Tunen syntax and information structure

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CHAPTER 8

Discussion and conclusion

8.1 Summary

8.1.1 Preliminaries

This thesis presented the results of a fieldwork study on the Bantu (Niger-Congo) language Tunen (ISO 639-3 [tvu]; Guthrie no. A44; Guthrie 1948, 1967-1971; Maho 2003, 2009; Hammarström 2019), spoken in Cameroon by approximately 70,000-100,000 people (Mous 2003; Eberhard et al. 2022) and known to have unusual syntactic properties (Dugast 1971; Mous 2003, i.a.). The introduction (Chapter 1) presented the central research question of the thesis, repeated in (500).

(500) **Central research question:**
To what extent is Tunen's syntax influenced by information structure?

The thesis continued with conceptual background on information structure, syntactic theory, comparative Bantu linguistics, and the Tunen language (Chapter 2), followed by discussion of the research methodology employed, namely in-situ fieldwork in Cameroon and the analysis of secondary sources (Chapter 3). Chapter 3 also provided information on the archiving of the data, with explanation of how the recordings can be accessed.

8.1.2 Grammatical overview

The next part of the thesis presented an overview of Tunen grammar (Chapter 4). This overview served to describe the core phonological and morphosyntactic features relevant for understanding the data presented in the rest of the thesis. I also highlighted deviations from previous authors' work on Tunen, most notably in the orthographic conventions adopted in relation to the sound system, but also in terms of previously unreported syntactic phenomena, such as the relative order of nominal modifiers.

The next chapters of the thesis comprised of studies on the interaction between syntax and information structure that served to address the research question introduced in (500) above. I briefly summarise each of these studies below before reflecting on the implications from the three taken together.

8.1.3 The expression of information structure

Chapter 5 asked how information structure is expressed in Tunen. Firstly, evidence was shown for S-Aux-O-V-X as the pragmatically-neutral word order, i.e. Tunen's canonical word order. Next, departures from this canonical word order were considered, including the VO constructions previously described for Tunen in Mous (1997, 2003, 2005, 2014) and picked up on by Bearth (2003); Güldemann (2007); Downing and Marten (2019) a.o., which were found much less frequently in my data than expected based on Mous' description. I then discussed the marker *á*, termed a contrast marker in Mous (1997, 2003) as part of a monoclausal analysis. I argued for an alternative analysis of the *á* marker, presenting evidence for *á* as the identificational copula as part of a biclausal cleft construction, with only limited evidence for it occuring as a marker of contrast. I then discussed topic expression, showing that topics may be left unmarked in Tunen or expressed in the clausal left periphery (marked by a preposition or a marker that function elsewhere as the conditional marker), with the right periphery available for afterthoughts. Next, as Tunen lacks a syntactic passive construction to demote the agent, functional equivalents of the passive were investigated. I discussed two relevant constructions, namely verbal participles formed with *-átɔ* PTCP and the *bá* SM.2 impersonals, commenting additionally on the middle voice prefix (cf. Mous 2008). The final part of the chapter considered how referent expression varies over discourse, as conditioned partly by IS (in terms of the accessibility/givenness of the referent; Ariel 2001; Gundel et al. 1993) but also by independent factors such as valency requirements of certain predicates. The chapter ended with a brief reflection on how Tunen's expression of IS compares to other Bantu languages, noting the relatively low degree of IS influence.

8.1.4 OV word order and derivational disharmony

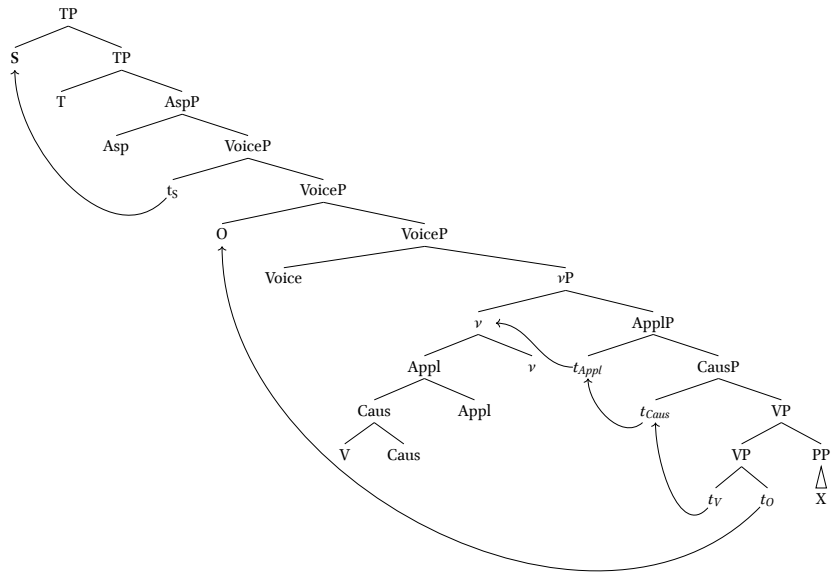
Chapter 6 considered Tunen's OV word order, which was shown to be more specifically characterised as S-Aux-O-V(-X), as illustrated in the thetic example (501).

(501) 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]

This OV word order is unusual from a comparative perspective given the VO word order in surrounding languages (Bearth 2003; Creissels et al. 2008; Dugast 1971; Mous 1997, 2003, 2005, 2014). In languages of West and Central Africa, OV has previously been considered to be a TAM or IS-conditioned variant of an unmarked VO word order (see e.g. Güldemann 2007, based on data from Mous 1997). By using both natural speech data and elicitation controlling for discourse context, I showed that the Tunen S-Aux-O-V-X word order pattern is in fact consistent across TAM contexts, IS contexts, and found with different clause types and different types of objects. A key finding is therefore that S-Aux-O-V-X should be considered the pragmatically-neutral word order in Tunen. I noted how this finding contrasts with expectations from other Niger-Congo languages of the Benue-Congo subgroup and discussed the implications for a historical-comparative analysis.

Chapter 6 then continued by developing the first formal analysis of Tunen syntax. I highlighted how S-Aux-O-V-X is of theoretical interest as an instance of disharmonic clausal word order, with a head-initial TP (**Aux**-V) dominating a head-final VP (O-**V**). Working within the generative syntax framework, I drew upon three types of analyses proposed for clausal disharmony crosslinguistically: roll-up movement driven by a movement feature (analysis type 1; see e.g. Sheehan 2013; Sheehan et al. 2017; Roberts 2019 on Aux-O-V in Germanic); base-generation of OV order (analysis type 2; cf. Haider's 2010; 2013 Basic Branching Constraint and Sande et al. 2019 on Aux-O-V in the Mande languages of West Africa); or verbal head movement + object movement (analysis type 3; modified from standard analyses of Aux-V in Bantu). After ruling out analysis type 2 on the basis of verb height diagnostics in Tunen, five further diagnostics on verbal derivation and clausal syntax were evaluated. I showed that these diagnostics provide evidence in favour of analysis type 3 over analysis type 1. This resulted in the basic formal model given in (502) below.

(502)

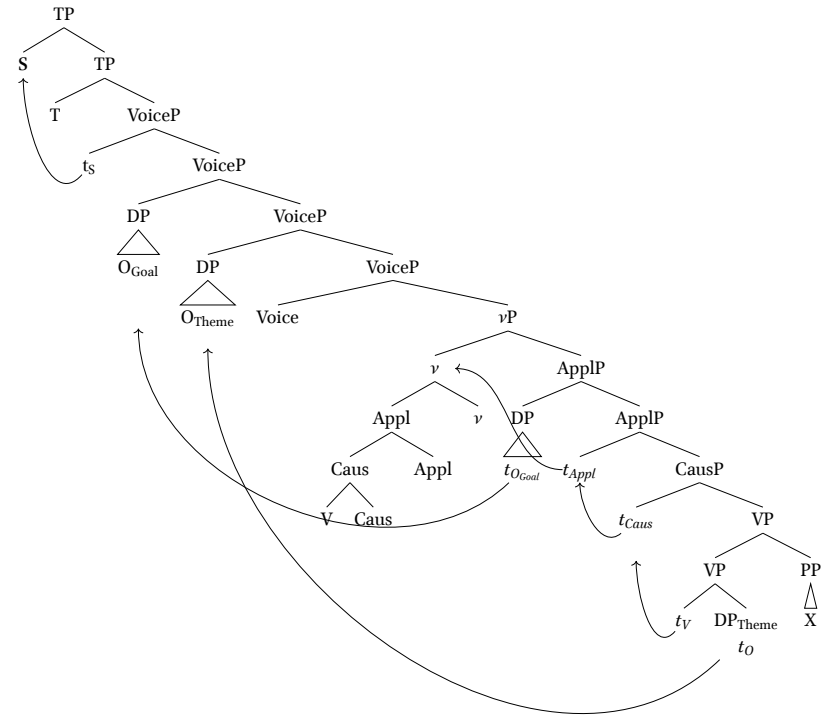


This analysis of Tunen syntax therefore involves two movement operations: (i) head movement of the verb up to *v* (V-to-*v* movement), and (ii) phrasal movement of the object to the innermost specifier of VoiceP. The verbal head movement analysis matches other generative analyses of Bantu verbal morphosyntax in that Bantu verbal suffixes are argued to be built up by head movement (Julien 2002; Ngonyani 2000; Wasike 2007; Van der Wal 2009, 2022; Zeller 2013a), but differs in that the head movement stops before T/Asp. I showed that this lower degree of verb movement correctly predicts the lack of aspectual encoding on the final vowel (FV) suffix in Tunen, in contrast to what is seen in canonical Bantu languages (cf. Good 2022). I also highlighted how this analysis allows for the innovation of preverbal objects and the position of objects relative to in-situ subject pronouns, thus making correct empirical predictions about Tunen's unusual syntax.

After presenting this basic model, I discussed the extension to ditransitive constructions, which can be captured by generating the Goal object in SpecApplP and moving it to a higher SpecVoiceP position (presumably also for licensing requirements). I also motivated the analysis of the subject in Tunen being base-generated in the outermost specifier of the verbal phase, i.e., SpecVoiceP, which I motivated on the basis of a construction with a split in subject expression between the subject marker and a co-referential pronoun that I argued was spelled out in the base

position. This resulted in the updated analysis in (503).

(503)



One of the five tests considered to tease apart the analyses was the ability for the analysis to account for a construction in Tunen in which a nominal modifier appears postverbally while the object is preverbal (S-O-V-Mod). I showed that these constructions pose a serious challenge for the roll-up movement analysis, as such an account incorrectly predicts that the modifier must move together with the rest of the object. Because of the significance of this construction for the evaluation of the formal models, I then turned to focus on discontinuous DPs as the next chapter.

8.1.5 Discontinuous DPs

Having built up this basic formal model, the next study (Chapter 7) looked in more detail at discontinuous noun phrases (*discontinuous DPs*), which were raised in Chapter 6 as a challenge for the formal analyses. The presence of such discontinuity in Tunen is interesting as discontinuous DPs are considered to be "very rare"

in Bantu, reported to be found in only 2 other of the 555-some Bantu languages (Van de Velde 2022:909). In Tunen, these constructions take the form noun-verb-modifier (**N-V-Mod**), as in (504).

(504) 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
'I see three birds.' [EO 225]

I showed that this construction is found for numeral, quantifier, and adjectival modifiers in Tunen; relative clauses modifying objects may also appear postverbally (likely for independent reasons related to extraposition), but associatives and the question word 'how many?' cannot be discontinuous from the head noun. The availability of the construction for adjectives and multiple types of numerals and quantifiers is significant in comparison to quantifier-float constructions found in other languages, which seem to be limited to a more restricted set of categories and can therefore be analysed by different formal models that do not readily transfer to the Tunen data.

While discontinuous DPs are generally thought to be conditioned by IS and are often analysed in generative frameworks as being formed by A'-movement of head or modifier to the clausal left periphery (see e.g. Fanselow and Ćavar 2002; Fanselow and Féry 2006; Hale 1983; Louagie and Verstraete 2016; Lochbihler 2009; Skopeteas et al. 2020), I showed that discontinuous DPs such as (504) in Tunen are (i) pragmatically-neutral (i.e., available for multiple different IS contexts), and (ii) formed through the independently-motivated A-movement of the object to a low position in the *v*P domain (motivated by licensing; L-movement), not by A'-movement. The O-V-Mod construction was shown to be difficult to account for in a roll-up analysis of the Tunen clausal domain, as such an account predicts that postverbal modifiers move together with the head noun. An alternative analysis whereby the modifiers are base-generated as outside of the DP as adverbial adjuncts was likewise ruled out on the basis of language-internal morphosyntactic and semantic evidence. The discontinuous DP constructions therefore provide key evidence in favour of the verbal head movement + object movement analysis of Tunen presented in (502) above.

8.2 Implications

On the basis of the findings from these three chapters, I conclude in answer to the central research question in (500) that Tunen syntax shows a low degree of IS influence for a Bantu language, with grammatical roles such as subject versus object having much more influence than discourse roles such as topic and focus. This reliance on grammatical role over discourse role is discussed for word order in Kerr et al. (2023), where we argued that Tunen shows the highest degree of grammatical role-oriented word order of the languages of the BaSIS sample. I turn now to the implications of these findings for this thesis' more general research question regarding the extent of influence of IS on Tunen's syntax.

8.2.1 The strong non-influence of IS hypothesis

The central research question asked the extent to which Tunen syntax is influenced by IS, with different possible answers ranging from a complete lack of influence to full determinism (Chapter 2 section §2.3.7). Based on the results presented in this thesis, I conclude that Tunen lies much closer to the former extreme than the latter. In this way, the results are largely compatible with the strong hypothesis that Tunen syntax has little influence from IS, as formulated in (505).

(505) **Strong non-influence of IS hypothesis**
Tunen syntax is not influenced by IS; IS features and positions are not required within the syntactic analysis.

This hypothesis is based on the empirical findings that certain constructions in Tunen previously thought to be conditioned by IS (such as OV word order and discontinuous DPs; Chapters 6-7) are in fact compatible with multiple different IS contexts, frequently being given as the first answer in elicitation and also being attested in natural speech data. In this way, the IS context is not deterministic, and other factors — such as grammatical role relations — appear to be more important for determining the choice of syntactic construction, and perhaps the only factors required for a complete formal analysis. The null hypothesis is therefore that Tunen syntax can be modelled without IS features or IS positions in the syntax.

While I take this strong hypothesis in (505) to be on the right track, I propose it along the lines of similar strong hypotheses within the Minimalist framework, which are taken not to be absolute truths but attempts to form the simplest analysis possible (Chomsky 1995). In other words, (505) reflects the metatheoretical stance that if an analysis of Tunen syntax can be made without IS features and positions, this is preferable, as the data available show little evidence that Tunen grammar

pays attention to these factors in its syntax. This fits into the metatheoretical stance that an acquirer would not need to suppose IS notions being active in the syntax on the basis of the input received (Chapter 2 section §2.3.5).

Within the context of research on syntax/IS crosslinguistically, a key question is whether any language can show complete independence between syntax and IS, given that constructions such as left-dislocation of topics and the use of clefts for (contrastive) focus appear to be universal (see e.g. Gundel 1988). In this sense, Tunen would not be at the absolute logical extreme of no influence of information structure, but perhaps at the extreme in terms of what is attested in human languages. I discuss this here for clefts and question formation.

Starting with clefts, a question for formal models is whether constructions such as clefts require IS-related features or positions in the model in order to be accounted for, as for example seen in approaches to focus that derive information focus as the absence of marking and contrastive focus as the presence of a [+exhaustive] (but crucially not a [+focus]) feature, meaning that the relationship with IS is only indirect, rather than encoded as a syntactic feature (as in Horvath's 2005; 2007 account for the syntax of foci in Hungarian; see e.g. É. Kiss 2009 for an overview). In terms of the presence of clefts in Tunen, this is unsurprising given the commonality of clefts crosslinguistically (Féry and Ishihara 2016b). I do not therefore commit to a particular formal analysis of clefts here, as the analysis of biclausal clefts is more a question of one's analytical preferences than one that will have a bearing on the answer to this research question.

Similarly, wh-movement can be analysed as driven by a [wh] or [Q] feature, with movement to a general SpecCP position rather than an IS-specific focus position in the clausal periphery (as conditioned by an IS-specific [focus] feature). This means that the presence of ex-situ wh-questions in Tunen does not necessarily imply a sensitivity to a notion of 'focus' in the syntax and would therefore be compatible with an account in which IS is not part of the syntax (as in e.g. Fanselow 2006). However, the finding that wh-questions are formed ex-situ in Tunen shows that the language *does* have A'-movement, just not (necessarily) any A'-movement operations driven by an IS feature.

One way to provide argumentation against the strong form of (505) is further study on the extent to which alternative constructions are available in Tunen besides the ones presented here. For example, we saw a degree of word order variation in Chapter 5 section §5.3 and regarding the contiguity versus discontinuity of noun and modifier in Chapter 7. As these constructions are less frequently attested, the extent to which their use in fact depends on conditions such as IS and prosodic weight remains a topic for further research. It could be the case that there are in fact IS contexts which favour these alternative constructions, meaning that

IS *does* exert influence on Tunen syntax, only in terms of preference for a particular construction rather than in terms of absolute acceptability of the construction. To arrive at a more detailed understanding of the degree of IS influence on Tunen syntax, a different type of dataset is therefore needed than what is currently available, namely a much larger corpus of natural speech, ideally supplemented by elicitation/experimental data from a much larger number of speakers. Such a dataset could be used to investigate to what extent the grammaticality and infelicity judgements found for the speakers in my field research are variable across speakers and to what extent such non-deterministic preferences can be identified, thereby confirming or falsifying the strong hypothesis present in (505).

In this way, it is important to bear in mind that the conclusion of this thesis should not be that IS has *no* effect on Tunen syntax, in the same way that there is likely no language in the world in which IS is entirely irrelevant for a language. For Tunen, however, the role of IS appears to be more likely to be in terms of likelihood of choosing an alternative construction, rather than being a core principle around which the grammar is organised. In returning to the web analogy from Chapter 2 Fig. 2.2, Tunen can therefore be taken to use less of the syntax side of the web than other languages do. This then raises the question whether other parts of the web (i.e., other aspects of the grammar) carry a higher functional load for the expression of IS in Tunen, as could be tested by further studies on Tunen phonology and Tunen semantics/pragmatics.

8.3 Limitations

As COVID-19 impacted the extent of data collection, future research on Tunen would benefit from a more extensive corpus, especially of naturalistic speech. While some natural speech data is available in Dugast's (1975) transcribed folktales, proverbs and prophecies and in the texts I collected for this study, a more diverse set of texts and a larger-size database would help strengthen the hypotheses made in this study, and good-quality recordings are necessary for any follow-up studies on the IS/prosody interface, a topic currently uninvestigated for Tunen.

This project was focussed on the interaction between syntax and IS. As a result, phonology was not studied in great detail. However, phonology (especially prosody) is likely to vary dependent on IS, even in languages such as the Bantu languages for which morphosyntactic expression is the primary factor (see e.g. Downing and Hyman 2016). A detailed study of Tunen prosody would therefore be useful. The study of prosody would also be useful to test predictions made in the syntactic analysis on constituency (to the extent that syntactic structure is taken to corre-

late with prosodic phrasing, which is not necessarily homomorphic; see e.g. Selkirk 2011). One example would be to test for H tone spread between verbs and postverbal objects as opposed to verbs and postverbal modifiers that are discontinuous from their head nouns and verbs and adjuncts, as raised in Chapter 4 and **??**-7, in order to test whether such constituents are best thought as in-situ or extraposed. As my audio (and video) recordings are archived open access as part of this study (Kerr in prep.; Chapter 3 section §3.6), they will be available for such research.

8.4 Topics for further research

8.4.1 Features and argument licensing

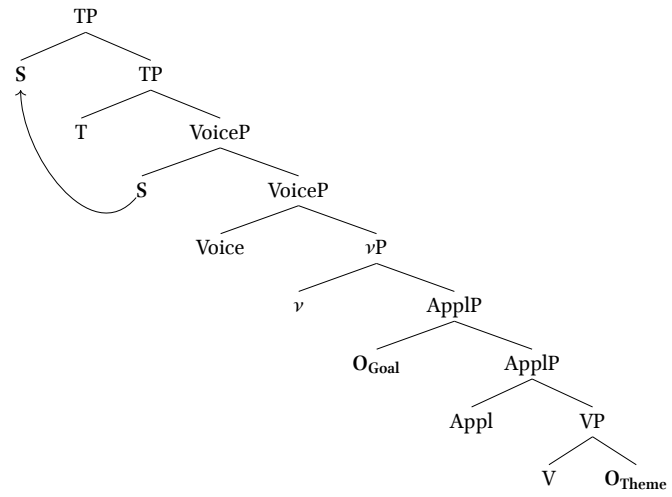
In the analysis proposed in this thesis, Tunen's preverbal object position is derived through formally-conditioned phrasal movement of the object to SpecVoiceP. One question for further research is the exact mechanisms of this movement, i.e., the features that condition it. Two types of analysis are possible here, one in which the object itself carries a movement trigger, and one in which the object moves as result of an [EPP] featural specification on a higher probe. Analyses of the second type are found in analyses of pre-stem object markers in Narrow Bantu, raising the question of the possible diachronic link between OV in Tunen's clausal syntax and the OV found at the word level in Narrow Bantu (in the sense of pre-stem object markers) (see e.g. Hyman 2011; Güldemann 2022). While OM-marked objects may be treated as given and therefore carrying IS-features in the syntax (as in Mursell 2021; Van der Wal 2022), in Tunen, the preverbal object position is filled synchronically by given and non-given objects alike. I therefore proposed in Chapter 6 section §6.8 that the movement feature in Tunen is a formal movement trigger rather than one with IS content, although I note such a trigger may have been present historically (cf. Güldemann 2007).

An outstanding issue with the formal analysis is how the Probe finds the object rather than the subject, which can be taken as a closer position (as base-generated in SpecVoiceP). This question relates to discussion of the order of operations Merge and Agree. An alternative featural specification could be developed under a Probe analysis, or else an account using defective probing. It could otherwise be argued that the object itself carries a movement trigger feature. I leave these matters of formalisation open for further research.

8.4.2 The syntax of subjects

A second topic for further research is the syntax of subjects. I assumed here that the subject is base-generated in SpecVoiceP where it receives its θ-role, from which it A-moves to SpecTP (506) for licensing reasons. When the subject is topical, however, it may alternatively be considered to be located in a higher functional projection of the clause, e.g. the SpecTopP position within a Rizzian extended left periphery (Rizzi 1997 *et seq.*).

(506)



However, I have not discussed in detail the nature of the subject marker (SM) as opposed to the lexical DP subject. There is variation within Bantu languages as to whether the SM is considered to be agreement or pronominal (Bresnan and Mchombo 1987). One interesting point in relation to Tunen subjects is that there appears to be a systematic difference between my fieldwork data and the data presented in Dugast (1971, 1975) with regards to the ability for SMs and lexical DP subjects to co-occur, as I noted in Chapter 5 section §5.5.1. In my data, lexical DP subjects can co-occur with SMs within the same prosodic domain (or with the lexical DP subject in a clause-external topic as part of a separate prosodic domain), as discussed in Chapter 6. In Dugast's data, by contrast, it has been argued that the lexical DP subject and SM cannot co-occur within the same prosodic domain (Isaac 2007). One clear example of this is when a lexical DP subject is found without a SM, as in (507a), a construction that is not grammatical in my consultants' grammars, who consistently use a subject marker alongside lexical noun phrase subjects (507a).[1]

[1]The only exception here was in testing for subject agreement with conjoined subjects, where

(507) a. mɛkɔ̀ ná mànyó wəy o-kànda tīkəkəʔ
9.leopard PST2 again PRN.POSS.1 INF-cut.raphia_leaves set
mʷɔ̆sɛ màlɛ́ndolonùm.
6.days 6.seven
'The leopard again set his raphia cutting (assembly) in seven days.'
(Dugast 1975, cited in Isaac 2007:37, glosses adapted)

b. mɛkɔ **a** n(á) ákan, [...]
/mɛ-kɔ **a** ná ákáná/
9-panther SM.1 PST2 leave
'La panthère est partie, [...]'
'The panther left, [...]' [JO 2037]

It is harder to show that lexical DP subjects and SMs in Dugast's data cannot co-occur within the same prosodic domain, given that no recordings are available and Dugast does not give clear prosodic demarcation. Nevertheless, Isaac (2007) argues that Dugast's use of the symbol <ʔ> can be used to diagnose prosodic domains, in that <ʔ> indicates a pause, being found only at the right edge of a prosodic domain. He then notes that lexical DP subjects co-occuring with SMs are often transcribed as ending in <ʔ>, thus indicating a pause before the SM (Isaac 2007:59) (508).

(508) wə́ni wà mŏná 'mɔ̀tɛʔ **a** nə́-wə̀.
DEM.DIST.1 ASSOC.1 1.child 1.one SM.1 PST.2-die
'The one who had one child, she died.'
(Dugast 1975, cited in Isaac 2007:59 (glosses adapated))

These data suggest that the DP is dislocated and the SM is a pronoun. This pattern is different from my consultants' judgements, where there is no restriction on the co-occurence of lexical DP subjects and SMs (but cf. Chapter 5 on the availability for clause-external topics which form a separate prosodic domain from the main clause). Given the time depth of Dugast's data (collected in the 1930s-1950s; Chapter 2 section §2.5.3), it could be argued that the SM in Tunen has grammaticalised from a pronoun to an agreement element that can be doubled, as following the independent pronoun → agreement marker grammaticalisation pathway found across African languages (Creissels 2006:44-45) and therefore indicative of language change in the time since Dugast made her transcriptions. Relevantly,

one avoidance strategy was to omit the subject marker altogether. As discussed in Chapter 4 section §4.3.3.3, because of the unnaturalness of this specific test and the fact that all other answers to conjoined subject prompts did have a SM, I do not take this as strong evidence for the ability to omit SMs in modern-day Tunen.

there is variation in the surrounding Mbam languages from the Western Mbam and Sanaga Mbam groups regarding subject indexation, with Nuasúɛ (A62A) showing minimal subject expression, with SMs unable to co-occur with DP subjects (Bebine 2019:397-399), while Nomaandé (A46) on the other end shows double indexation of the subject via the split subject construction (discussed for Tunen in terms of in-situ subjects in Chapter 6 section §6.5.3) (Wilkendorf 2001; Taylor 1984, 1999). This variation across closely-related Mbam varieties suggests variation over time, supporting the idea that subject indexation in present-day Tunen differs from the variety recorded in Dugast's work. I leave this as an interesting topic for further comparative research, which has bearing on the understanding of Tunen's predicate structure and morphosyntactic variation in Bantu/Bantoid.

8.4.3 The diachrony of word order change in the Mbam languages

Finally, this thesis had a synchronic focus, aiming to investigate the extent of influence of IS on Tunen's synchronic syntax. Having established that IS features and positions are not necessary for a synchronic account of Tunen's clausal syntax, in Chapter 6 section §6.8 I sketched out a proposal of how Tunen's word order may have arisen diachronically, suggesting that the OV order was innovated from a previous VO pattern.

This diachronic proposal can be tested in future work by means of data collection on the neighbouring Mbam Bantu languages, which I hypothesise to be at an intermediate stage of development as compared to Tunen versus canonical Bantu languages (cf. Chapter 6 section §6.8). Further detail on other zone A Bantu languages and non-Bantu Bantoid languages of Cameroon/Nigeria would also be relevant, as noted by Hamlaoui (2022) in terms of the possible relationship between degree of analyticity and the (un)availability of IS-conditioned word order (cf. Kerr et al. 2023 on the link between IS and word order variation in North-Western Bantu). Here, the variation found in this thesis between Tunen and surrounding languages illustrates the need for detailed empirical investigations into different languages of the Northwestern Bantu/non-Bantu Bantoid region, which is known to show a high degree of linguistic diversity (see e.g. Marten 2020). Such an investigation into the degree of analyticity of the Mbam languages is of broader scientific interest given the currently-unresolved debate as to whether analytic morphosyntax reflects the older (Güldemann 2011, 2022) or more innovative morphosyntactic profile (Hyman 2004, 2011; Nurse 2007) in Niger-Congo languages as a whole and the Benue-Congo group in particular.

8.5 Conclusion

In summary, then, Tunen's unusual syntax provides an important comparative point for understanding variation within Bantu syntax and for reconstructing the syntax of Proto-Bantu and the Benue-Congo subgroup of Niger-Congo more broadly. More generally, the co-occurrence of OV order with head-initial syntactic properties, the variation in the syntax of subjects, and the ability for modifiers to appear discontinuously from the nouns they modify are all typologically-interesting syntactic properties that provide interesting case studies in language change. I present the formal analysis of Tunen syntax in this thesis as a first hypothesis, with further modifications to be made on the basis of insights from further empirical study.