. This proposal was originally formulated in the Government and Binding Theory (GB) era under the *verb phrase-internal subject hypothesis* (VPSH; Fukui and Speas 1986; Koopman and Sportiche 1991), with the external argument base-generated in SpecVP for θ-role assignment. In later approaches, the verb phrase was extended by *v*P, leading to Spec*v*P as the site for base-generation of the external argument. In approaches postulating a VoiceP (Kratzer 1994, 1996 *et seq.*), SpecVoiceP has become the base-generation site for the external argument. As I argued in section §6.5.1 above that the presence of a voice prefix in Tunen provided evidence in favour of a VoiceP projection in Tunen (see e.g. Pylkkänen 2002, 2008; Harley 2017 for the idea that languages vary in whether they project both a *v*P and a VoiceP or just one projection), I assume here that SpecVoiceP is the in-situ subject position. This means that the base structure for the internal and external argument of a transitive construction in Tunen is as in (378).

(378)

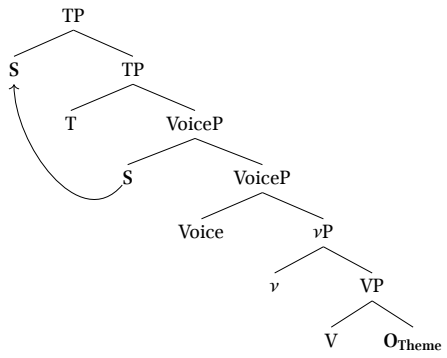


From this base structure, movement operations lead to the surface patterns seen. Concentrating on the external argument, we have seen that in Tunen, lexical noun phrase subjects always precede the subject marker and tense marker (S-Aux-O-V-X, where Aux contains a subject marker). This linear order provides evidence

discussed so far under a model following Kayne (1994) that only allows left adjunction, as neither the verb nor the object surface in their base positions. I leave the question of whether left adjunction makes different empirical predictions for other parts of the grammar for further work.

that the subject is higher than the in-situ VoiceP-internal subject position – in other words, that the subject must have raised to a position higher than Tense/Neg. For current illustrative purposes, I suggest that this higher position is SpecTP (379), following standard practice.[29,30]

(379)



I provide (379) as a basic account of subjects in Tunen. A more complete analysis would require discussion of lexical noun phrase subjects versus subject markers (SMs), as widely discussed in the literature on Bantu regarding the distinction between SMs as agreement morphology versus pronominal elements (Bresnan and Mchombo 1987 *et seq.*). As our current goal is accounting for the order of the object related to other elements, I leave these details about the analysis of different types of subjects aside (to be returned to in Chapter 8 section §8.4.2).

While this basic analysis accounts for most structures in Tunen, there is one construction in which a subject appears to surface in a low domain. In this construction, a personal pronoun co-referential with the subject marker (SM) surfaces in a low position below T, as in (380)-(382) below. This split pronoun / split subject construction is not known for any other Mbam languages besides Nomaándé (Bantu A46) (Taylor 1999; Wilkendorf 2001; Mous 2005; Philippson 2022b), Tunen's

[29] The general idea is that the subject nominal must raise to SpecTP in order to be licensed, a mechanism that dates back to the Extended Projection Principle (EPP) within Government and Binding Theory (Chomsky 1981, 1982). However, I do not commit to SpecTP as the final landing site for Tunen subjects – evidence for subjects being above negation and tense can provide evidence for an alternative analysis where the subject is in SpecFinP (as suggested for the Bantu language Teke-Kukuya in Li to appear *b*), and it is also possible for Tunen subjects to be in a left-peripheral SpecTopP position when topical (cf. Chapter 5). As the relevant point here is whether subjects have raised from their base position, rather than the details of exactly where this higher position is and what featural specification drives the movement, I leave these points aside.

[30] In (379) I only indicate movement of the subject; this should not be read as a statement that this movement precedes other syntactic operations such as verbal head movement and object movement.

neighbour to the South-East and closest genealogical relative.[31]

(380) Context: EO describes how he ended up at the town square; PM says:
ɔ ná ndá **aŋɔ́á** bɛ́nyánánɛ́na ɔban-
/ɔ ná nda **aŋɔ́á** bɛ́-nyánánɛ́na ɔbánɔ/
SM.2SG PST2 VEN PRN.2SG MID-find.REP only
'Tu es revenu te retrouver comme ça.'
'You found yourself like that.' [PM 1009]

(381) Context: "Because I knew it was his funeral today, I passed by."
mɛ nɔ́ ka **ámɛ** bɛlɛŋa bé- bí- bíúŋúnání, mɛ nɔ́ bésuala [...]
/mɛ nɔ́ ka **ámɛ** bɛ-lɛŋa **bé**-úŋúnáníə mɛ nɔ́
SM.1SG PST2 AND PRN.1SG 8-clothes MID-change SM.1SG PST1
bé-sɔ́á-ala/
MID-wash-DIM
'Je suis allé me changer, je me suis débarbouillé,'
'I went and got changed, I had a quick wash,' [PM 1014]

(382) okay. hánía ɔ́ ndɔ aŋɔ́á tuənə náə, ɔ Bafɛa? ɔ́ ndɔ tuənə ɔ Bafɛa ?
/okay hánía ɔ ᴴndɔ **aŋɔ́á** tuənə náə ɔ Bafɛa ɔ
okay.EN where SM.2SG PRS PRN.2SG live then PREP Bafia SM.2SG
ᴴndɔ tuənə ɔ Bafɛa/
PRS live PREP Bafia
'Okay. Où resides-tu alors - à Bafia ? Résides-tu à Bafia ?'
'Okay. So where do you live - Bafia? Do you live in Bafia?' [PM 956]

Note in these examples that the pronoun precedes the middle prefix *bé* (380), (381), and that the theme object intervenes between the pronoun and the verb (381). The examples are, interestingly, all from natural speech data. We see in (382) that the low subject pronoun is not syntactically required, as speaker PM repeats the question without it. This gives some support to Dugast's (1971) analysis that such split pronouns are used for pragmatic reasons related to emphasis. However, the exact discourse function of the pronouns is unclear and difficult to evaluate from the current corpus; they do not necessarily have to encode contrastive focus on the

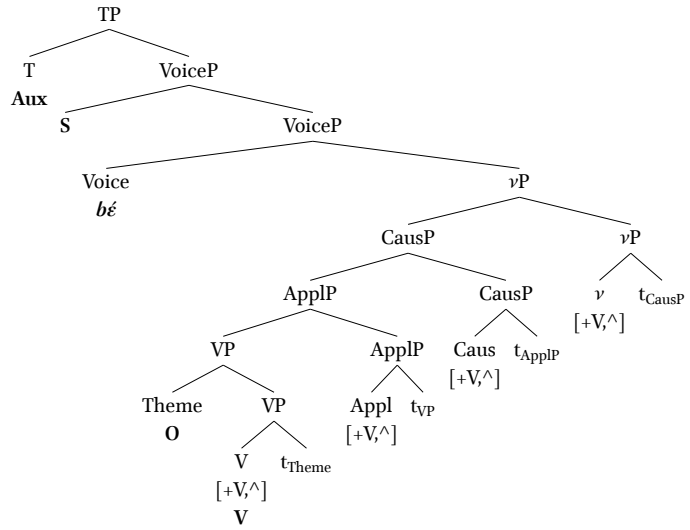
[31] Mous (2005:412) and Philippson (2022b:255) write that no other Mbam language besides Nomaándé has this construction, although the construction was previously noted for Tunen in Dugast (1971:334-5), who analyses it as a single emphatic pronoun which is split up by the TAM marker.

subject. I suggest tentatively that they may be used in natural speech to encode an individual's stance as part of the turn-taking patterns of dialogic speech.[32]

Turning back to the formal analysis of this construction, I propose that we can consider it as an instantiation of the in-situ subject position in which the low pronominal component is a subject pronoun realised in its base position. In other words, I presume that the low pronominal element – such as *aŋɔ́á* 'you' in (382) – is base-generated and pronounced in SpecVoiceP. A formal analysis then needs to capture the right SM-TAM-S_{Pron}-O-Voice-V order, with the voice prefix *bé* attaching as a prefix to the verb and the subject pronoun preceding the theme object and the verb. This construction therefore is diagnostic for the structure of the Tunen verb phrase, and so forms the third test for the analyses of Tunen Aux-O-V disharmony.

We saw in section §6.5.1 that the roll-up account (analysis type 1) struggles to capture the Voice prefix as attaching to the verb and not to intervening material. As the analysis does not adequately derive SM-Aux-O-Voice-V order without additional stipulations regarding the syntax/morphology interface, it also does not adequately derive the SM-TAM-S_{Pron}-O-Voice-V order. We can however adapt the structures seen in §6.5.1 to show the proposal that the subject pronoun is base-generated in SpecVoiceP, as in (383), an update of (370).[33]

(383)

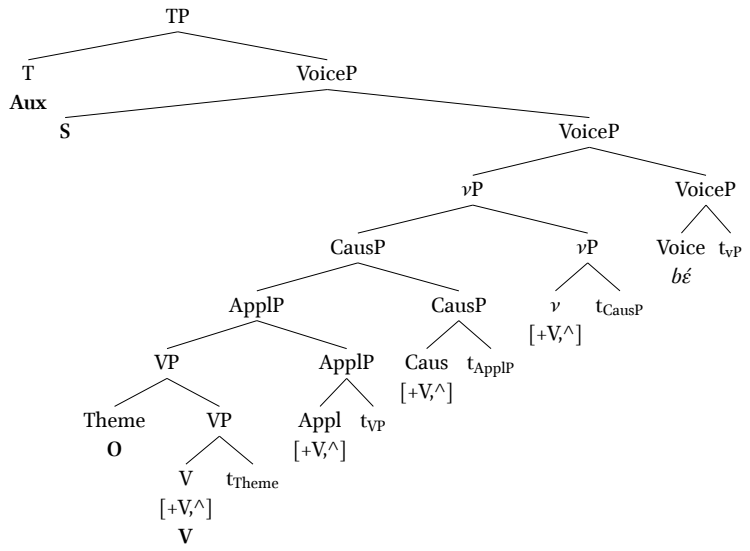


[32]Note that in Nomaándé, such split pronoun constructions, while not found in all tense/mood contexts, appear from the description in Taylor (1984, 1999); Wilkendorf (2001) to be much more frequent than in Tunen. This could be due to having grammaticalised from a previously more discourse-conditioned function. I leave this microvariation between Nomaándé and Tunen for further study.

[33]For brevity, I do not show the movement of the subject above the auxiliary in these trees (but still assume the movement schematised in (379)).

Alternatively, if the approach is taken where there is roll-up to SpecVoiceP, the last stage of which is undone post-syntactically via a morphological readjustment rule, then the structure would be as in (384). Note here that it is crucial that the verbal part is in the lower specifier of the VoiceP projection. This is possible if the movement of VoiceP's complement to SpecVoiceP precedes the External Merge operation that builds the SpecVoiceP position in which the subject is merged.

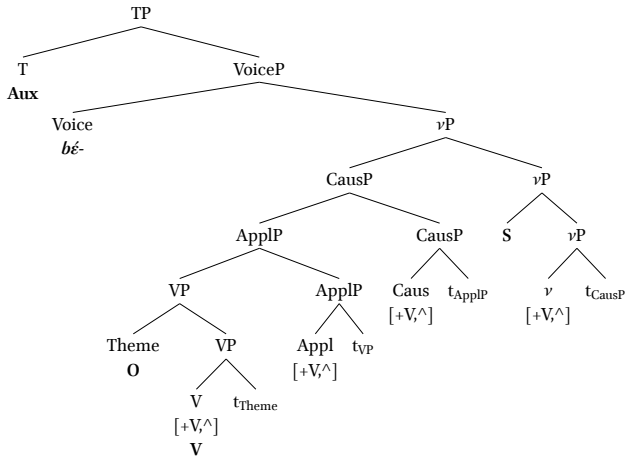
(384)



Note that if one instead takes Spec*v*P rather than SpecVoiceP as the position where the subject is base-generated, two specifiers are required: one for generation of the subject and another to serve as the landing site for roll-up of the CausP projection (or whichever of the verbal phrases is projected last). While the model I adopt allows for multiple specifiers (as presented as the null hypothesis in e.g. Chomsky 2008:146), note that this is incompatible with a strict application of the Antisymmetry approach of Kayne (1994), where the *Linear Correspondence Axiom* (*LCA*) disallows multiple specifiers for reasons of linearisation. The model I propose in this thesis therefore requires a different linearisation algorithm than the LCA.

Here, the model can *prima facie* have either of the two logically possible orders of specifiers, with nothing in the theory distinguishing between the two. However, we can see that only one order of specifiers matches the empirical situation in a construction where personal pronouns are taken to be spell-out of the subject in Spec*v*P. Order 1 incorrectly puts the object before the in-situ subject (385). Order 2 does not have this problem, although still has the more general challenge of the roll-up account in deriving the middle prefix as a prefix attaching to the verb (386).

(385)



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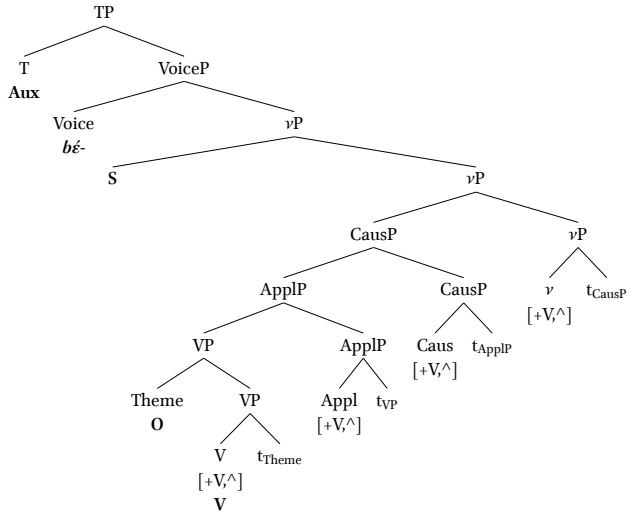
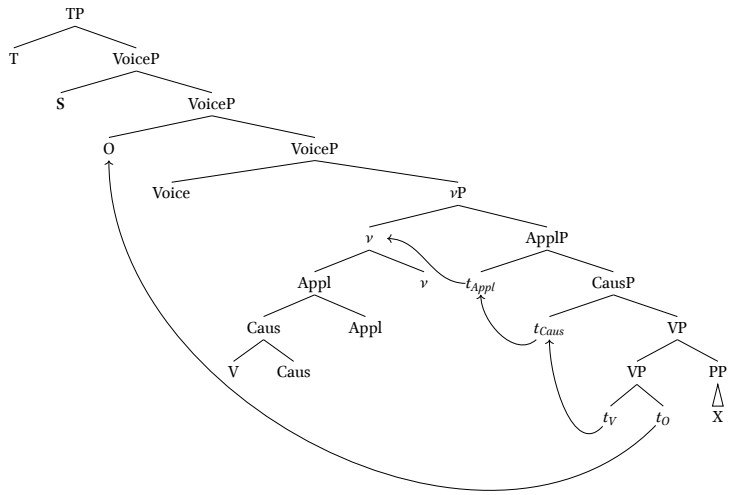


In summary, the roll-up movement analysis struggles to capture the SM-TAM-S_{Pron}-O-Voice-V construction due to its more general issue in capturing the prefixal Voice morphology, as seen in section §6.5.1, although the subject pronoun can be captured with respect to the rest of the *ν*P when the roll-up triggered by [*ν* [+V,^]] applies before the External Merge operation that inserts the subject pronoun.

Turning to the verbal head movement + object movement account, recall that V+*ν* form a complex head. As discussed above, I take SpecVoiceP to be the base-generation site for the subject (378). The proposal then looks as follows (387).[34]

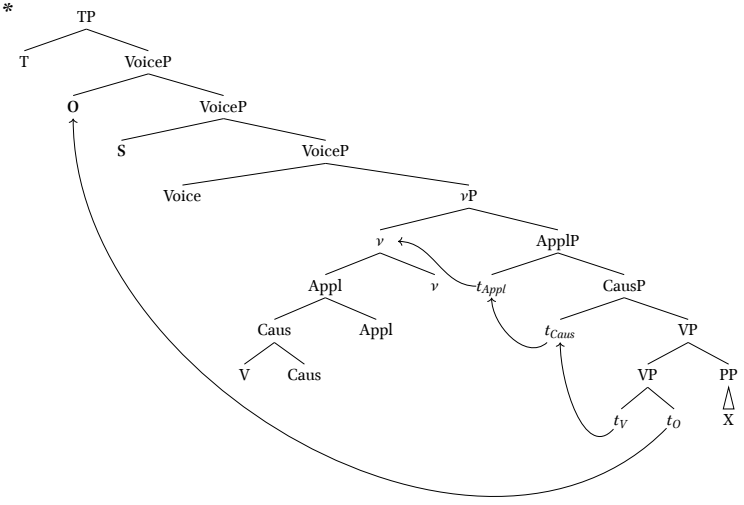
[34]Note here that if the object moves to Spec*ν*P instead of SpecVoiceP, then the structure would be linearised with the incorrect order S_{PRON}-Voice-O-V, not the desired S_{PRON}-O-Voice-V order. The

(387)



This version of analysis type 3 correctly captures the linearisation SM-TAM-S_{PRON}-O-Voice-V. Note however that such an analysis crucially relies on the object occupying the innermost specifier of VoiceP. If the object moved to the higher specifier, the derivation would generate the incorrect order O-S_{FOC}-Voice-V, as in (388).

(388) *



position of in-situ subjects is therefore a further argument in favour of SpecVoiceP as the landing site of object movement in Tunen (cf. section §6.5.1 above).

There are two ways of deriving the order of specifiers in (387), depending on the order of operations assumed in the syntax. The first way is to propose that the object movement operation precedes the structure-building operation that introduces the subject. The second way is to propose that the object moves after the subject has already been generated in SpecVoiceP, which means that the object must move via so-called *tuck-in movement* (i.e., movement to the innermost specifier). Whether or not this second analysis is desirable therefore depends on metatheoretical preferences regarding tuck-in movement and multiple specifiers. I will return to the discussion of tuck-in movement in relation to the derivation of ditransitives in section §6.5.5. I leave evaluation of the first analysis to a more comprehensive model of Tunen syntax that discusses the order of operations. Whatever the details of the analysis chosen, the point to conclude this test with is that the in-situ subject construction in Tunen can be derived in analysis type 3, providing evidence for SpecVoiceP rather than Spec*v*P as the landing site of object movement.

6.5.4 Test 4: Extension to ditransitives

So far, we have seen analyses applied to the derivation of transitive S-Aux-O-V-X constructions in Tunen. However, we saw in section §6.2.5 that the preverbal O slot in Tunen can be filled by multiple objects in a ditransitive construction. The fourth test for the formal analyses is therefore how well they can be extended to these double objects constructions.

As discussed in Chapters 4 and 5 (see also Kerr to appear), Tunen has two types of ditransitive constructions, one in which both objects are preverbal (S-Aux-O_{Goal}-O_{Theme}-V-X) and one in which the goal object is postverbal (S-Aux-O_{Theme}-V-Prep-O_{Goal}). The preverbal objects cannot be obliquely marked (i.e., cannot be introduced by a preposition), while the postverbal object must be. We saw in section §6.2 above that when the preverbal double object construction is used, there is a strict Goal-Theme order; the reverse order is not possible, regardless of IS context:

(389) Context: 'Who is the woman giving a gourd to?' + BaSIS photo stimulus

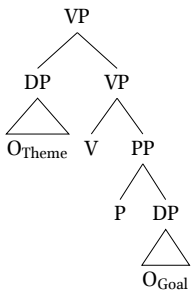
a. a nɔ́ **ɔsɔ́kɔ́ hɛtétɛ́** indi.
/a nɔ́ **ɔsɔ́kɔ́ hɛ-tétɛ́** índíə́/
SM.1 PST1 1.other 19-gourd give
'Elle donne une gourde à [l'autre]$_{FOC}$.'
'She gives a gourd to [the other (woman)]$_{FOC}$.' [PM 1541]

b. *a nɔ́ **hɛtétɛ́ ɔsɔ́kɔ́** indi.
/a nɔ́ **hɛ-tétɛ́ ɔsɔ́kɔ́** índíə́/
SM.1 PST1 19-gourd 1.other give
Intd.: 'Elle donne une gourde à [l'autre]$_{FOC}$.'
Intd.: 'She gives a gourd to [the other (woman)$_{FOC}$.' [PM 1542]

(390) Context: 'Who is the woman returning a calabash to?'
muəndú á ndɔ imítə́ túmbiə ɔ **mɔn**.
/mɔ-əndú a ᴴndɔ ɛ-mítə́ túmbiə ɔ **mɔ-ná**/
1-woman SM.1 PRS 9-calabash return PREP 1-child
'La femme remet la calebasse [à l'enfant]$_{FOC}$.'
'The woman returns the calabash [to the child]$_{FOC}$.' [JO 1586]

I assume that the two types of ditransitive constructions in Tunen derive from different underlying structures, following standard analyses of double object constructions crosslinguistically (see amongst others Anagnostopoulou 2003; Bruening 2010; Jackendoff 1990; Pesetsky 1995; Hale and Keyser 1993; Harley 1995, 2002; Ramchand 2008; Holmberg and Platzack 1995; Holmberg et al. 2019; see however Larson 1988; Ormazabal and Romero 2010; Hallman 2015 for alternative accounts). Specifically, the prepositional object construction in (390) can be simply analysed as an instance of the canonical S-Aux-O-V-X word order, where the goal object is a PP complement of the verb (391).

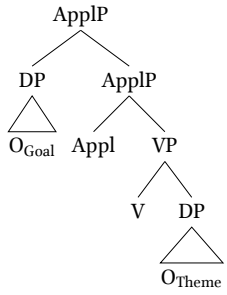
(391)



For the double object construction in (389a), there is no P head to license the recipient object; instead, the proposal is that it is licensed by an Appl head, crucially being generated in a higher position than the Theme object (which is licensed as complement to the V head) (392).[35]

[35]Appl is more specifically a high applicative head in proposals with both an inner (Appl$_{low}$) and outer (Appl$_{high}$) applicative, the former being generated within the VP and the latter dominating VP, as it does in (392) (Pylkkänen 2002, 2008 *et seq.*).

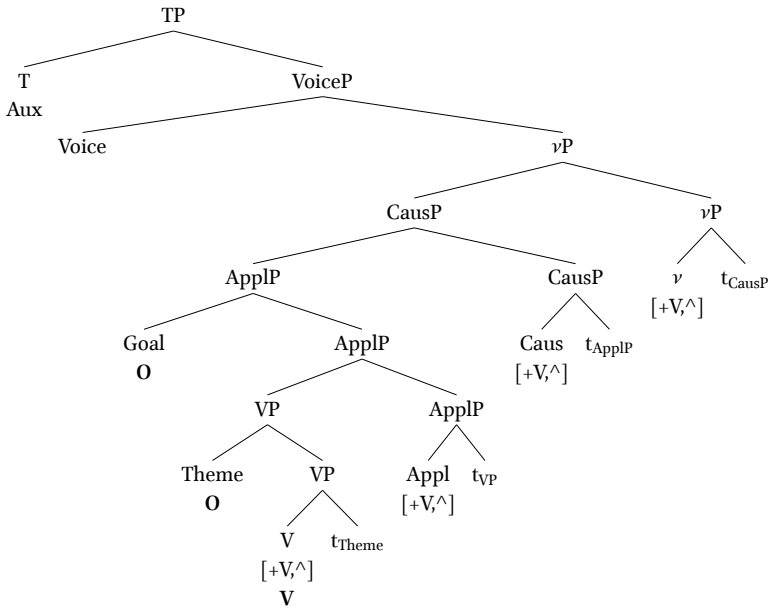
(392)



The prepositional object construction is easy to capture in the models developed of Tunen syntax so far (at least for analysis type 3), as obliquely-marked objects must stay in their base position. However, the ability for multiple objects to appear in the preverbal O slot as in (389a) requires further steps of analysis.

For the roll-up analysis (analysis type 1), multiple preverbal objects can be derived from the proposal that the recipient object is base-generated in SpecApplP. Here, the sequence Goal-Theme-V is then taken as part of the complement of the subsequent [V+,^] heads of the verbal head that trigger roll-up movement (393), resulting in the correct invariant Goal-Theme-V word order.

(393)

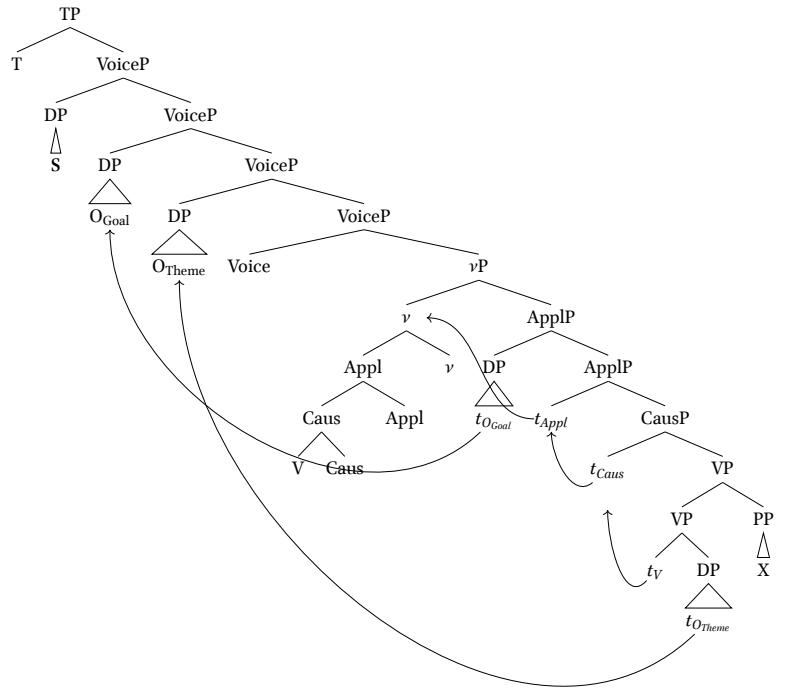


As (393) shows, the multiple preverbal objects in ditransitives are captured by the same mechanism of roll-up movement already applied in transitive construc-

tions and so do not constitute a problem for the roll-up movement analysis. The ability to account for ditransitives without additional mechanisms is therefore an advantage of analysis type 1.

In analysis type 3, by contrast, the object movement mechanism applied for transitive constructions does not derive the correct Goal-Theme-V order (assuming in the same way that the recipient object is base-generated in SpecApplP), because the movements postulated for the verb and theme object (387) do not affect the goal object. In other words, the basic proposal would predict the incorrect Theme-V-Recipient order, showing that adjustment is needed to capture the preverbal position of the recipient object. This can be done by postulating object movement of the goal object to a higher position than the theme object, as shown in (394).

(394)



While analysis type 3 can be adjusted in this way to derive the ditransitive constructions, it requires two stipulations. First, the analysis requires the stipulation that the landing site of the goal object is higher than that of the theme object. Note here that strict O_{GOAL}-O_{THEME} order is found for double object constructions in other languages and is therefore a restriction not only found in Tunen. For Scandi-

navian languages, for example, the strict O_{GOAL}-O_{THEME} order follows from Holmberg's Generalisation, which bans movement of the theme object across the indirect object (see e.g. Holmberg 1986, 1997; Broekhuis 2023). This stipulation for Tunen may therefore be captured as part of a broader study of derivational restrictions on movement operations, which I leave for further work.

The second stipulation is, if this analysis is applied with SpecVoiceP as the landing site for object movement, as illustrated in (394) above, it also relies on VoiceP having three specifiers, in strict S-Goal-Theme order.[36]

The use of multiple specifiers is significant both in terms of metatheoretical preferences regarding tuck-in movement (i.e., movement to an inner specifier) and in terms of phase theory. For example, under certain definitions of phases, only the outermost specifier is directly accessible after phasal transfer, meaning that only the Goal object in Tunen would be accessible (assuming Voice is a phase head). In this sense, the stricter nature of PIC1 would result in different predictions regarding accessibility for further operations than PIC2 would (Chapter 2 section §2.3.2). I leave these details for further study; the point to note here is that the analysis chosen to deal with the current data will make empirical predictions regarding availability for material to participate in operations in subsequent phases. As a more general metatheoretical evaluation, by involving two movement mechanisms in contrast to the single roll-up mechanism used in analysis type 1, the head movement + object movement analysis is a less elegant analysis of ditransitives. However, it is still able to capture the data.

6.5.5 Test 5: Extension to modified DPs

The final challenge for the roll-up and head movement + object movement analysis to Tunen is the derivation of modified DPs. One main component of this is that Tunen has discontinuous DPs of the construction S-Aux-O-V-Mod (395), found for numerals, quantifiers, adjectives, for objects and subjects (to be further illustrated in Chapter 7).

(395) Context: 'What do you see?'
mɛ́ ndɔ **tunoní** sinə **tɔ́lál.**
/mɛ ᴴndɔ **tɔ-noní** sinə **tɔ́-lálɔ́**/
SM.1SG PRS 13-bird see 13-three
'Je vois trois oiseaux.'
'I see three birds.' [EO 225]

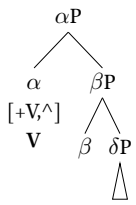
[36] If applied with Spec*v*P as the landing site for object movement, this analysis of ditransitives still requires the stipulation of strict Goal-Theme order of the two VoiceP specifiers.

(396) Context: 'Do you see two birds?'
éɛ, mé ndɔ **tunoní** sinə **tɔ́fandɛ**.
/ɛɛ mɛ ᴴndɔ tɔ-noní sinə tɔ́-fandɛ́/
yes SM.1SG PRS 13-bird see 13-two
'Oui, je vois deux oiseaux.'
'Yes, I see two birds.' [EO 1408]

While discontinuous DPs are often viewed as low-frequency constructions driven by a difference in IS status between the noun and modifier (e.g. Fanselow and Ćavar's 2002 Contiguity Principle), in Tunen, this construction is common (across consultants) and is pragmatically-neutral, as I will show in Chapter 7. There is therefore no reason to motivate movement of Mod driven by IS features (unlike discontinuous DPs in other languages formed by A'-movement to the clausal left periphery). Instead, the intuition is that the modifier is stranded in-situ, while the object has moved higher via formal movement.

Discontinuous DPs of this kind are a significant challenge for the roll-up movement account (analysis type 1) because ^-feature driven movement always takes the whole complement. In other words, it is not possible under such a roll-up account to take only a sub-XP of V's complement such that the modifier is stranded postverbally. This restriction is illustrated below. From a base structure in which a head has the ^-feature specification (397), the only possible result is to move the entire complement of that head into the specifier position (398); it is not possible to only move a sub-component of the complement (399).

(397)



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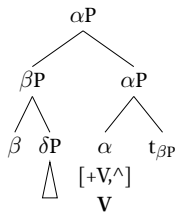
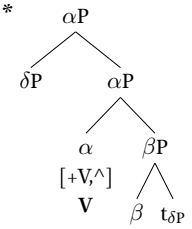
(398)



(399) *



In the next chapter, I will show that this causes severe issues for the application of the roll-up analysis to Tunen. As the details require a proposal of the internal structure of the Tunen DP, I leave them out here for brevity reasons (see Chapter 7). The basic point is that any modifier present within βP in (397) will be obligatorily moved under the roll-up analysis and cannot be stranded in the postverbal position.

Although I focus here on the derivation of discontinuous DPs, a related issue is that VO orders are sometimes accepted when modifiers are present, constituting an exception to the general unavailability of VO word order in Tunen (cf. Chapter 5 section §5.3). We will see in Chapter 7 that while the discontinuous O-V-Mod order is standard (395)-(435), V-O-Mod is also accepted (400a). O-Mod-V in contrast is generally judged ungrammatical or reduced acceptability (400b) (despite N-Mod being the order in contiguous DPs; Chapter 4 section §4.3, Chapter 7).

(400) Context: "How many people do you see?" (+ picture)

a. mɛ́ ndɔ sinə **bɛndɔ báfandɛ**.
/mɛ ᴴndɔ sinə **bɛndɔ** **bá-fandɛ́**/
SM.1SG PRS see 2.person 2-two
'Je vois deux personnes.'
'I see two people.' [JO 541]

b. ?mɛ́ ndɔ **bɛndɔ báfandɛ́** sinə.
/mɛ ᴴndɔ **bɛndɔ** **bá-fandɛ́** sinə/
SM.1SG PRS 2.person 2-two see
'Je vois deux personnes.'
'I see two people.' [JO 543]

These data are surprising for our understanding of Tunen, which is otherwise consistently OV and not VO. In terms of the formalism, the challenge is how such postverbal objects are licensed. I assume that the object movement postulated in analysis type 3 is an instance of A-movement driven by licensing (i.e., L-movement). This proposal is motivated by the fact that the O slot in Tunen OV constructions is only filled by DP objects, not PP objects (which are licensed by the P head) or clausal objects. In this way, Tunen matches other languages with OV surface patterns argued to derive from object movement of DP objects (see e.g. Thráinsson 2007; Svenonius 2000). The standard movement of the object is therefore movement to a structural case position.

The puzzle then is why movement of DP objects should be optional, resulting in both O-V-Mod and V-O-Mod orders with no clear IS difference (under the understanding that licensing is not optional). It could be argued that V-O-Mod is in fact

not a spell-out of the base V-O-Mod structure and instead involves extraposition (in parallel to treatment of verbs taking complement-initial embedded clauses in OV languages as always involving extraposition; see e.g. Biberauer et al. 2014:172). I leave this hypothesis to be tested when diagnostics of extraposition in Tunen are available. A second puzzle is why O-Mod-V should be ruled out.[37] If object movement is just formal movement of V's complement, there is no theory-internal reason why movement of the entire object should be dispreferred.[38]

In Chapter 7, I will provide more detail on the specific derivation of the discontinuous DP construction in Tunen, which requires an analysis of Tunen nominal syntax. The conclusion is that modified DPs provide additional evidence against the roll-up movement account and in favour of the head movement + object movement analysis. In Chapter 5, I discussed the rare cases of VO word order with unmodified DPs in Tunen. I will then tie together the consequences for the formal analysis in Chapter 8. For current purposes, we can conclude that this test provides a further challenge to the roll-up analysis (analysis type 1), while being possible to account for in the head movement + object movement analysis (analysis type 3).

6.6 Summary of analyses

In summary, we have seen in section §6.3 that multiple different underlying derivations have been proposed for disharmonic Aux-O-V word order patterns in different languages, as exemplified for roll-up movement in Germanic (analysis type 1), base-generation of Aux-O-V word order in West African languages (analysis type 2), and verbal head movement analyses in Bantu, which must be modified by the additional mechanism of object movement in order to apply to Tunen's Aux-O-V syntax (analysis type 3).

As motivations behind these different structural derivations included different empirical behaviour with respect to verb movement diagnostics and general headedness properties, in section §6.4 I showed how these basic syntactic diagnostics pattern for Tunen. These diagnostics showed that there is evidence for a low level of verb movement (to a head below Asp) in Tunen, and that the language is generally head-initial. On the basis of this, I showed what a basic application of the three formal analyses would look like for Tunen. The base-generation of OV analysis (analysis type 2) was noted to be incompatible with the evidence for verb movement

[37] As will be discussed in Chapter 7, note that this varies across speakers: some speakers do accept O-Mod-V, and this construction is attested in the Tunen Bible Matthew subcorpus (CABTAL 2019).

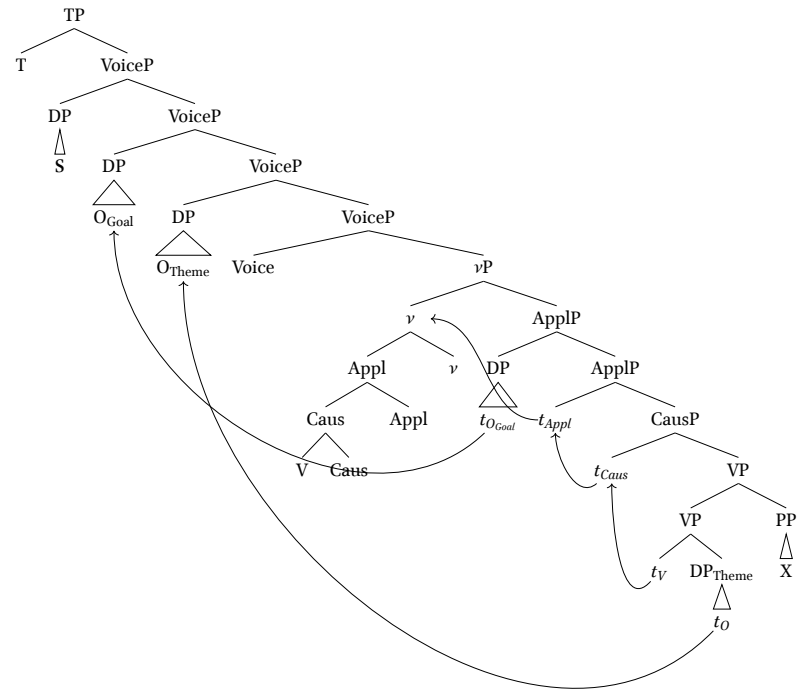
[38] Here, a parallelism can be made with pied-piping in *wh*-questions, where in some languages only the *wh*-word is fronted, while others allow the noun to move along with it.

and therefore ruled out from further consideration. This left analysis type 1 and 3 as serious contenders for Tunen.

In section §6.5, I presented five tests that served to tease apart the remaining two analyses, namely (i) the derivation of Tunen's verbal morphology, (ii) the derivation of O-V-X order in combination with Aux-O-V, (iii) the position of in-situ subjects, (iv) the derivation of ditransitives, and (v) the ability for modified DPs to result in discontinuous DPs and VO constructions. Tests (i)-(iii) were shown to require greater stipulation for analysis type 1 than for analysis type 3. Test (iv) was shown by contrast to require further stipulation in analysis type 3. Finally, test (v) was introduced as a serious issue for analysis type 1, which provides strong evidence in favour of analysis type 3 and so will form the focus of the next chapter.

On the basis of these test results, I propose that the best available analysis for Tunen's disharmonic word order is the proposal in (401), in which there is both V-to-*v* movement and object movement to SpecVoiceP.

(401)



The verb movement mechanism employed in this analysis matches common assumptions about the derivation of verbal morphology in Bantu, which is desirable considering the close genealogical relationship between Tunen and (other) Narrow Bantu languages.[39] Secondly, the derivation of OV in Tunen through object movement contributes to an understanding of nominal licensing in Tunen. Specifically, I propose that the object movement that derives OV word order is A-movement motivated by nominal licensing (i.e., L-movement). This movement is purely formally-conditioned, rather than being driven by an IS feature.

I will further discuss this analysis in the following chapters, when more data from discontinuous DPs and word order variation will be considered. This chapter will now continue its investigation into OV word order in Tunen by reflecting on the what this formal syntactic analysis of OV in Tunen means for our understanding of syntactic typology (section §6.7) and the diachrony of OV vs VO word order change in Benue-Congo (section §6.8).

6.7 Reflections on typology

6.7.1 Tunen within Benue-Congo and Africa more broadly

In the previous sections, I showed that OV order in Tunen is not conditioned synchronically by IS, and is instead unmarked. I also showed that Tunen has a disharmonic Aux-O-V clausal word order alongside O-V-X syntax. I showed that Tunen patterns otherwise similarly to (other) Narrow Bantu in being consistently head-initial, with verbal derivations built up as suffixes; the difference is the degree of verb height and the addition of object movement. We can ask now how this updated understanding of Tunen syntax fits into the comparative picture on word order variation in other languages.

Recall from section §6.2 above that Nyokon (Bantu A45, Cameroon) and Tikar (Bantoid, Cameroon) have TAM-conditioned S-Aux-O-V-X/SVO alternations (see also Mous 1997, 2014, 2022; Kerr 2024) and that Ewondo/Eton (A72, Cameroon) and Nomaándé (A46, Cameroon) have S-Aux-O-V-X restricted to pronominal objects, while other Bantu/Bantoid languages have SVO as the base word order.[40] We there-

[39] In other words, this analysis fares well under the metatheoretical heuristic to prefer to analyse closely related languages in the same fashion; proposing a completely different analysis for verbal morphology in Tunen would mean assuming that significant syntactic reanalysis has taken place somewhere in the diachrony of Tunen versus other Bantu. While this is possible, it should not be taken as the null hypothesis.

[40] Certain Bantu languages around the B70 group in Congo have SOV word order due to an immediate-before verb (IBV) focus position. Tonal evidence supports an analysis in which this word

fore see a difference in synchronic patterning between OV word order in Tunen and VO in its immediate neighbours within the Benue-Congo family.

Looking more generally at word order variation in Africa, S-Aux-O-V-X is argued to be crosslinguistically rare, but is found in West Africa in the Mande languages, Senufo/Gur, Kwa, and Atlantic groups (Creissels 2005, 2018; Gensler 1994, 1997; Gensler and Güldemann 2003; Heine 1976, a.o.). On the one hand, this has been taken as evidence for S-Aux-O-V-X (or subcomponents Aux-O-V/O-V-X) to be an areal feature of a region of West/Central Africa named the *Sudanic Zone* or the *Macro-Sudan Belt* (MSB; Gensler and Güldemann 2003; Güldemann 2008).[41] On the other hand, the S-Aux-O-V-X surface pattern is generally argued to have arisen through unrelated historical patterns, which many authors argue means that S-Aux-O-V-X should be treated as a group of word orders rather than a single pattern or feature (Creissels 2005; Nikitina 2011; Sande et al. 2019). Furthermore, Creissels (2005, 2018); Sande et al. (2019) argue that the uniformity and extent of S-Aux-O-V-X has been overstated (Hyman 2011).

As I showed in section §6.2.5, the 'O' of S-Aux-O-V-X has many aspects of variation within African languages, namely (i) the number of objects (single preverbal O or multiple objects allowed), (ii) the type of object (pronominal only or also lexical NP; locative), (iii) the IS status of the object (extrafocal, focal, contrastive), and (iv) the thematic type of object (theme, recipient/beneficiary). This amount of variation calls into question the validity of 'S-Aux-O-V-X' as a descriptive label and problematises presentations of a monolithic 'African Aux-O-V' word order type, which I argue are misleading.

In order to make sense of the variation, Güldemann (2008:162-3) proposes a bipartite distinction between (i) language families of the East which have S-(Aux)-O-V-X as a "grammatically conditioned phenomenon", i.e. in alternation, often conditioned by IS of the object (cf. Güldemann 2007), and (ii) language families of the West, where S-Aux-O-V-X is "far more salient" and hardly or not at all influenced by functional factors. Such a distinction into eastern versus western languages is endorsed by Creissels (2018), who additionally highlights distinctions between S-Aux-O-V-X in Mande and S-Aux-O-V-X patterns in other languages of West Africa.

What we have seen in this chapter for Tunen provides a counterpoint to this

order can be taken to be innovated from a cleft construction. Note that it is not taken to be the basic word order, which is SVO; I therefore do not discuss these languages further here and refer the reader to Kerr et al. (2023); Li (to appear *a*, *b*) and references therein for further discussion.

[41]Throughout this thesis, I use *West/Central Africa* as a descriptive label covering the region in which Tunen and these other languages are spoken. While this label is not perfect (especially as I do not mean to include languages throughout central Africa), I use it to avoid proposing that this is a linguistic area (cf. the use of the term *Northern Sub-Saharan Africa* in Idiatov and Van de Velde 2021).

bipartite presentation of S-Aux-O-V-X in Benue-Congo languages of the East versus languages of West Africa. Despite clearly being a Benue-Congo language (Chapter 2 section §2.5), Tunen has S-Aux-O-V-X word order that is not conditioned by IS, not being an exceptional pattern found alongside a basic VO pattern. Instead, the preverbal O position is a general position for objects, with S-Aux-O-V-X applying across TAM contexts and clause types.

We therefore observe different types of Aux-O-V languages within the Benue-Congo group. On the one hand, Tunen has rigid S-Aux-O-V-X word order, which I argued in sections §6.5-6.6 to be derived by formally-conditioned object movement in addition to verb movement. In contrast to Tunen, Nyokon (Bantu A45) and Tikar (Bantoid, Cameroon Stanley 1997) have TAM-conditioned OV/VO alternations (Mous 2005). Ewondo/Eton and Nomaándé on the other hand have OV restricted to pronominal objects, compatible with an analysis in which IS is the primary conditioning factor for determining clausal word order. These facts highlight the inadequacy of a monolithic characterisation of the 'eastern languages'. These differences within the Benue-Congo languages of Cameroon also parallel the differences reported between S-Aux-O-V-X languages of West Africa (the 'western languages'), as reflected on by Sande et al. (2019) (see also Creissels 2018:61-69):

> "while many typological discussions of word order are based on surface order, **the results in this section 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)

In other words, the label 'S-Aux-O-V-X' is misleadingly reductionist, and a more meaningful crosslinguistic comparison can be made on the basis of structural properties. On account of the empirical variation observed between the West African languages of Sande et al.'s (2019) study, they propose a 3-way structural typology of Aux-O-V languages within the Macro-Sudan Belt linguistic area.

(402) Type I. 'true' S-Aux-O-V as derived from a disharmonic underlying structure with V movement

Type II. 'true' S-Aux-O-V as derived from a disharmonic underlying structure without V movement
Type III. Languages in which S-Aux-O-V surface orders arise through verb movement from head-initial VP structures

Note here that Sande et al.'s (2019) sample of 54 languages of West Africa did not include the Benue-Congo languages Tunen, Nyokon, Nomaandé, Eton, or Ewondo. We can therefore extend their typology of Aux-O-V languages by noting that S-Aux-O-V-X in Tunen is derived by verb movement + object movement. The S-Aux-O-V-X pattern in Nyokon is more likely to be related to the T domain, while Ewondo S-Aux-O_{PRON}-O-V-X could potentially be derived through an IS-conditioned movement trigger. We can now consider a structural typology of Aux-O-V disharmony.

6.7.2 Tunen within a structural typology of disharmonic word orders

Based on the syntactic diagnostics and analyses reviewed in this chapter, we can identify the parameters of variation in analyses of Aux-O-V word order patterns crosslinguistically given in Table 6.7 overleaf.

While some of these aspects of variation may be argued to boil down to different theoretical preferences on the part of the authors, we have seen in this chapter that they are also motivated by significant differences in the (morpho)syntactic properties of each language. The investigation of S-Aux-O-V-X word order in Tunen showed that it patterns differently from other Benue-Congo languages in not being synchronically conditioned by TAM or IS context, instead being derived through formally-conditioned object movement. We can therefore update our typological understanding of Aux-O-V word order patterns in Africa to include the presence of formally-conditioned Aux-O-V word order outside of the Mande group.

This updated overview of differences in S-Aux-O-V-X word order patterns raises questions about how such synchronic variation in word order patterns came about diachronically, which we can turn to in the next section.

6.8 Reflections on diachrony

6.8.1 OV in Niger-Congo: old or innovative?

A widely-discussed question in Africanist syntax has been whether Proto-Bantu and Proto-Niger-Congo had OV or VO basic word order. Early proposals for the

Parameter	**Example**
Headedness	
Is the VP underlyingly head-final?	Guébie, Dafing, Uralic (e.g. South Sámi)
or is the VP underlyingly head-initial?	Gwari, Fongbe, Tunen, Nyokon
Nature of movement in the VP domain	
Is there V or VP raising?	Kru, Makhuwa vs Germanic
Is there roll-up movement?	Germanic dialects (e.g. Yiddish)
V movement	
Does V stay in-situ?	Guébie
Does V move to *v*?	Tunen
Does V move to Asp?	Canonical Bantu (e.g. Makhuwa)
Does V move to T?	Kru-type SVO/S-Aux-O-V-X alternation
Does V move to C?	Germanic V2
Object parameters	
Is the object nominalised?	Fongbe
Is there object movement?	Tunen
Is object movement driven by information structure (e.g. [+given])?	Ewondo/Eton, Old English
Is object movement driven only by a formal feature (e.g. [+V^])?	Germanic, Tunen

Table 6.7: Parameters of variation in formal analyses of Aux-O-V disharmony with example languages/language families discussed in this chapter.

syntax of Proto-Niger-Congo argued for *SOV[42] as the historical order (Givón 1975; Hyman 1975; Williamson 1986), while the more recent consensus is that the order was *SVO (Heine 1976, 1980; Heine and Reh 1984; Claudi 1993). Gensler (1994, 1997) and Gensler and Güldemann (2003) propose a third analytical possibility, whereby the disharmonic syntagm *S-Aux-O-V-X co-existed with *SVO (see also Güldemann 2022). The presence of languages with S-Aux-O-V-X is therefore significant for theories about the word order of the respective proto-languages. While Gensler (1994, 1997) proposes explicitly that *S-Aux-O-V-X word order in languages of West/Central Africa is a feature inherited from Proto-Niger-Congo, in Güldemann (2008), S-O-V-X is recast as an areal feature of the Macro-Sudan Belt (MSB) linguistic area.

6.8.2 The areal argument

Güldemann's (2008) alternative account for S(-Aux)-O-V-X word orders in Africa is that they have arisen in the MSB through areal pressure for this surface pattern (which may be arrived at through different underlying processes). Such a view is based partly on the argument that the pattern is crosslinguistically and typologically unusual, but found in multiple languages of Africa (Gensler and Güldemann 2003; Güldemann 2008; Creissels 2018).

While the MSB as a linguistic area is supported by a variety of linguistic features (e.g. ATR harmony systems and labio-velar stops; see a.o. Clements and Rialland 2008; Güldemann 2008; Rolle et al. 2020; Idiatov and Van de Velde 2021), the areal account of the 'S-Aux-O-V-X' feature (or the combination of 'Aux-O-V' and 'O-V-X' features) in particular has been critiqued by various sources. One issue is the extent to which S-Aux-O-V-X word order can be shown to have arisen through areal pressure versus language-internal change. Hyman (2011:11) for example asks "if this order is so old, why is it so common that we can identify the verbal origin of the "AUX"?', noting "no argument is given that it must be reconstructed to [Proto-Niger-Congo] rather than developing via the natural V > AUX grammaticalization pathway" (Hyman 2011:13). One potential counterpoint to this critique, however, is that the S-Aux-O-V-X template could go through multiple cycles of auxiliary creation and replacement, as considered by Gensler (1994).

Another issue regarding the areal argument is the empirical question as to how rare S-Aux-O-V-X word orders truly are. The most convincing portrayal of the argument is that S-Aux-O-V-X is only found in Africa (as in Gensler and Güldemann's 2003 proposal of this pattern as an 'Africa-specific quirk'). However, if S-Aux-O-V-X

[42] Following standard practice in historical linguistics, the asterisk <*> here indicates a reconstructed form (not an ungrammatical order).

is split into the subcomponent(s) Aux-O-V and/or O-V-X, as has been done in later work, then the rarity argument is weakened, as both Aux-O-V and O-V-X are found in many languages outside Africa. The number of Aux-O-V patterns crosslinguistically is similarly increased if a less restrictive definition of 'Aux' is used than that of Dryer (2013), where a non-verbal auxiliary is included (as discussed in section §6.2.4). Hyman (2011:13) also comments that "[the] distribution [of S-AUX-O-V is spotty [within the MSB]"; see also e.g. Creissels (2018). The argument here is that the extent of S-Aux-O-V-X has been somewhat overstated. If the word order spreads via areal pressure, the question is why so many intervening languages only have the VO pattern. In other words, why do so many languages in the area *not* have these S-Aux-O-V-X patterns?

This sceptism regarding the validity of the areal explanation draws on robust crosslinguistically-supported research showing that VO↔OV word order change can arise language-internally through known grammaticalisation paths (Heine and Reh 1984; Heine and Claudi 2001; Heine and Kuteva 2004), rather than being arrived at through contact or areal pressure, of which V>Aux grammaticalisation is one example. A similar language-internal argument to the language-internal V>Aux grammaticalisation proposal is provided by Heine and Claudi (2001), who argue that S-Aux-O-V-X has arisen not through areal diffusion or genetic inheritance, but recurrent grammaticalisation based on Gen-N order within the nominal domain. Heine and Claudi (2001:43) thus conclude that "the presence of type B [involving the word order S-Aux-O-V-X] in different African languages is neither a matter of common origin (= genetic relationship) nor of language contact (= areal relationship)", again calling into question the applicability of an areal analysis for Tunen.

Relevant to our study of Tunen, we can consider that Tunen is spoken far away from the West African Aux-O-V languages, at the Southern periphery of the proposed MSB linguistic area. Most interestingly, Tunen has in some ways greater syntactic similarity to Mande languages furthest from Cameroon in that the Aux-O-V pattern is rigid across TAM and IS contexts. While it is likely that Aux-O-V patterns in Kru and Gur are influenced through contact with adjacent Mande languages — meaning that there is indeed an areal component to the synchronic distribution of Aux-O-V word orders — the geographical distance from the Benue-Congo group Tunen which Tunen is part of makes it more likely that Tunen OV order grammaticalised independently from the West African cases. In other words, the null hypothesis should be that Tunen word order did not arise through contact with Mande; the burden of proof is on an areal account to show how such language contact could have arisen given the distances in question. I therefore consider it unlikely that Tunen's S-Aux-O-V-X is related to areal influence and propose a language-internal grammaticalisation account as the null hypothesis. I turn now to building up a basic

proposal of how such a language-internal process could have taken place.

6.8.3 Previous accounts of OV in Tunen

If OV order is not inherited from a proto-language and not arrived at through areal influence, the question arises as to how it developed in Tunen. This question is particularly pressing for authors who consider VO→OV word order change to be rarer than the inverse OV→VO pattern (see e.g Givón 1977:242; Kiparsky 1996:140; Roberts 2021:482). Earlier work on Tunen by Maarten Mous proposed that Tunen's OV syntax is an innovation from a historical VO word order (Mous 1997, 2005, 2014), a view supported by Hyman (2011). I review the basics of the proposal here, condensing arguments from Kerr (2024).

One existing proposal for VO → OV word order change in African languages relies on nominalised objects, where OV constructions can arise due to Gen-N word order in the noun phrase (Claudi 1993; Heine and Claudi 2001). As Mous notes (see also Williamson 1986:7), this proposal cannot however apply to Tunen, as Tunen has N-Gen, not Gen-N word order (Mous 2005; section §6.4.2 fn21). Mous therefore sketches a possible grammaticalisation scenario through nominalisation in infinitival constructions and homophony of the preposition and infinitival prefix, where the OV syntax found in infinitival constructions (403a) was generalised to all objects via analogy and V>Aux(>TAM) grammaticalisation (403b).

(403) **Mous' (2005) infinitival pathway**

a. S V ɔ O (ɔ) V_{INF}

b. S TAM O_{Pron} V (Kerr 2024:317)

Mous proposes that Tunen's neighbours with OV/VO alternations also have innovative OV word order. However, the details of the infinitival process are unclear and the empirical data on Nyokon, Ewondo, and Tikar are very limited. I discuss this further in Kerr (2024), where I argue that the infinitival pathway is a possible grammaticalisation source of OV order in these Cameroonian Bantu/Bantoid languages, but is still unclearly motivated, in part due to variation between Tunen, Nyokon, and Tikar, for example the lack of homophony of preposition and infinitive in languages besides Tunen.

Another relevant proposal for clausal word order change in African languages is the V>Aux(>TAM) grammaticalisation pathway, whereby the former main verb becomes an auxiliary or TAM marker, with another element then becoming the main verb (Claudi 1993; Heine and Kuteva 2004; Nurse 2008). Such a change has been proposed to be crosslinguistically common and therefore a natural change

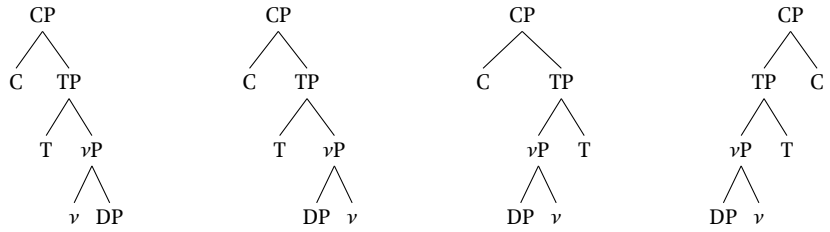
(Hyman 2011:13), found with verbs such as 'to begin', 'to finish', and 'to come' (Heine and Reh 1984:113-135). In comparing the Tunen forms of these verbs with the Tunen TAM system, I did not find any clear correspondences that provide evidence for this change (Kerr 2024:313-316). However, this is not to say that V>Aux grammaticalisation did not occur in Tunen, rather that no strong claims can be made about it in the absence of further evidence.

As the mechanism of innovation of OV word order in Tunen is thus not yet fully understood, a question we can ask is whether the formal synchronic analysis presented in this chapter can lead to any new insight into this diachronic question. In order to do so, some background on generative perspectives on word order change is needed.

6.8.4 Generative perspectives on word order change

Work in the generative literature on disharmonic word order related to FOFC makes strong predictions about the directionality of headedness change. The claim is that change to head-finality must start at the lowest phrase within an extended projection (SATBG; Roberts 2019:140-141; section §6.3.3). For our current purposes, the relevant extended projection is the verbal domain, and so we have the strong prediction that a head-initial language can introduce head-finality at the VP level, while a head-final language cannot move to head-initiality starting from the VP but must instead start from the top of the extended projection (i.e., the CP domain). This restricted pathway in word order change in the clausal domain is illustrated in (404).

(404) **Stages of word order change in the clausal domain**



This perspective is compatible with the idea that OV word order in Tunen is innovative (Mous 2005; Kerr 2024). Specifically, Tunen word order would be at Stage

II of (404), starting from a harmonically head-initial structure (Stage I). The relevant empirical context is that we see both languages with VO and Aux-O-V order in Africa (= Stages I and II), but not languages with C-O-V-T order (Stage III).[43] This makes the Aux-O-V patterns less likely to have derived from a harmonically head-final initial state (Stage IV) than a harmonically head-initial one (Stage I), as there is no trace of the Stage III part of the process in surrounding languages.

Another point relevant for the formal derivation of African Aux-O-V is the question as to whether the preverbal object position is conditioned by IS or by formal object movement. We can take the synchronic variation to reflect variation in whether such IS features are active in the grammar. Such debates are also found in the discussion of Aux-O-V derivation in other language families. For example, recent work on word order variation in Germanic has argued for IS as a conditioning factor for OV/VO variation, in contrast to previous work that relied on non-IS factors such as prosodic weight of postverbal objects. Struik and Van Kemenade (2020, 2022); Struik (2022) for example argue that the choice between VO and OV in Germanic was driven by object movement triggered by givenness (see also Bech and Eide 2014 and chapters therein). This leads to the proposal that variation in IS-sensitivity of OV languages in West/Central Africa may be related to variation in featural specification on heads in the verbal domain. In the following section, I propose that word order change in the African languages may be derived through the grammaticalisation of formal movement from previously IS-conditioned movement, i.e., whether or not IS-features drive movement operations within the Narrow Syntax.

6.8.5 Proposal for Tunen

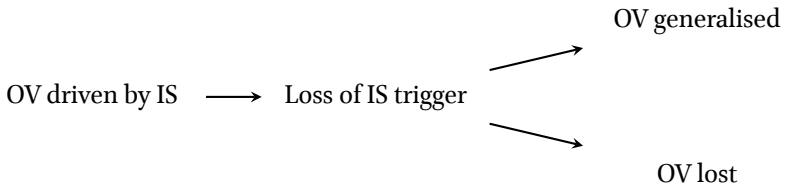
I have proposed in this chapter that Tunen's OV word order is derived via formally-conditioned A-movement of the object(s) to SpecVoiceP, driven by a licensing requirement (L-movement). In other words, Tunen's preverbal object placement is a basic fact of Tunen syntax rather than an IS-conditioned word order pattern.

While IS is therefore not required for the derivation of OV word order in synchronic terms, it is still possible that Tunen's word order has grammaticalised from an alternation that was conditioned by IS in an earlier stage of the language. I propose along these lines a diachrony of IS > formal movement conditioning, whereby OV order can be generalised from a previously IS-motivated system. Such an ap-

[43] This statement is based on comparative work on word order variation such as Heine (1976). It could be falsified if a language is found in which there is evidence for T consistently following the verb. I do not consider Mande languages in which the verb can take a TAM suffix as Stage III cases, as this is not the main TAM position able to appear alone (see e.g. Creissels et al. 2008:103), and so this verbal suffix is unlikely to reflect the T position.

proach is compatible with Güldemann's (2007) description of IS-conditioned object movement in Benue-Congo but extends it to a further grammaticalised type of movement no longer with a semantic/pragmatic function, as sketched in (405) below in comparison to Struik and Van Kemenade (2020, 2022) and Struiks' 2022 proposal for Old English.

(405) **Word order change related to IS features**



In other words, consistent OV word order in Tunen could have arisen from a historic stage in which OV was conditioned by an IS trigger; after the IS trigger was lost, the movement was generalised in Tunen. This is in contrast to the other logical possibility, in which the loss of an IS trigger results in the loss of OV (as in Old English). In this way, languages can differ in directionality of word order change due to changes between IS and formal movement features.

In considering the evidence for word order change, one question is the extent of variability in the data (which may be used to indicate a recent change that has not yet been fully generalised across all speakers' grammars). In terms of the rare SVO patterns found in Tunen (for which see Chapter 5 section §5.3), one hypothesis is that they are preservations of the earlier SVO syntax (although this is not the only possible account). However, we saw in section §6.2 and in Chapter 5 that OV in Tunen is synchronically consistent across TAM contexts, IS contexts, and clause types, meaning that the existence of a previously IS-conditioned stage proposed in (405) is based primarily on comparative arguments about OV across Benue-Congo.

An alternative to this proposal that a previously IS-conditioned movement alternation was generalised would be to say that OV in Tunen arose through a TAM-driven alternation, like what is seen in various West African languages like those of the Kwa and Gur groups, and what is also seen synchronically in the neighbouring Western Mbam language Nyokon and nearby Bantoid language Tikar (Stanley 1997; Mous 2005, 2014, 2022; Kerr 2024). Such TAM-conditioned alternations could be considered to be indirectly IS-driven in that there is an argued relationship between TAM forms like the progressive and IS categories like focus, as Güldemann (2003) argues. However, this account needs to be shown to capture the set of TAM forms that do and do not trigger OV order in individual languages. As the sets of

TAM contexts triggering OV vary across languages and are not restricted to the prototypical case of present progressive discussed in Güldemann (2003), the burden of proof is to show that there is a meaningful grouping of these TAM forms that can explain why these triggered OV while others show VO patterns. Furthermore, TAM-based alternations can alternatively be considered in relation to a structural difference in the availability of V-to-T movement (e.g. Koopman 1984); in many languages, TAM-dependent OV versus VO patterns depend on the presence or absence of material in the Aux slot. This means that alternative analyses are possible which only rely on the presence/absence of syntactic material and therefore do not need to make recourse to semantics or IS at all. I will return to this discussion about the necessity of IS in the formal analysis of Tunen syntax in Chapter 8, considering the empirical facts regarding VO word order and the expression of information structure discussed in Chapter 5. For now, I conclude with the proposal that Tunen's OV is synchronically independent of IS, but may have arisen historically through an IS-conditioned alternation, formalised in the change between IS-features to formal movement triggers (405), reflecting a Stage I-Stage II change in (404).

6.9 Conclusion

In this chapter I have considered the Tunen verb phrase, which differs from almost every other Bantu language in having OV as the basic word order, resulting more specifically in the disharmonic word order pattern S-Aux-O-V-X. I showed that this word order pattern is consistent across TAM and IS contexts in Tunen, meaning that it is the basic word order pattern, compatible with various information-structural contexts. I then gave a detailed empirical overview of what material can fall in each of the S, Aux, O, V, and X slots, showing in particular that the preverbal object position can take multiple objects and is not restricted by definiteness, heaviness, polarity, or main versus embedded clause type.

Next, I introduced S-Aux-O-V-X as a disharmonic word order pattern compatible with the Final-Over-Final-Condition (FOFC; Biberauer et al. 2014; Sheehan 2013; Sheehan et al. 2017). On the basis of this, I introduced three analyses of Aux-O-V discontinuity that have been applied to different languages, namely (i) a roll-up movement analysis, (ii) a base-generation of OV analysis, and (iii) a verb head movement analysis modified by the addition of object movement. I then presented a basic analysis in each of these types for Tunen, showing empirical diagnostics for low levels of verb movement and general head-initiality. These diagnostics presented evidence against the base-generation of OV analysis. Next, I showed how five different tests can be used to tease apart the roll-up movement analysis from the head

movement + object movement analysis, with four out of five tests providing evidence against the former analysis and in favour of the latter one. I therefore concluded in favour of the head movement + object movement analysis, to be further refined in Chapter 8. The core of the analysis is that Tunen's disharmonic S-Aux-O-V-X clausal word order is derived from an underlyingly harmonically head-initial structure of the kind found in other Bantu languages.

The chapter concluded by turning to consider what this more detailed synchronic understanding of OV word order and derivational disharmony in Tunen means for our understanding of the typology and diachrony of this word order pattern within Africa and more generally. I argued that the Tunen data show that previous descriptions of word order in Benue-Congo are over-simplified, specifically in the bipartite presentation of two types of S-Aux-O-V-X languages, one found in Western languages where the word order is rigid and one found within Eastern languages (including Benue-Congo) in which the word order is TAM-dependent or IS-conditioned. This division was criticised already by Creissels (2005, 2018) on the basis on glossing over too much variation within the Western group. Here, I also show that lumping the Eastern languages together does not capture the fact that the word order in Tunen in fact fits more within the 'Western' pattern in terms of the rigidity of the Aux-O-V order. I then considered how this word order may have originated, arguing in favour of Mous's (2005) proposal of OV as an innovation from an earlier VO word order pattern. I reflected on how this innovation of OV order can be captured in a generative analysis in terms of the generalisation of object movement from an earlier IS-conditioned alternation (compatible with Güldemann 2007) and argued that the grammaticalisation of OV in Tunen happened independently to that of other rigidly Aux-O-V languages such as Mande, rather than being arising through shared inheritance or areal pressure.