Larger discourse units in linguistic structure of Yali narratives

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Katharina Gayler
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Erstgutachter: Prof. Dr. Nikolaus P. Himmelmann
Zweitgutachterin: Prof. Dr. Martine Grice

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List of Abbreviations

1	first person
2	second person
3	third person
ABL	ablative case
ADV	adverbial
AM	autosegmental-metrical theory
AM [gloss]	attributive marker
ANA	anaphor
AP	accentual phrase
BEN	beneficiary
C	consonant
CAUS	causative
COMPL	completive aspect
CONTIN	continuative
CVC	coverb construction
DET	determinative
DIR	directional linker
DIST	distal demonstrative
DS	different subject
elic	elicited example
ERG	ergative case
EXCL	exclamation
EXIST	existential
F0	fundamental frequency
FUT	future tense
GIV	given
H	high tone
HES	hesitation
IM.FUT	immediate future
IM.PST	immediate past tense
IMP	imperative
INF	infinitive
INSTR	instrumental case
INTJ	interjection
IRR	irrealis
IU	intonation unit

L	low tone
LOC	locative case
M	mid tone
MED	medial demonstrative
NEG	negation marker
NOM	nominal clause marker
NP	noun phrase
OBJ	object
REDUP	reduplication
PL	plural
PN	personal name, place name
POSS	possessive
POT	potentive
PRX	proximal demonstrative
PST	past tense
PT	particle
Q	question marker
QUOT	quotative
REM.PST	remote past tense
SB	self-beneficiary
SEQ	sequential
SF	stem-forming
SG	singular
SIM	simultaneous
SOV	subject-verb-object
SS	same subject
ST.PART	stative participle
SYNT	larger syntactic unit
T	tone
THL	tail head linkage
TNG	Trans-New Guinean
TOP	topic marker
V	vowel
XP	syntactic constituent

List of Tables

Legend: Tables within this thesis are counted per chapter

List of Figures

Chapter 1:

Chapter 2:

Legend: Figures in this thesis are counted per chapter; furthermore, most of the Figures (though not all) are pitch visualisations of examples, which as a principle are counted to agree with the corresponding example in their numbering. For this reason, the counting of Figures sometimes skips a number, where an example was given without corresponding Figure.

Table of contents

1. Introduction

The segmentation of a text (spoken or written) is, as Serzisko (1992; also quoting Rath 1989:13) put it, a precondition for any analysis of this text: we need to break the text down into "manageable units" that can be processed and investigated. Of course, a linguistic segmentation should not chop the relevant text into any random chunks, but rather look for the units formed by and relevant for linguistic structure, i.e. the building blocks of the text in a linguistic sense. This intuition is illustrated by Serzisko (1992: 9) using the metaphor of dismantling a technical device, e.g. a television. Deconstructing it in a knowledgeable way, a television can be dismantled into "its parts" (Serzisko 1992: 9, translation my own), i.e. into its functional components (e.g. a CRT, a cover), whose make up and interrelation can then be studied further. A television can also easily be chopped up using an axe, which would also result in the creation of smaller, maybe more 'manageable' pieces or 'parts'. Such pieces, however, would be quite useless for gaining knowledge on how a television works.

Coming back to the investigation of texts, we can, again, rather intuitively follow Serzisko (1992: 9ff) in assuming that the 'functional components' identified as building blocks of linguistic structure should be 'functional' in the sense of being relevant to speech processing. That is, the building blocks of texts we are looking for should eventually be cognitively relevant units of meaning in some sense, which the segments identified from linguistic structure implement or construct.

This intuition has been theorised and/or reflected on by numerous scholars, e.g. in Chafe's work on intonation units, which discusses a speech unit of prosodic structure as a cognitive unit of attention focus (Chafe 1987, 1994). Similar functions are suggested for the morphosyntactic structure of a clause by Pawley & Syder (2000), and formalised into a Sense Unit Condition of intonational phrases by Selkirk (1984).

In the same spirit, much of the work on larger discourse units, by which I mean units larger than a clause and/or an intonation unit[1], is interested in the identification of functional components or units of meaning in texts: Larger text components, labelled *superfoci of consciousness* (Chafe 2015: 393) or *centres of interest* (Chafe 1994: 139-144), are discussed for example by Chafe as units of "coherent content" (Chafe 2015: 393) or as "topics" in the sense of "segments of discourse during which one or more speakers talk about the same thing" (Chafe 2015: 394). Similar notions of stretches of speech about the same topic or thing (e.g.

[1] The term *intonation unit* is used in this thesis in line with its usage in Chafe's works (e.g., Chafe 1987, 1994). It is assumed to essentially refer to the same type of unit than the terms *intonation phrase* and *intonational phrase*, which are perhaps more widely used especially within the framework of Autosegmental-Metrical works. Intonation units (in Yali) will be discussed in more detail in section 2.1 of this thesis.

with the same participants, events happening at the same location or in the same time setting) have been worked into descriptions of *paragraphs* or *episodes* by numerous other authors, most widely known perhaps by Brown & Yule (1983) and van Dijk (1982).

However, specifically for these larger components of texts, it remains an open question how such cognitively relevant units of meaning actually relate to linguistic structure. Numerous structural traits have been proposed as relevant linguistic markers or implementations of paragraphs, episodes or other larger discourse units. These include for example referential/pronominal chains (e.g. Filippova & Strube 2006, Same 2022, Seig 2004), the use of certain discourse markers (e.g. Gerstner-Link 2018: 418 on Kilmeri), low boundary tones, final falls and/or final lowering (e.g. Wichmann 2000, Genetti & Slater 2004, Chafe 1994), and, more specifically in the context of Papuan linguistics, clause chains[2] as a syntactic structure (Sarvasy 2021) and *tail head linkage* as a conventionalised strategy of recapitulation of the end of one chunk of discourse as the beginning of the next (Farr 1999, de Vries 2005, 2006; see section 1.1 for an example from Yali). As pointed out by Himmelmann & Riesberg (2026), the trouble is that all these different larger-scale linguistic discourse-structuring devices do not necessarily align in actual texts. That is, pronominal chains and clause chains, for example, do not necessarily start and end at the same point in discourse in a language that employs both. Similarly, it is not clear per se that final falls only occur at syntactic boundaries, as will be demonstrated for Yali in example (2) below (section 1.1). Assuming e.g. a paragraph to be a larger functional component of a text and both final falls and syntactic boundaries or clause chains and pronominal chains to mark this functional component or to be linguistic traits of it, such misalignments are a problem, because the start and end point of the functional component cannot really be identified. For this reason, the relation between larger functional text components and actual formal traits of linguistic structure is still an open theoretical issue and on the floor of debate.

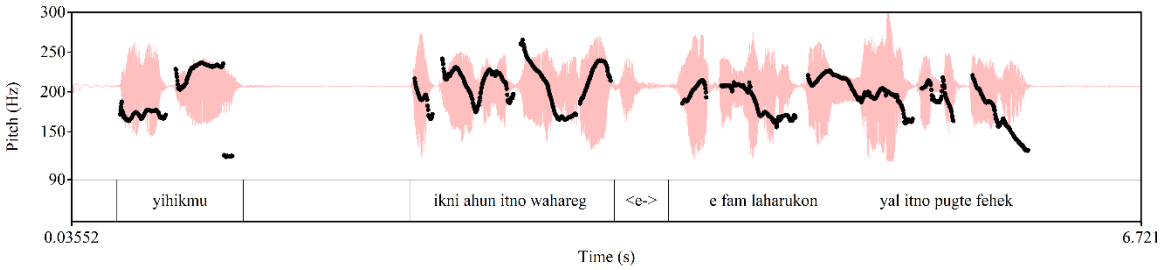
Hoping to create new input to this debate, this thesis will present a case study attempting to approach the issue from the other side: starting the identification of larger discourse units and segmentation of (spoken) texts from the description of linguistic form. Descriptum are spontaneous narrative texts from the Papuan language Yali (TNG), which, to date, remains seriously underdescribed (see section 1.3). The study is therefore explorative in nature, reflecting on how especially prosodic and morphosyntactic parameters form groupings in the texts and investigating where these groupings correlate and diverge. Its goal is to define structural (larger) units from the possibilities of grouping. By gaining these units in a structure-

[2] The term *clause chain,* in the Papuan literature, refers to a structure of n so-called *medial clauses*, followed by one so-called *final clause* that ends the chain. They are a clear-cut and definable syntactic structure, because medial and final clauses use distinct verb forms. Clause chains will be discussed more fully in section 3.2 of this thesis.

based descriptive process, the study hopes to start on the tracking of how the interplay of different linguistic phenomena leads to the emergence of larger discourse units in Yali narratives. Such tracking, it argues, might also offer new insights or perspectives to the debate on the relation between larger functional text components and linguistic structure more generally.

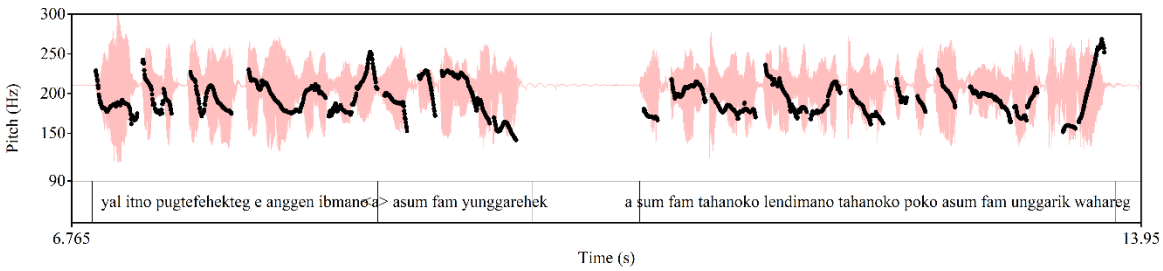
1.1 Project idea

Narrative monologues in Yali very regularly and saliently segment into units of most typically about 2 to maybe around 7 intonation units (IUs) and roughly about 2 to 4 or 5 clauses, which are grouped together both prosodically and syntactically and most typically followed by a short recapitulation opening the next unit. This very clear and regular structural pattern inspired the idea that a larger discourse unit, above the level of clauses and intonation units, can be identified from prosodic and syntactic structure together in Yali. The pattern is demonstrated in example (1)/FIG 1.



a) b) c) d) e)

FIGURE 1A: Text segmentation through prosodic and syntactic grouping in Yali narratives; IUs a-e



f) g) h)

FIGURE 1B: Text segmentation through prosodic and syntactic grouping in Yali narratives; IUs f-h

(1) Text segmentation through prosodic and syntactic grouping in Yali narratives[3]

a) i. *yihikmu /*
yihi-ehek=mu
carry.fruits-3SG.IM.PST=DS.SEQ

b) ii. *ikni* *ahun* *itno* *wahareg /*
ikni ahun itno waha-teg
father man DET come:3SG.IM.PST-SS.SEQ

c) *<e->*
eh
HES

d) iii. *e* *fam* *laharukon /*
e fam laha-tuk=on
tree on go.up-INF=NOM

e) iv. *yal* *itno* *pugte* *fehek *
yal itno pug=te fe-ehek
stair DET tie=TOP make-3SG.IM.PST

f) v. *yal* *itno* *pugte* *fehekteg*
yal itno pug=te fe-ehek-teg
stair DET tie=TOP make-3SG.IM.PST-SS.SEQ

vi. *e* *anggen* *ibmano /*
e anggen ibma=no
tree fruit there=GIV

g) *<a->* *asum* *fam* *yunggarehek *
a a-sum fam yunggat-ehek
HES 3SG.POSS-net.bag in fill-3SG.IM.PST

h) vii. *asum* *fam* *tahanoko* *lendimano* *tahanoko* *poko*
a-sum fam tahan-oho lendi=mu=no tahan-oho po-oho
3SG.POSS-net.bag in pick-ADV above=LOC=GIV pick-ADV hang-ADV

asum *fam* *unggarik* *wahareg /*
a-sum fam unggat-ik waha-teg
3SG.POSS-net.bag in fill-DIR come:3SG.IM.PST-SS.SEQ

(…)
'it (a tree) was carrying fruits, then the man came and (wanted to) climb the tree, so he made a ladder. He made a ladder and then filled the fruits into his bag. He picked (them) into his bag, and picked (more) above, and came to fill (them) into his bag (…)'

pear_story_Isak_008

FIG 1 gives a pitch visualisation of the example, demonstrating the prosodic contribution to the unit-effect, which is most salient as two prosodic segmentation points in the form of two clearly falling phrase-final pitch contours in (1e and g). Borrowing the terminology of Gussenhoven (e.g., Gussenhoven 2010), the falling contours can be described as *finality intonation,* which terminates a sequence of prosodic phrases (IUs) without finality intonation, indicating continuation by contrast. In FIG 1, these are (1a-b and d) and (1f) respectively, recognisable by a final pitch peak each. (1h), finally, opens a third unit (ending with a final peak as well), the continuation of which is not displayed in the excerpt given. Note that the basic unit of segmentation for the examples in this thesis (represented by the line breaks in the transcriptions and indicated in the annotation of the pitch visualisations) are intonation units (IUs) as a very basic (possibly universal) phonetically-defined unit of speech production and perception (see section 1.4.5 for more details and section 2.1 for a characterisation of IUs in

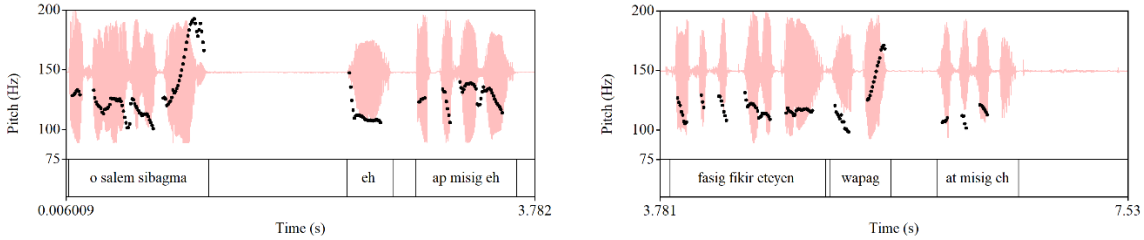
[3] The alphabetic labelling counts intonation units in the examples, the romance numerals count clauses.

Yali). Note furthermore that, for easier comparison with syntactic structure, finality intonation is additionally indicated in the transcription, using \ at the end of the respective IU. IUs without finality intonation are marked by / for continuation instead.

Syntactically, the grouping corresponds to two sequences of combined clauses, which could be analysed e.g. as a sentence, as a syntactic paragraph, or similar larger constituent (see section 1.2.1 for a discussion of the different terminology for larger syntactic units). The two sequences comprise clauses (1i.-iv.) and (1v-vi.) respectively, and end both with a clause using a non-combined and fully independent verb form (1iv. and 1vi.), for easier identification here marked in red. All clauses preceding them in the sequence use clause-linking verb forms (marked in green), indicating cohesion with the next clause (see chapter 3 for more details on the different forms of clause combination in Yali). Clause (1vii.), finally, starts a new grouping, which is not displayed fully anymore.

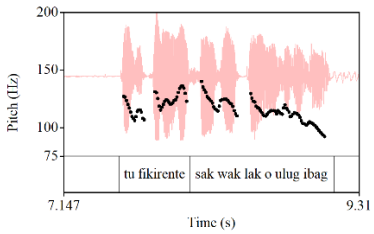
As in the example, the prosodic and syntactic groupings described most typically correlate in natural discourse of Yali, such that finality intonation occurs where there is a non-combined verb form (1e/iv. and 1g/vi. above) and vice versa, and are, also most typically, followed by a short recapitulation of the preceding (*tail head linkage;* 1v. recapitulating the event of 1iv., and 1vii. recapitulating the event of 1vi. above). The recapitulation at the same time starts the next unit of combined clauses, ended with finality intonation and followed by the next recapitulation, and so on, giving a quite salient and regular pattern. As a working hypothesis to this thesis, I propose that this correlation of prosodic and syntactic structure is the prototypical usage of what I will refer to as *major discourse boundaries* in Yali: the boundaries between two larger units. Note that similar observations of a strikingly salient correlation between prosodic finality and syntactic groupings of clauses, as well as proposals of corresponding larger discourse units have also been made elsewhere in the Papuan literature in reference of other languages, most notably by Sarvasy in her works on Nungon (Finisterre-Huon) (Sarvasy 2015, 2017, 2021). A similar suggestion for an Austronesian language of the region (Matukar Panau) is also available in (Mansfield & Barth 2021).

Perhaps unsurprisingly, the correlation of syntactic clause combinations and finality intonation in Yali narratives, striking as it is, is not absolute though. This is demonstrated in example (2)/FIG 2, where a syntactic combination of two clauses (2i.-ii.) ends with prosodic continuation (clear final peak) in (2e). Finality intonation, in this case, occurs only three IUs later (2h, final fall) with the ending of clause (2iv.), although there is no clause combination between (2ii.) and (2iii./iv.). Note that (2iii.) is a clause of reported speech, followed by a speech clause (2iv., verbalising the corresponding speech event 'they said that to a man'), the patient argument (denoting the addressee of the speech event) of which precedes the reported clause. Clause (2iv.) can therefore be considered a non-linear clause.



a) b) c) d) e) f)

FIGURE 2A: Misalignment of prosodic and syntactic groupings; left: IUs a-c, right: IUs d-f



g) h)

FIGURE 2B: Misalignment of prosodic and syntactic grouping; IUs g-h

(2) Misalignment of prosodic and syntactic grouping

a) i. *o* *salem* *sibagma /*
o salem su-ibag=mu
time rainy.and.cloudy do-3.REM.PST=DS.SEQ

b) *eh*
eh
HES

c) ii. *ap* *misig* *eh*[4]
ap misig eh
man one HES

d) *Fasig* *fikir* *eteyen /*
fasig fikit ete=en
PN direction above=ABL

e) *wapag /*
waha-pag
come-3.REM.PST

f) iv. *at* *misig*
at misig
3SG one

g) iii. *tu* *fikirente*
tu fikit=en=te
PRX direction=ABL=TOP

[4] IU (2c) as well as IU (2f) was treated as a phrase without (clearly recognisable) final contour here, due to the IU-final hesitations that seem to involve heavy glottalization.

h)	*sak*	*wak*	*lag*	*o*	*ulug*	iv.	*ibag*
	sak	wa-ik	lag	o	ulug		ibag
	pandanuscarry-DIR	2SG.IMP:go		PT	QUOT		say:3.REM.PST

'it was raining the whole day when, eh, a man came from Fasig, (because) (they) had asked him to bring pandan from this area'

landslide_ayabiye_008

These usages are what I refer to as *misalignments* of prosodic and syntactic grouping in this thesis and constitute a challenge to the idea of an overall larger discourse unit emerging from prosodic and syntactic structure together. Misalignments, I suggest, make major structural boundaries in Yali an interesting descriptum warranting investigation in its own right: How frequent are they? When do they occur, what is their function? What kind of boundary is (2ii./e)?

1.2 Theoretical background: larger discourse units and different perspectives on discourse structure in the literature

In a bird's eye's view, theoretical discussions of discourse structure and linguistic text units in the literature can be grouped into two different main conceptual perspectives: In a first line of research, discourse segments are treated as discrete units which relate hierarchically to each other, giving rise to equally discrete and stable levels of structure that texts can (ideally exhaustively and unambiguously) be segmented into. A second line of research, in contrast, starts from the observation of a (gradual) scale of stronger and weaker boundaries in discourse, treating units of texts as emergent structures.

Both perspectives offer important insights on the nature of unit formation in texts. For this reason, both of them will be introduced here in turn (section 1.2.1 and 1.2.2 respectively), as a background to the descriptions of this thesis. Their introduction will include a short comparison of (general) advantages and disadvantages between the two and focus on their treatment of (and problems with) larger units.

1.2.1 Hierarchical models of discourse structure

The first line of research reported here departs from the idea that text segments, i.e. units of linguistic structure or Serzisko's 'parts of a text', should be distinct units that texts can exhaustively and unambiguously be segmented into. That is, it assumes that it will be possible to identify, based on linguistic criteria, boundaries between different text units objectively and at one specific point in discourse in a dichotomic choice of boundary or no boundary (see e.g. Garvin 1963: 22 for a discussion of discourse structure making this expectation explicit).

This expectation of clear-cut text units is very widespread and could be said to naturally and intuitively follow, or follow from, Serzisko's metaphoric view of text structure analysis as an act of dismantling a technical device, like a television. This is because in dismantling a television, which is a physical object, the parts or components that can be identified will always also be physical objects, e.g. the back cover, or a cable. They are thus distinct entities with actual physical boundaries. Furthermore, the television being kept in good working order, there should also not be anything inside it that has no functional role to play (e.g. no forgotten pencil should be lying there). Thus, on top of being unambiguous, the segmentability into television components should also be exhaustive.

Turning back to the investigation of texts and building on this idea of discrete units, it is furthermore very widely assumed that such units relate to each other in a hierarchical way. Among the text units forming the basis of almost any language description are thus, for example, morphemes, words, and (morphosyntactic) phrases, where phrases can be segmented into words and words again segmented into morphemes. Two very basic hierarchies of linguistic text units that most works in language description and typology seem to agree on are given in FIGS 3 and 4. The versions given do not exhaustively list all types of linguistic text units that could be ordered in hierarchical relations, but rather serve as an example for the concept. They are cited after Dixon & Aikhenvald (2003: 31).

morpheme < grammatical word < phrase < clause < sentence

FIGURE 3: Hierarchy of morphosyntactic structures

phoneme < syllable < (foot) < phonological word < intonation group < utterance

FIGURE 4: Hierarchy of phonological structures

Again, this hierarchical conception of the relation between different types of text units is very well compatible with Serzisko's television metaphor: the various components of a television, e.g. a cable, have different subcomponents, e.g. the cable jacket or different wires, which have subcomponents again, e.g. the wire insulation, and so on. All of the subcomponents of the components of a physical object must be physical objects themselves again, wherefore the assumption of exhaustive categorical segmentability (boundary: yes or no) into unambiguously distinct units kind of naturally translates to all levels of segmentation. It has been formalised for linguistic analysis e.g. in Prosodic Hierarchy Theory as the Strict Layer Hypothesis (Selkirk 1984), split up into the four constraints of NONRECURSIVITY, EXHAUSTIVITY, LAYEREDNESS and HEADEDNESS in Optimality Theory (Selkirk 1995).

However, there are also some problems to such hierarchical conceptions of text units. A first and rather obvious issue is: why, if we conceive of text segmentation as a deconstruction of the relevant text into its functional components or building blocks, are there two distinct hierarchies of linguistic units (i.e., a hierarchy of morphosyntactic and a hierarchy of prosodic/phonological units, cf. FIGS 3 and 4 above)? What is then the relationship between the two sets of structures?

Recalling our earlier assumption that 'functional components' of a text in the end should be cognitively relevant units of speech processing and/or production (see the introduction to this chapter), one possible conception could be that morphosyntactic and/or prosodic structures serve to identify or mark such content units. Where this conception is applied to both morphosyntactic and prosodic structures, the most straightforward answer to this question would then be that both hierarchies actually identify the same set of (hierarchically-ordered) content units and simply describe them from two different perspectives (probably allowing for some content units marked by either just prosody or just morphosyntax).

This understanding of text structure is quite intuitive for units like the word: a word can be described as a phonological entity (a phonological word) identified by phonological phenomena and/or processes, or as a morphosyntactic entity (a grammatical word) derived by morphological processes (see e.g. Dixon & Aikhenvald 2003, Aikhenvald et al. 2020 for thorough discussions of the two concepts). First of all, however, a word is the "smallest, completely satisfying [bit] of isolated 'meaning'" a sentence can be segmented into (Sapir 1921: 34), thus: a cognitive or content unit. Both the phonological and the morphosyntactic word can therefore be perceived of as marking or identifying this "bit of isolated meaning".

However, such a conception entails that phonological and morphosyntactic units should as a rule align, assuming they both align with or mark the same content units. While this is cross-linguistically largely the case for morphosyntactic and phonological words (see e.g. Aikhenvald et al. 2020, Aikhenvald 2015: 77, Dixon & Aikhenvald 2003: 31), larger prosodic and

morphosyntactic structures, especially intonation units and clauses, have been shown to be much more independent of each other, such that, for example, a speaker is free to both spread a clause over several intonation units or an intonation unit over several clauses (Bolinger 1989, Chafe 1987, 1994 among others; cf. also Himmelmann 2022). And even for words, there are well-known exceptions to the prosody-morphosyntax correlation, as for example clitics, or compounds and reduplications, in which morphosyntactic and phonological words cross-linguistically often diverge (see Aikhenvald 2015: 77, Himmelmann 2006: 254ff, e.g.). The relationship of morphosyntactic and phonological structures is thus likely more complex than just a one-to-one correspondence where both serve to mark the same set of (hierarchically-ordered) content units, wherefore the relation between the two hierarchies remains to date on the floor of debate. After all, as Nespor & Vogel (2012: chapter 2) put it, the fact that morphosyntactic and prosodic units do *not* always correlate is what motivates and justifies the positing of two distinct hierarchies in the first place.

Secondly, hierarchical accounts of text structure struggle to accommodate larger discourse units in their modelling, i.e. structures beyond the level of intonation units on a prosodic and beyond the level of clauses on a morphosyntactic scale. Although such units are widely held to exist in some way, compared to smaller structures, there is in general less research that explicitly investigates their properties and characteristics. Where such research exists, furthermore, there seems to be much less consensus than on smaller structures, both in deciding what linguistically relevant levels of structure exist beyond clauses/intonation units and on how they can be (objectively) identified. This is true both for prosodic and morphosyntactic structures, although in a slightly different way.

On a prosodic level, many investigations of hierarchical structures simply stop at the level of the intonation unit (or equivalent structures like *intonation phrases* or *intonational phrases*)[5] (e.g. Selkirk 2011). Others, for example many text books on prosodic hierarchy theory, explicitly assume the existence of a larger unit (often referred to as an *utterance*), but do not further comment on its properties (e.g. Féry 2016). Where such a larger unit is investigated or reflected on explicitly (language-specifically or in general), different works use different terms for it, e.g. *utterance/ utterance phrase* (e.g. Mansfield & Barth 2021, Kawahara & Shinya 2008, Nespor & Vogel 2012), *prosodic sentence* (Chafe 1994), *sequence of tone units* (Crystal 1969) or *paratone* (Brown et al. 1980, Brown & Yule 1983), which may also entail somewhat different

[5] As already mentioned in the introduction to this chapter, *intonation phrase* or *intonational phrase* as terms used in works in the autosegmental-metrical tradition of analysis are here assumed to be equivalent to the term *intonation unit* in that they denote the same structure (though definitions may be slightly different between different authors). Other terms like *tone group* (Crystal 1969) are used as well in the literature, with a more or less equivalent meaning. Since the slight distinctions between the terms are not relevant to the discussion at hand, I will use the term *intonation unit* only in reference of this structure in this chapter, though acknowledging explicitly that many of the authors cited use a different term instead.

definitions and conceptions. More importantly, however, there is no consensus as to how many different levels of structure above the intonation unit are even relevant and how they are implemented: many researchers seem to assume only one level (e.g., Kawahara & Shinya 2008), but do not explicitly comment on or consider the possibility of several levels. Others, however, seem to assume two different levels, which might again be hierarchically ordered among each other (e.g., Wichmann 2014 distinguishes a *spoken sentence* from a *spoken paragraph*; Brown et al. 1980: 71 originally distinguished a *minor paratone* from a *major paratone*). Yet others, however, seem to imply that all these terms essentially refer to the same kind of structure (e.g. Mansfield & Barth 2021), while a still different line of analysis explains apparent groupings of intonation units as recursive phrasing (Ladd 1988, Truckenbrodt & Féry 2015), thus essentially assuming there is no distinct constituent level above the intonation unit (none that has different properties from the intonation unit, that is). Overall, there is thus no consensus on whether one or even several distinct constituent levels above the intonation unit exist or not, nor on the properties that define such a constituent level or levels.

For morphosyntax, the picture on larger discourse units is a bit different. Clause nexus, i.e. the combination of clauses into something that must then be a structure larger than a clause, is investigated in many works, with the higher-ordered structure that clauses are combined into generally assumed to be the sentence. However, there is no consensus yet as to whether, maybe just for some languages, a second morphosyntactically relevant level above the clause (e.g. a paragraph) should be assumed, and, furthermore, even for the sentence as a morphosyntactic constituent, definitions remain controversial and unclear (at least in the analysis of spoken texts).

A good case for illustration of the definitional and conceptual uncertainties concerning larger morphosyntactic units can be found in the Papuan-style clause chain, which is a morphosyntactically clear and discrete above-clause-level unit, defined in terms of its verb forms: clause chains in Papua morphologically distinguish chain-internal verbs (*medial verbs*) from chain-final verbs (*final verbs*), where the former are dependent for some verbal categories (e.g. TAM), while the latter are fully independent forms (see e.g. Fedden 2020, Foley 2000, Foley 1986 for typological discussions and chapter 3.2 of this thesis for a short summary and a description of clause chains in Yali). Despite their morphosyntactically clearly defined structure, however, there is no consensus yet on the theoretical status of clause chains in a model of discourse units: One line of research analyses clause chains as sentences, labelling the relation between final and non-final clauses in such chains *cosubordination* and treating it as one out of three options of sentence-internal clause linkage (the other two options being coordination and subordination). The notion goes back to Foley & van Valin (1984), and is perhaps the most widely taken approach in more recent syntactic discussions of clause chains

(e.g. Foley 2010 or van Valin 2005). A different line of research, however, sees clause chains as instantiations of (morphosyntactic) paragraphs. This proposal goes back to Longacre (1970, 1972, 2007 (1985)), who explicitly rejects an analysis of clause chains as sentences, based, mainly, on the argument of size: clause chains, according to Longacre (2007 (1985): 400, 416), are too long for sentences (Sarvasy 2021, for example, reports that the longest clause chain in her corpus of 64 Nungon texts spans 22 clauses).

The latter argumentation clearly presupposes that paragraphs are a structure that is larger than the sentence. Taking paragraphs as a morphosyntactic structure (because clause chains are a morphosyntactic structure), this, however, is at odds with common definitions of a morphosyntactic sentence as "the largest unit that can be formed by combining phrases and words through morphosyntactic means" (Himmelmann & Riesberg 2026: 12)[6].

However, as argued by Himmelmann & Riesberg (2026), this common definition of a morphosyntactic sentence is also not compatible with the first line of analysis which treats clause chains as sentences. This is because, at least in some languages, it is possible to combine two clause chains or a clause chain and another clause into a still larger syntactic grouping, e.g. via coordination. A clause chain, in these languages, is thus not the largest structure that can be formed via morphosyntactic means and should, taking the definition of a sentence strictly, actually be a unit that is *smaller* than the sentence. The phenomenon can be illustrated with an example from Yali, as given in (3): The first line of the construction here presents a chain of two clauses (a medial clause recognisable by its medial verb form *embeselug* followed by a final clause *laha,* which terminates the clause chain, cf. section 3.2), to which, however, another clause is linked via the connector morpheme ***famen***[7] 'NOM'. The example is taken from Himmelmann & Riesberg (2026: 13), but the glossing and display slightly modified to be consistent with the conventions of this thesis.

(3) Yali: clause chain within larger syntactic structure

a)	*ilen*	*eneg*	*embeselug*	*laha*	***famen***
	il=en	eneg	embe-se-lug	laha	famen
	eye=ERG	just	put-??-SEQ	go:3SG.IM.PST	NOM

[6] Note, however, that this definition of a morphosyntactic sentence as well can be contested, and that the term *sentence* is used in reference of prosodically and/or orthographically defined structures as well in the literature, such that not every discussion of *sentences* is also a discussion of morphosyntactic structure. See Himmelmann & Riesberg (2026: 12) for a pertinent discussion.

[7] Himmelmann & Riesberg analyse *famen* as a conjunction with the meaning 'but'. Since it is one out of a larger group of originally nominal morphemes that can be used as clause connectors in Yali, forming clause combinations with very varied interpretations and a wide range of usages not all of which are understood yet, I gloss it simply as 'NOM' for 'nominal clause marker' in this thesis, along with all other morphemes of a similar function. This is not meant to refute the analysis of Himmelmann & Riesberg, however, but mainly serves to keep glossing throughout the thesis consistent. Nominal clause marking in Yali, as well as the problems in its analysis at the current state of research, will be introduced fully in section 3.4.

b) *fobik itano malik eke toron eke*
fobik ita=no malik eke tot=on eke
after DIST=GIV child one small=AM one

c) hulal ibma sehek sehek
hulal ibma su-ehek su-ehek
study there do-3SG.IM.PST do-3SG.IM.PST

'he just looked at them and left but,
after that (there is) a little boy, he studies them'

[pear_story_Edo 057ff]

Overall, there is thus no consensus yet on the placement of (Papuan) clause chains in a taxonomy of (hierarchically-ordered) morphosyntactic units, although they are a morphosyntactically clearly defined (and discrete) structure. Larger discourse units, therefore, are not very well integrated into hierarchical models of discourse structure to date, neither from a prosodic nor from a morphosyntactic perspective.

Summing up, it can thus be said that hierarchical models still struggle to accommodate larger units and encounter conceptual problems in explaining the relationship between their two distinct hierarchies of linguistic structure. Nevertheless, their assumption of discrete hierarchically-ordered unit categories is to date the most widespread perspective in linguistic analyses of text structure and often presupposed without further discussion (e.g. in language description). A reason for this could be that the positing of two distinct structural hierarchies despite its problems at the same time is also a major advantage of the account: It captures the intuitively very plausible idea that a morphosyntactic structure, e.g. a morphosyntactic phrase, relates to another morphosyntactic structure, e.g. a clause, in a different way than to a prosodic structure, e.g. to an intonation unit.

1.2.2 Discourse boundaries of different strength

Explicit challenges to the assumptions of hierarchical models of discourse structure have, in the last decades, come especially from scholars examining larger discourse units and/or prosodic or phonological structure. Examples include Himmelmann & Riesberg (2026), Schütze-Coburn (1992), and Schiering et al (2010) and Bickel et al (2009). All of these works deny the possibility of unambiguous exhaustive segmentability of texts for the investigated level of structure respectively.

For Schiering et al. (2010) and Bickel et al. (2009), this investigated level of structure is the phonological word. At least in some languages, they claim, individual phonological cues usually associated with this domain do not always converge on one domain, but may also

identify several structures of slightly different size each. Where this is the case, the boundaries of individual instantiations of the category *phonological word* will emerge clearly in some cases (where more cues converge on the same domain), but less clearly in other cases (where more cues diverge), making boundary identification clear in the first, but ambiguous in the latter case.

For Schuetze-Coburn (1992), the structure of interest is the “prosodic phrase” or “intonation unit” in German. Boundaries to this type of unit, he finds, may be marked by more or less phonetic cues together and therefore emerge clearer in some and less clear in other cases, making their identification, again, clear for some, but not for all of the units.

Himmelmann & Riesberg (2026), finally, discuss linguistic cues to paragraph boundaries/larger discourse units, making similar observations: different linguistic cues to such units do not always align in texts, wherefore some boundaries of larger units emerge clearly (where more cues meet at the same point), while others remain ambiguous (where more cues diverge) (see also the discussion in the introduction to this chapter).

Two reasons why unclear or hard-to-place boundaries might play a role, next to prosodic/phonological structures, especially in the description of larger units come to mind here. Firstly, and perhaps more obviously, both in larger discourse units and prosodic structures multiple cues usually converge to form one boundary together (cf. also the discussion of the delimitation of intonation units in Chafe 1994: 57-60). This, of course, is a precondition to the possibility of more or less cues being used at one specific boundary (as reported in Schuetze-Coburn 1992) or of more or less cues being timed to correlate (as reported in Schiering et al. 2010). Both of these options lead the way to the emergence of structures with multiple, but neither necessary nor sufficient boundary criteria.

Secondly, boundaries of larger units/paragraph-like structures are often discussed involving prosodic cues, e.g. pause length (Swerts 1997) or resets of declination trends (Wichmann 2000). Many of the cues known to contribute to the perception of prosodic boundaries, however, can be scaled and are thus actually continuous in nature. Pauses or final lengthening, for example, can be longer or shorter, (initial) pitch raising and pitch resets can involve larger or smaller pitch jumps, and so on. Where the same cue, scaled smaller or larger/shorter or longer, is relevant to several units at different levels of structure (e.g. where a pause is considered a boundary cue at the level of intonation units, and a longer pause a boundary cue at the level of paragraphs), this cue in itself does not directly license the assumption of discrete levels of structure.

To make this clearer, let us assume with Kawahara & Shinya (2008:63 with reference to Selkirk et al. 2003 and Selkirk & Tateishi 1991) that the Major Phrase in Japanese is characterised by “a larger pitch reset and a larger initial rise” than the Minor Phrase, while the Intonational

Phrase is implemented, among others, by a “distinctive large initial rise and pitch reset at its beginning” (ibid: abstract) and the Utterance, among others, “by an even larger initial rise” (ibid: abstract). Trying now to link the prosodic boundaries in actual Japanese texts to these levels of structure, we will probably face numerous pitch resets that, by the size of the pitch jump involved, leave us in doubt whether they are still Major Phrase pitch rises, or already Intonational Phrase or even Utterance level.

Note, however, that while it is not possible to allocate individual boundaries to distinct levels of a hierarchy based on scaled cues alone (since scaled parameters give continuous measurements), a correlation of the scaling of such cues with different levels of a hierarchy of (prosodic) units nevertheless has been shown in a number of studies (e.g., Swerts et al. (1996) on pitch reset at boundaries of different depth in Swedish, Wightman et al. (1992) on final lengthening in English). Crucially though, in these studies, the assumption of distinct levels of structure is not a result of the investigation of their scaled boundary cues, but rather a presupposition to it. In Kawahara & Shinya (2008), for example, the hierarchical levels of the boundaries investigated were determined prior to the prosodic analysis, based on morphosyntactic structure.

Where boundary cues form continuous dimensions, thus, the identification of discrete levels of structure will need other, (prosodic or non-prosodic) categorical boundary cues (e.g. boundary tones). Taken literally, qualitatively (unambiguously) distinct levels of structure will only follow from qualitatively distinct cues. Instead of discrete levels of a hierarchy, both continuously-scaled (prosodic) cues and structures with multiple non-obligatory boundary cues therefore actually rather favour a conceptualisation of discourse boundaries as a continuous dimension of strength. Stronger boundaries, on such a dimension, are then formed where more and higher-scaled cues are employed, weaker boundaries where less and lower-scaled cues align, and unit categories emerge from this gradual dimension, most likely with fuzzy boundaries and some ambiguity in their distinctions.

Although no fully-fledged model of discourse structure has been developed from this perspective yet, a first initial suggestion on especially larger units is put forward by Himmelmann & Riesberg (2026), who propose to view their individual boundary cues as cohesive ties à la Halliday & Hasan (1976). Such ties, they argue, in principle form individual (larger) units by themselves each, but by doing so produce stronger discourse boundaries where more of these units end in the same place, and weaker ones where less of the cues converge.

Illustrating this for Yali with the two examples introduced in section 1.1, where a larger prosodic and a larger syntactic grouping correlate in one (example 1), but not in the other (example 2) case, both the prosodic and the syntactic grouping could be a cohesive tie, since they both

group certain parts of discourse together. In this sense, each of them can be viewed as identifying a larger unit on its own. Both of these units ending in the same place (the correlation, example 1) could then be viewed as a stronger boundary marked by two cues/ties together, one of the units ending alone (the misalignment, example 2) as a weaker boundary marked by one cue/tie only. Pursuing the line of thought further and assuming in line with the descriptions of other languages that other linguistic cues are relevant to larger discourse units in Yali as well, a third tie (cue) might exist e.g. in referential chains of the structure NP, pro/ø, pro/ø, pro/ø, where each part of the chain is a referential expression denoting the same referent (see e.g. Filippova & Strube 2006, Same 2022 on such chains as paragraph cues in English/other languages). Such chains, then, would be another cohesive tie, indicating a boundary where they end. Where this boundary correlates with the prosodic and syntactic groupings, this would result in a strong boundary marked by three cues/ties, where it correlates with only one of them in a weaker boundary of two ties, and where it correlates with neither in a still weaker boundary of only one tie. Further cues could be added again, e.g. certain particles or discourse markers etc., allowing for boundaries of four, five and more cues, such that in the end, boundary strength could be a fully continuous dimension.

Adding enough boundary cues, the result of this would likely look something like the results obtained in experiments testing native speakers' perception of unit formation in discourse. Examples include Swerts' (1997) investigation of paragraph identification, and studies using Rapid Prosody Transcription (RPT; see Cole & Shattuck-Hufnagel 2016: 7-13), like Riesberg et al. (2018) testing speakers of Papuan Malay. In general, these experiments show that (naïve) native speakers do not categorically agree on the placement of boundaries: Riesberg et al. (2018: 402), e.g., find that at no point in the discourse segmented by their participants there is complete agreement between all annotators on the presence of a boundary[8]. Still, some points in discourse emerge where many speakers perceive a boundary, while at others somewhat less or even just a few speakers would identify one. Such results can be captured by the assumption of strong discourse boundaries, perceived as a break by many speakers, and weak discourse boundaries, perceived as a break by just a few, with all levels of strength from just one speaker perceiving a boundary up to all speakers perceiving a boundary possible. The concept is visualised in FIG 5 taken from Swerts (1997: 516). Boundary strength, here, is a continuous dimension (depicted on the y axis).

[8] Complete agreement on the absence of boundaries may be reached, though.

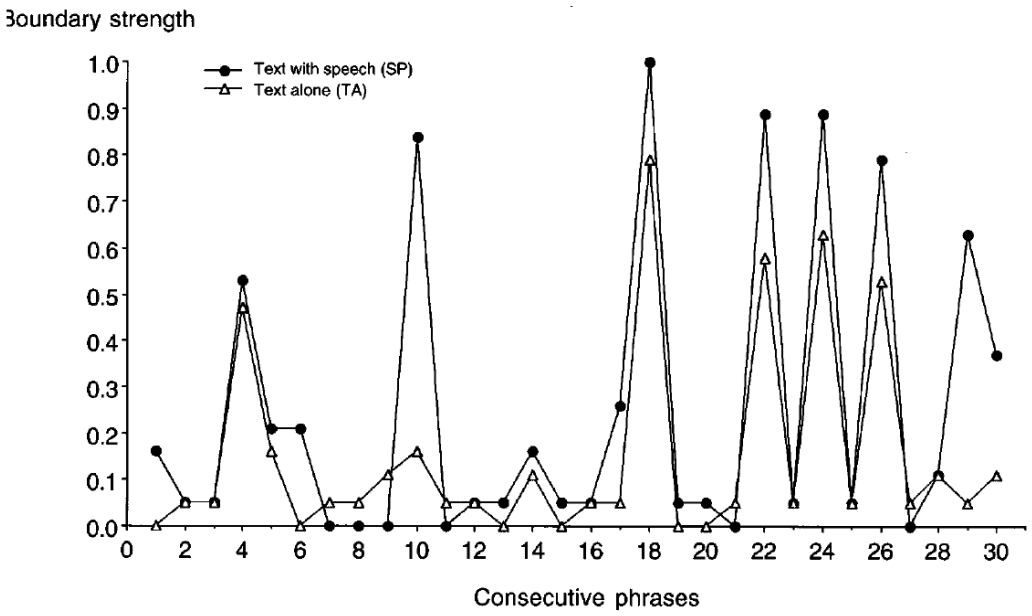


FIGURE 5 (taken from Swerts 1997: 516): Boundary strength of consecutive phrases (x-axis) as continuous dimension (y-axis). The quantification of boundary strength is derived from the number of speakers that marked a paragraph boundary at the respective point in discourse in a perception experiment.

Note that such perception experiments as a principle do not identify purely prosodic discourse units that could be differentiated from morphosyntactic ones, or vice versa. This is because speakers usually base their boundary judgements on all sorts of different cues available to them, even if explicitly instructed e.g. to identify the places where they "hear the end of a unit" (Riesberg et al. 2018: 412) by experimenters targeting prosodic structure (cf. the argumentation in Cole & Shattuck-Hufnagel 2016, confirmed in Riesberg et al. 2018 in analysing different linguistic parameters connected to the boundaries identified by their participants). The boundaries identified thus pertain to a more holistic (intuitive) conception of text units, which does not make a conceptual split between prosodic and morphosyntactic or other units or boundary cues. Viewing boundaries of (at least larger) discourse units as a result of many different linguistic cues including prosodic and morphosyntactic phenomena alike, this would then also hold for the units described in a discourse model of gradual boundary strength.

Thus not relying on the assumption of two distinct structural hierarchies, this could be a major advantage of such a model, since it would not need to explain how the two hierarchies (prosodic and syntactic structures) relate to each other and how they can still both identify cognitively relevant text units. At the same time, it would be a disadvantage though, since the model then also looses the intuition that prosodic units have a different relation with other prosodic units than with morphosyntactic units, and vice versa.

A more pressing issue of the model at its current initial state, however, is that, put to its logical extreme, the assumption of one gradual dimension of boundary strength which is a

conglomerate of all parameters that can signal continuation or finality/boundaries leads to the description of just one overall dimension 'unit boundary', such that the model looses different types of discourse units (and boundaries), i.e. unit categories and structural levels, completely. A larger discourse unit, e.g. a paragraph, firstly, would then be just a somewhat stronger-cued intonation unit, e.g., where it does not necessarily follow from the model at which point (e.g. with how many added cues) an IU boundary becomes a paragraph.

Clearly, further work is therefore required until a full model of discourse structure can be developed from the perspective of discourse boundaries on a gradual dimension of boundary strength that emerges from the interaction of multiple boundary cues. A valuable source of information for this work could perhaps come from descriptive tools of the relation between continuous dimensions and discrete categories of other scientific disciplines. One such tool that has been applied successfully to linguistic modelling before are attractor landscapes, used to describe the different possible realisation of pitch accents in Roessig et al. (2019), for example[9]. The central purpose of this thesis being the description of linguistic structure in Yali, however, their usefulness to a description of discourse boundaries cannot be explored further at this point, such that the matter will have to remain open for the time being.

1.3 About Yali

Yali is a Papuan language spoken east and north- and south-east of Wamena in the highlands of the Indonesian province Papua Pegunungan. It belongs to the Dani language family, and likely to the Trans New Guinea phylum (cf. Lewis et al. 2015, Hammarström et al. 2022). Numbers of speakers are estimated to be approximately 30.000 (cf. Riesberg 2021, Lewis et al. 2015).

According to both Ethnologue (Lewis et al. 2015) and Glottolog (Hammarström et al. 2022), Yali can be subclassified into three distinct Yalic languages, Pass Valley Yali, Angguruk Yali and Ninia Yali. As argued in Riesberg (2021), these three languages are, however, mutually

[9] In a nutshell and very coarsely speaking, attractor landscapes are a way of modelling the emergence of categories from continuous dimensions in terms of certain values (*attractors*) on a scale that are especially likely to occur or especially frequent, or around which especially many measurements of a certain phenomenon cluster. Illustrating this for the emergence of unit categories from a gradual scale of boundary strength, two distinct categories *paragraph* and *intonation unit,* e.g., could be modelled as two values of boundary strength around which especially many boundary realisations cluster, i.e. as something like a target value.

intelligible and speakers themselves rather differentiate four dialectal areas, Angguruk, Ninia, Apahapsili and Abenaho. The present thesis is based on data from the Apahapsili area. In the Glottolog's and Ethnologue's classification, Apahapsili is subsumed as one out of three dialects under Pass Valley Yali.

In a very general sense, Yali can be regarded as an under-researched language, since there are only a few linguistic works on it available to date. These are: a dictionary published as Riesberg et al. (2021), which includes a short grammar sketch treating basic aspects of morphosyntax and segmental phonology (Riesberg 2021) and an actual dictionary of Angguruk lexemes collected by Siegfried and Ilse Zöllner; a detailed description of the Angguruk verbal system by Siegfried Zöllner (ms.), which has never been published but is available online (https://hdl.handle.net/1839/00-0000-0000-0022-2A8B-8); a doctoral dissertation comparing Abenaho morphology to Dani (Fahner 1979); and a few articles and bachelor's theses treating more specific grammatical phenomena (Riesberg in prep, Riesberg 2022, Kaland et al. to appear, Riesberg 2018, Lekeneny 2014, Wandik 2014, K. Walianggen 2012, Y. Walianggen 2012, Sawaki 1998).

1.3.1 Segmental Phonology

According to Riesberg (2021: 8-10), there are five vowel and twelve consonant phonemes in Apahapsili Yali, as depicted in Tables 1 and 2 respectively[10]. Example words for all of them can be found in Riesberg (2021: 8-10).

Table 1: Apahapsili Yali Phonemic Vowel Inventory

	front	central	back
high	i		u
mid	e		o
low		a	

[10] For the Angguruk dialect, two more contrastive vowels are reported, which are centralised versions of the high vowels /i/ and /u/. However, this centralisation contrast does not hold for Apahapsili, where most speakers neither produce nor perceive the difference (cf. Riesberg 2021: 10), and will not be considered here.

Table 2: Apahapsili Yali Phonemic Consonant Inventory

manner\place	(bi)labial	alveolar	palatal	velar	uvular
plosive	/p/	/t/		/k/	
fricative	/ɸ/	/s/			/χ/
nasal	/m/	/n/		/ŋ/	
lateral		/l/			
approximant	/w/		/j/		

Next to the twelve lexically contrastive consonant phonemes (Table 2), Riesberg (2021: 8-10) lists a number of allophonic variants of these sounds. Of these, the following are relevant in the context of this thesis because they are reflected in the orthography adopted in the transcriptions here: Firstly, the three voiceless stops /p/, /t/ and /k/ are generally realised as voiced stops [b], [d] and [g] respectively if preceded by a nasal. Between two vowels, /p/ is realised as a voiced bilabial fricative [ß] and /t/ as an alveolar trill [r][11], while the velar stop /k/ does not have an intervocalic variant and is realised as [k], e.g. in /eke/ 'and'.

Secondly, the bilabial fricative /ɸ/ is regularly realised as a voiced segment [ß] intervocalically, which, as noted by Riesberg (2021: 9), makes root-internal occurrences of [ß] ambiguous in their analysis as phonemic /ɸ/ or /p/. Elsewhere, /ɸ/ is in free variation with a voiceless labio-dental fricative [f].

Thirdly and finally, the voiceless uvular fricative /χ/ is often realised as a voiceless glottal fricative [h] in word-initial position and may be voiced into [ʁ] in other positions. Examples for all of these alternations can be found in Riesberg (2021: 8-10).

Note additionally that the two glides /j/ and /w/ are probably not fully contrastive in all positions: following a vowel (i.e. word-internally in onset position), they appear to be in complementary distribution such that /j/ occurs after front, /w/ after back vowels. Following the same distribution, glides may also be inserted into vowel sequences, e.g. when vowel-initial suffixes are attached to vowel-final roots (/su/ 'big' + /on/ 'AM' -> [suwon] vs. /eke/ 'one' + /on/ 'AM' -> [ekejon]). Still, both glides may appear after the mid vowel /a/, where their distribution seems to be lexically specified (though no minimal pairs are attested in this position), e.g. /sajep/ 'kind.of.string' vs. /sawet/ 'not.fresh'. Furthermore, the two approximants are fully contrastive

[11] There are, however, a few exceptions to this, which Riesberg (2021: 8-9) suggests to be lexical.

in word-initial position, where they also form an opposition with simple vowels and sequences of two vowels, e.g. /e/ ‘tree’ vs. /je/ ‘true’ vs. /we/ ‘only’, /am/ ‘times’ vs. /jam/ ‘to bury’ vs. /iam/ ‘village’ vs. /wam/ ‘pig’, /uan/ ‘younger.sister’ vs. /wan/ ‘to wear’ vs. /an/ ‘1.SG’.

For the vowels (Table 1), so far there is no evidence for any phonemic length distinction in Yali. Sequences of (two) non-homogenous vowels, however, do exist in all possible combinations of the five vowel phonemes, as for example in /sue/ ‘bird’ or /pianŋku/ ‘kind of tree’. Their analysis as sequences of two vowel segments (as opposed to one diphthong segment) syllabified at least phonemically into two syllables is based on the possibility of glide insertion noted above. That is, words like /sue/ ‘bird’ are also sometimes realised as [suwe], /pianŋku/ ‘kind of tree’ as [pijaŋgu], etc., making the disyllabic structure of the sequence explicit.

Concerning phonotactics, there are four different types of syllable structures attested in the corpus: V, CV, VC and CVC syllables (see further down for examples). Schematically, the Yali syllable can thus be represented as given in FIG 6.

(C)V(C)

FIGURE 6: Syllable Template for Yali

No consonant clusters within a syllable exist in Yali, neither in onset nor in coda position. Note additionally that the set of consonants allowed in coda position seems to be restricted to exclude the two glides /w/ and /j/ and the bilabial and alveolar fricatives /ɸ/ and /s/, while in the onset slot, all twelve consonant phonemes are attested. Examples are /pun.tip/ ‘kind of tree’, /ku.luŋ.ku/ ‘dizzy’, /ɸat/ ‘to touch’, /sa.lu.am/ ‘kind of pandanus’, /χu.maχ/ ‘next.to’, /naŋ.kuk/ ‘extinguished’, /ni.ja.wa.len/ ‘kind of itchy leaf’, /ŋal/ ‘angry’.

All four attested syllable types can constitute a monosyllabic root, as in /e/ ‘tree’, /ŋa/ ‘scream’, /ap/ ‘man’ and /wam/ ‘pig’. There are also disyllabic, trisyllabic and even 4-syllabic roots, as in /su.e/ ‘bird’, /taŋ.koχ/ ‘sleep’, /χu.al/ ‘to open’, /um.ban.tu/ ‘side’, /ŋi.at.noχ/ ‘joke’, /ɸe.i.ruχ/ ‘kind.of.vegetable.plant’, /e.le.ma.mit/ ‘to block’, with no apparent restrictions on the combination of syllable types within roots. Since Yali morphology is largely agglutinating, morphologically complex words and compounds can even be longer than four syllables, e.g. /la.χa.peχ.ma.ne/ ‘look.up-ST.PART-LOC-DIR’.

1.3.2 Orthography

Examples throughout this thesis will be transcribed using the orthography developed by the missionaries of the Vereinte Evangelische Mission Wuppertal, notably by Siegfried Zöllner and Friedrich Tometten. This orthography is also used by Riesberg et al. (2021) and in the transcriptions throughout the corpus I work with. It largely adheres to standard Indonesian spelling conventions and is phonemic using the respective IPA symbols with the following list of exceptions:

Firstly, despite their non-phonemic status, the voiced stops [b], [d] and [g] are transcribed as such where they occur; the same is true for the alveolar trill [r]. Secondly, the voiced bilabial fricative [ß] is represented by <b> where it occurs, no matter whether it functions as an allophone of /p/ or of /ɸ/. This makes the reading of the grapheme <b> in intervocalic position ambiguous for the two phonemes, but thereby also avoids committing to one of the two analyses in cases where there is no evidence for either, i.e. for root-internal occurrences of [ß]. Furthermore, in word-initial and non-intervocalic position, the phoneme /ɸ/ is represented by <f>, no matter whether it was realised indeed as [f] or as [ɸ]. This phoneme is thus represented by <f> where it is realised as [f] or [ɸ] and by <b> where it is realised as [ß]. Next, the phoneme /χ/ is represented by <h> in onset position and by <g> in coda position. And finally, the velar nasal /ŋ/ is represented by <ng> and the palatal glide /j/ by <y> (following Indonesian spelling conventions). Non-contrastively inserted glides are represented in the transcription as well. Table 3 summarises the consonantal phoneme and allophone to grapheme correspondences used in the orthography.

Table 3: Consonantal Phoneme/Allophone to Grapheme Correspondence

Phoneme	Realisation	Grapheme	Environment
/p/	[p]	<p>	
	[b]	<b>	after nasal
	[ß]	<b>	intervocalically
/t/	[t]	<t>	
	[d]	<d>	after nasal
	[r]	<r>	intervocalically
/k/	[k]	<k>	

	[g]	<g>	after nasal
/ɸ/	[ɸ]	<f>	
	[f]	<f>	
	[ß]	<b>	intervocalically
/s/	[s]	<s>	
/χ/	[h]/[χ]	<h>	in onset position
	[χ]/[ʁ]	<g>	in coda position
/m/	[m]	<m>	
/n/	[n]	<n>	
/ŋ/	[ŋ]	<ng>	
/l/	[l]	<l>	
/j/	[j]	<y>	
/w/	[w]	<w>	

1.4 About this thesis

1.4.1 Aims, scope and procedure

The primary goal of this thesis is the description of Yali. In concrete, it means to explore how prosodic and syntactic structures form larger units and major boundaries in natural monologue discourse, both separately and in interaction. To this end, the thesis explores possible descriptions of both larger prosodic and syntactic units in turn and operationalises one version for each of them for annotation in a corpus. From this annotation, it quantifies their correlation and investigates effects and meanings of specifically misaligned usages further, i.e. usages where larger syntactic and prosodic units do not end in the same place. The decision to zoom in on the misaligned cases is grounded in the assumption that they constitute a divergence from the norm, in line with the working hypothesis of this thesis posited in section 1.1: the correlation of larger prosodic and syntactic groupings is the prototypical usage of major

discourse boundaries in Yali. As we will see later, this working hypothesis is compatible with their correlation rates in the corpus investigated.

As a description of larger discourse units from the perspective of linguistic form, the investigations presented are limited to narrative monologue to enable a first coherent account. This account, hopefully, can later serve as a starting point for more genre-divers research in the future.

Furthermore, in terms of the linguistic phenomena investigated, the thesis is limited to the description of prosodic phrasing and morphosyntactic clause combination. This is despite the fact that other linguistic phenomena are likely relevant as well to the perception of major discourse boundaries and the formation of larger discourse units in Yali, most notably the very regular convention of recapitulation introduced shortly as *tail head linkage* in section 1.1, perhaps also others, e.g. the usage of certain particles. A detailed investigation of such other possible linguistic cues to major boundaries, however, unfortunately is out of scope of the current thesis. Nevertheless, they will shortly be commented on where relevant to the prosodic and morphosyntactic descriptions given, and their relevance to major boundaries will be taken up again in the discussion (chapter 5).

A more detailed account of more different major boundary cues is out of scope in the present context especially due to the very initial state of research on Yali in general: especially on its prosodic system, there is nearly no previous research at all (with the exception of one article in Kaland et al. to appear, see chapter 2 for more details). For this reason, the thesis will also give a very first account of prosodic phrasing in Yali in general, as well as a description of the different clause-combining mechanisms that exist, to enable the exploration of larger (prosodic and syntactic) groupings in the first place.

Finally, the initial state of research on Yali, as well as the natural language data used, lead to an encounter with a range of different grammatical phenomena (in the examples as well as in the annotation of major boundaries) that previous research on Yali has not treated yet and/or which cannot be accounted for fully yet. Since a full description and investigation of all these parameters is not possible within one thesis either, the contribution of the present study to many of these issues will be the postulation of first hypotheses or first possible accounts, which, nevertheless, await more systematic testing by future research. An example of such a grammatical phenomenon are constructions of reported speech, described for the current data in section 4.3.1.3.

1.4.2 Structure of the thesis

Next to the introductory chapter setting the general frame, goals and methods of this study, the current thesis comprises three main descriptive chapters on Yali. Of these, only chapter 4 is dedicated to the exploration of larger discourse units directly. Chapter 4, therefore, includes a description of larger prosodic units, a description of larger syntactic units, a corpus segmentation into both of them, a quantification of their correlation (*alignment*), as well as a description of the effects of misaligned usages where one of the units ends without the other. The other two descriptive chapters (chapters 2 and 3) serve to set the scene for this exploration. Of the two, chapter 2 is concerned with prosodic phrasing, describing most importantly smaller prosodically indicated groupings, i.e. intonation units and accentual phrases in Yali. Additionally, it will also include a short comparison between Yali and other Dani languages, as well as a discussion of possible lexical prosodic phenomena. Chapter 3, in turn, describes different phenomena of morphosyntactic clause combination in Yali, discussing clause chains, switch-reference marking, as well as clauses marked by nominal morphology.

The descriptive part will be followed by a discussion in chapter 5, suggesting possible interpretations of the results of the investigations and highlighting some findings that might be of theoretical interest. Furthermore, recalling the initial expectation that linguistic text units should have relevance for content structure and/or processing, this chapter will also outlay some initial ideas about typical content types and structures for the prosodic and syntactic units discussed. Chapter 6, finally, will conclude the thesis.

1.4.3 Analytical framework

The prosodic descriptions and analyses given in this thesis draw on the framework of autosegmental-metrical theory (AM, e.g. Ladd 2008, Jun 2005, 2014b) and, in principle, on the notation conventions of the ToBI annotation scheme (Beckman et al. 2005)[12]. Note, however, that no full description or model of the intonation system of Yali can be given yet within the scope of this thesis.

[12] The ToBI scheme covers tones (To) and break indices (BI). For the current purpose, however, only the tone annotation conventions will be used.

The following basic assumptions on intonation commonly held in the AM tradition are especially relevant in the current context:

1) There are two basic functions of intonation cross-linguistically, which are phrasing and highlighting respectively.
2) Tonal events consist of (phonological) pitch targets, from which contours are formed by interpolation.
3) Tonal events can be phonologically complex, i.e. consist of more than one pitch target.

The first of the three, a distinction between intonational phrasing and highlighting, is especially relevant in the current context for noting that only one of the two functions, prosodic phrasing, will be investigated in this thesis. Concerning the possibility of prosodic highlighting, only a few comments on the idea of lexical stress can be made so far (section 2.4.1). The second and third are relevant in that they result in a description of Yali intonation in terms of high (H) and low (L) tones (pitch targets), corresponding to peaks and troughs in the pitch contour respectively.

Concerning notation conventions, the following symbols will be used for the discussion and transcription of tones: ^ for an upstepped/upscaled tone; *!* for a downstepped/downscaled tone; *T+T* for a tone complex of two targets; and *%* for a boundary tone at the level of intonation units. They are summarised in Table 4.

Table 4: Symbols used for the transcriptions of tone events

symbol	**meaning**
^T	upstepped tone
!T	downstepped tone
T+T	tone complex with two targets
T%	boundary tone of the intonation unit

1.4.4 Data and methods

The descriptions of this thesis are primarily based on corpus data, which have been supplemented by a few elicitations only, specifically on the topic of clause combination (chapter 3). Prosodic descriptions have been gained by auditory and visual inspection of the data, i.e. measurements have not been performed (yet).

The corpus of Yali recordings that was used has been compiled by Sonja Riesberg and colleagues in fieldwork between 2012 and 2024 (ongoing). Parts of it are available online as Riesberg et al. (2012-2016) in The Language Archive, MPI Nijmegen.

At the time of writing, the corpus holds about 10 hours and 50 minutes of transcribed and translated recordings of spontaneous and semi-spontaneous speech. These include stimuli- and task-based narratives and dialogues, natural spontaneous conversations, traditional stories and songs, as well as various other kinds of unscripted monologues, like personal narrations and anecdotes or procedural and explanatory texts. Additionally, the corpus includes elicited data and a toolbox lexicon and database with interlinear glossings and (Indonesian, as well as in large parts English) translations of the texts. All recordings are from the dialectal area of Apahapsili.

In principle, the full corpus was accessible to me in writing this dissertation. Its full resources, including the toolbox data base and elicited materials, have been used for the morphosyntactic descriptions of chapter 3 only, however. The investigation of larger discourse units (chapter 4), is restricted to a subcorpus instead, due to its heaviness in annotation. This subcorpus will be referred to as *the narrative subcorpus* in this thesis.

The narrative subcorpus consists of eight recordings of narrative monologue, four of them pear story retellings (Chafe 1980), four traditional stories. It contains data from seven different speakers, four male and three female, and the eight stories total a recording time of 28 minutes and 17 seconds and have been segmented into 1055 intonation units.

The prosodic descriptions of chapter 2, finally, are in principle restricted to this subcorpus as well, but complement it with a set of elicited utterances from the corpus, which were recorded specifically for the purpose of generating first hypotheses about prosody in Yali. The set comprises 15 utterances recorded from nine different speakers with the purpose of keeping the recorded material as consistent as possible over all nine of them (in terms of the segmental string). Furthermore, it enables the comparison of the same words in phrase-final and phrase-medial positions to help disentangling word-level from phrase-level phenomena, as well as covering different speech acts, most notably declaratives and questions.

1.4.5 How to read the examples of this thesis

All examples of Yali data given in this thesis will use the orthographic conventions outlined in section 1.3.2. They will be displayed using up to four interlinearised tiers, which give, from top to bottom, an orthographic transcription, a transcription of tone events, a morpheme analysis, and interlinear glosses, as demonstrated in (4). Of the four, the tone transcription is facultative and will be used only where directly under discussion. The three/four interlinear tiers will be followed by an idiomatic English translation at the end of examples. Note additionally that the tone transcriptions, were given, represent the surface structure.

(4) Example structure for the transcription of examples in this thesis

e	*anggen*	*(i)tano*	*hinahan*	*og*	*(i)rehek*
[	L+H]$_{AP}$	[H]$_{AP}$	[L+H]$_{AP}$	[	L+H]$_{AP}$
e	anggen	ita=no	hinahan	og	it-ehek
tree	fruit	DIST=GIV	three	give	3SG.BEN-3SG.IM.PST

'he gave him three of the fruits'

pear_story_Stefen_b_060

Furthermore, all examples given will be segmented into intonation units (IUs) via line breaks, considering them to be the most basic unit of language transcription (see Himmelmann 2006 for discussion, as well as section 2.1 for a description of IUs in Yali). Where more than one IU is displayed, IUs will additionally be counted using alphabetical numbering, as demonstrated in (5). One exception to the basic segmentation, however, exists in elicited examples for which no recording was available. These will be displayed as one line of transcription, or, if applicable, using a clause segmentation. Note as well that in rare cases, the transcription of individual IUs was to long for one line, such that an additional line break had to be inserted. These cases can be recognised by the absence of alphabetical counting for the additional line. An example of such a case is (6) below.

(5) IU segmentation of examples

a) *we*
we
PT

b)

lahibareg	*(i)tare*
laha-ibag-teg	ita=te
go.up-3.REM.PST-SS.SEQ	DIST=TOP

'then they went up'

suit_13_052

However, as the vast majority of examples discussed are taken from recordings of natural speech and the current thesis investigates larger linguistic units, the examples in this thesis are rather complex at times. Furthermore, describing prosodic as well as syntactic structure, different aspects of the examples given will be relevant to the discussion at different points of

the thesis. For these reasons, several additional more specific notation conventions will be used to highlight important aspects and/or clarify morphosyntactic or prosodic structure. All of them are facultative and will be used where relevant to the discussion and judged helpful for the understanding of the example only. Furthermore, they will be explained again at the relevant points in the text, such that the overview given here need not be memorised for the course of the whole thesis, but is rather meant as a reference point for later consultation if in doubt at any point.

The additional notation conventions are as follows:

Firstly, a bracket notation using *( )* will be used to identify segments of a word that were omitted in the surface realisation of an utterance. An example of this was *(i)tare* in (5b) above, which indicates that the distal demonstrative in question was realised as *tare,* not as *itare* in the given instance.

Secondly, a clause segmentation (and counting) using romance numerals will be added where discussing syntax, as demonstrated in (6). Note that this segmentation may correspond to the alphabetically-numbered IU segmentation in many cases, but not necessarily, as in (6) (two clauses segmented, but one IU).

(6) Clause segmentation of examples

i.	***il***	*<u>larukim</u>*	ii.	*itano*	*an*	*hondo*	*niya*	*wamulusa*
	il	la-tuk-im		ita=no	an	hondo	niya	waha-usa
	say:CONTIN	go-INF-DS.SIM		DIST=GIV	1SG	close	1SG.OBJ:DIR	come-3PL.IM.FUT

ulug	*atam*
ulug	atam
QUOT	PT

'when they were saying this (and going) he thought they will come to catch me'

filling_the_traps_066

However, for reasons discussed in sections 3.2 and 3.4, the clause segmentation given will *not* segment medial clauses, and therefore treats clause chains as one unit (see section 3.2). Where under discussion, the structure of clause chains will therefore be highlighted differently, using bolt face to mark predicates of medial clauses and underlining for predicates of final clauses. Example (6), thus, in fact shows a clause chain of one medial clause *il* and a final clause *larukim,* segmented as (6i.), followed by a different type of clause (not a chain), segmented as (6ii.).

Thirdly, bracketing using *[ ]* will be used to segment constituents and constructions other than IUs and clauses where needed. Where segmenting prosodic constituents, the bracketing will be inserted into the tone tier of the transcription, where segmenting morphosyntactically, into the morpheme tier. An example of the former was (4) above, segmenting accentual phrases (APs; see section 2.2.2). An example of the latter is the rather long and complex sequence in

(7) below, segmenting a larger syntactic unit (SYNT), which, in fact, consists of the whole sequence of seven clauses (*[* and *]* in the morpheme tier at the beginning of 7i. and the end of 7vii. respectively).

(7) Segmentation of larger syntactic unit, reported speech and IU-final contours

a) i.
hiyap *ibmanoen* *aluatuk* *lapareg /*
[hiyap ibma=no=en aluat-tuk la-pag-teg
woman these=GIV=ERG observe-INF go-3.REM.PST-SS.SEQ

b)
ih
ih
EXCL

c) ii.
apte *horog /*
ap=te horog
man=TOP like

d)
siyahon *alulumni* *hahon* *itnoen /*
siyag=on alulumni hag=on itno=en
bad=AM bad like=AM DET=ERG

e)
malik *itno* *toron* iii. *peruk* *famente /*
malik itno tot=on pe-tuk famen=te
child DET little=AM think-INF NOM=TOP

f) iv.
ti *ari* *suruk* *ari* *ulug* v. *aluatfaregte* *yoho *
ti ari su-tuk ari ulug aluat-pag-reg=te yoho
dance MED do-INF MED QUOT observe-3.REM.PST-SS.SEQ=TOP PT

g) vi.
wam *wapag* *sambit* *itno* *enegte /*
wam wat-pag sambit itno eneg=te
pig kill-3.REM.PST NOM DET NOM=TOP

h) vii.
ebenam *apag *
ebenam at-pag**]**SYNT
visible become-3.REM.PST

'the women were observing him, ih, and although they thought he was a bad man, he was (just) a little boy, they (now) found out (lit: observed) that he could dance (like an adult man). and when they had a pig party (lit: killed a pig), (indeed) he became normal'

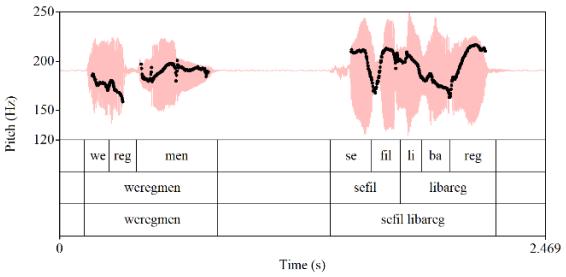
suit_14_052

Fourthly, constructions of reported speech will become relevant to the discussions at some point in the course of this thesis. They will be identified in the examples using colour-coding, where the reported sequence is rendered in red, and the speech clause (see section 4.3.1.3), if any, in blue. An example of this is (7) as well, where two reported clauses (7ii. and iv.) occur, followed by a corresponding speech clause (7iii. and v.) each.

Fifthly and finally, the symbols / and \ will be used as a representation of IU-final intonation contours, distinguishing continuity (/) from finality intonation (\) (see sections 2.3 and 4.1). They will be added at the end of the line in the transcription tier of the respective IU, as demonstrated in (7) as well.

Next to this, where judged relevant to the discussions, a visualisation of the pitch contours and waveforms of examples will be added to complement their transcription. All visualisations were

created in praat (Boersma & Weenink 2021) and include a textgrid segmentation of IUs and, optionally, of words and/or syllables, as demonstrated in FIG 8. Where more than one IU is displayed, an alphabetical counting of IUs will be given below the figures, corresponding to the IU count of the transcriptions to ease the matching between the two. Note additionally that the counting of figures always matches these visualisations to the counting of examples, such that a pitch visualisation given as FIG 8 will always be a visualisation of example (8), and vice versa. This is meant to facilitate the discussion of examples, as well as the matching between figure and interlinearised analysis of the same example. However, it leads to the skipping of individual numbers in the counting of both of them, such that it might happen that there is no FIG 7, but a FIG 8, or no example (8), but an example (9), etc. This is because on the one hand, there are also other types of figures than pitch visualisations that do not correspond to an example. In this case, there will be a FIG 8, but no example (8), e.g. On the other hand, pitch visualisations will not be given for all examples, resulting in e.g. an example (9) without FIG 9. Examples, figures and tables alike, furthermore, will be counted per chapter.



a) b)

FIGURE 8: Example pitch visualisation

Finally, all examples will include a corpus reference giving the filename and IU reference from the toolbox database that the examples are taken from. This corpus reference will additionally flag elicited examples, by adding the string *[elic].* It will also be used to identify the corresponding audio files in the supplementary material for the prosodic examples discussed.

2 Prosodic Phrasing

Yali prosodic structure has not been described systematically yet to date. The only paper addressing it are Kaland et al. (to appear), who offer a first acoustic exploration of word- and phrase-final F0 movements. For this reason, this chapter, providing the background to the discussion of larger prosodic units in chapter 4, will introduce two levels of prosodic structure that can (clearly) be identified in Yali, intonation units (IUs; section 2.1) and accentual phrases (APs; section 2.2). Additionally, it will describe some salient phenomena of tonal scaling and IU-final intonation contours (section 2.3), which are relevant to prosodic phrasing as well.

However, while Yali itself has not been described systematically from a prosodic perspective yet, one of its closest relatives, Lower Grand Valley Dani, has (Bromley 1961). Furthermore, there are a few descriptive works on other Dani languages commenting at least briefly on some suprasegmental phenomena of the languages described (Burung 2017 on Wano, Etherington 2002 on Nggem, Purba et al. 1993: 36 on Western Dani; see Kaland et al., to appear, for a review). All of these descriptions assume non-contrastive final or penultimate (Nggem) word stress in their respective language. Furthermore, at least one of them (Burung 2017) could be interpreted as describing a marginal system of lexical tone. Suspecting similarities between Yali and its close Dani relatives, section 2.4 is therefore added, discussing whether lexical and/or word-level phenomena play a role in Yali prosodic structure as well and commenting on these possible similarities (and differences).

In benefit of this comparison, the most salient points of Bromley's (1961) description of Lower Grand Valley Dani and Burung's (2017) description of Wano will shortly be summarised here. For Nggem (Etherington 2002) and Western Dani (Purba et al. 1993), the available descriptions do not go beyond the proposal of regular word stress. No comments on phonetic correlates of this word stress are offered.

For Lower Grand Valley Dani, Bromley distinguishes three levels of prosodic structure, a phonological word, an intonation contour group and a prosodic sentence. He describes regular word stress at the final syllable of the stem of every phonological word (stems may be followed by unstressed clitics), which is realised by "upgliding pitch and/or increased loudness" (Bromley 1961: 49). Furthermore, he identifies "contrastive intonation contours" (Bromley 1961: 55), which associate with the final word of intonation contour groups. No concrete inventory of such contours is given. The prosodic sentence, finally, is a grouping of intonation contour groups mostly defined by "a final relaxation of the articulatory muscles" and a "pitch-lowering effect" (Bromley 1961: 58) (cf. also Kaland et al., to appear: 6f in my version, for a similar summary of Bromley's descriptions commenting also on problems of interpretability arising from the analytical framework used).

Similar to Lower Grand Valley Dani, Burung's (2017) description of Wano also assumes regular word-final stress, specifying that this stress will shift with suffixation (i.e. remain word-final, moving to the suffix), but not with cliticization (i.e. become penultimate in a phonological word containing a final clitic by not shifting to the clitic). It does not explicitly discuss the phonetic implementation of this word stress.

Furthermore, Burung (2017: 64ff) reports an inventory of phrase-final intonation contours, distinguishing flat, rising and falling intonation. Of the three contours, the contour labelled "flat" seems to be the most frequent in Wano. Flat-ending phrases, however, are described by Burung as simply ending with the high pitch induced by the (final) word stress of the phrase-final word. Since the high pitch clearly implied as a correlate of word stress in this description is not explicitly discussed by Burung, however, the actual intonation contour of these "flat"-ending phrases remains somewhat unclear, as does the distinction between the final high pitch of these phrases and what Burung identifies as "rising" phrase-final contours.

Rising and falling phrase-final contours, according to Burung (2017: 65, 64), are found with questions seeking "a compulsory answer" and at the "end of an utterance" respectively. Additionally, falling contours also mark hortative mood, some forms of greetings and questions without compulsory answer. Interestingly, in all examples given, the rising contour occurs with a particle *a* 'question', the falling contour with a particle *o* analysed as pause marker by Burung. Analysing them as lexical contours of *a* and *o* respectively would therefore actually be a possible interpretation of Burung's examples. A different interpretation, however, would be that both *a* and rising intonation mark the same speech act, which is why they correlate, and both *o* and falling intonation mark finality in some sense, which is why they correlate as well. Note, however, that *o* and falling intonation in Burung's examples also correlate to mark non-prototypical finality situations, e.g. in marking hortatives (as opposed to imperatives; 2017:67). Which of the two possible analyses is favoured by Burung is not completely clear to me, nor whether the rising and falling intonation contours could in principle also occur without *a* and *o* in Wano.

2.1 Yali: Intonation Units

Prior to any phonological analysis, Yali data can be segmented into prosodic units as stretches of speech set off by melodic and rhythmic coherence (cf. the "distinct units perceivable by means of a coherent melody" discussed by Himmelmann et al. 2018: 213, and their discussion of the interplay of melodic and rhythmic cues responsible for the perception of such coherent

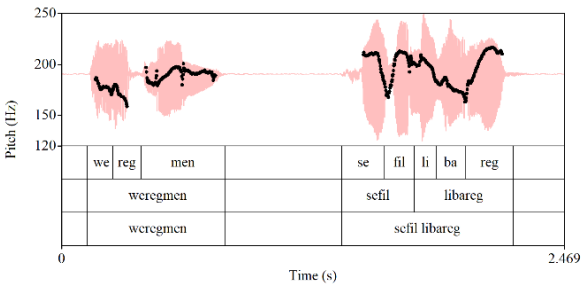
melodies). Roughly mutually corresponding units that could be subsumed under this description have been discussed by different authors under different terms (partially also entailing slightly different definitions), e.g. as *intonation units* (Chafe 1987, 1994), *intonational phrases* (Himmelmann et al. 2018), *intonation phrases* (e.g. Nespor & Vogel 2012), or *tone units* (Crystal 1969). For the current thesis, I will use the term *intonation unit* (IU), following Chafe's (1987, 1994) reflections on spontaneous speech. Still, the segmentation of the units described is informed equally by the discussion of *phonetic intonational phrases* in Himmelmann et al. (2018: 239ff), which refers essentially to the same unit, building on the work by Chafe (among others).

As discussed in Chafe (1994), Himmelmann (2006: 260), and Himmelmann et al. (2018), among others, IUs as a stretch of speech with coherent melody and rhythm constitute a basic unit of spoken language. They have arguably a cognitive root (Chafe 1994) and are probably universally identifiable in any language (Himmelmann et al. 2018).

Salient rhythmic cues to such IUs in Yali are especially silent pauses and (sometimes quite substantive) lengthening of the unit-final syllable. Other relevant cues include anacrusis, i.e. the acceleration of the speech rhythm at the beginning of a new unit, and changes in overall speech tempo.

Salient melodic cues are especially pitch resets, i.e. a jump in pitch up or down between one unit and the next, as well as unit-final intonation contours and register shifts. Furthermore, many speakers make extensive use of creaky voice at the boundaries of IUs.

An example sequence of two IUs clearly set apart by a silent pause, lengthening of the unit-final syllable *men* and a pitch jump (reset) up between *men* and *se* (over the pause) is given in FIG 1 transcribed as (1). The melodic break between the two units is reinforced by a register shift, i.e. all H targets in the IU *sefil libareg* are on (roughly) the same and higher pitch level as the H target on *men* in the first IU.



a) b)

FIGURE 1: Sequence of two IUs with very clear prosodic boundary

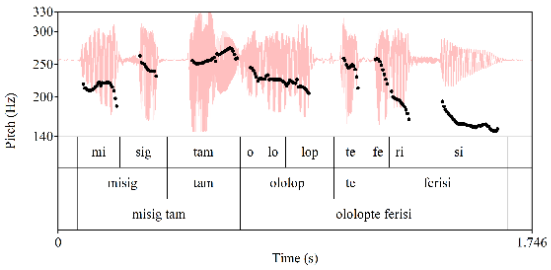
(1) Example sequence of two prosodically clearly separated IUs

a) *weregmen*
wereg-men
EXIST-NOM

b) *sefil* *libareg*
su-fe-il la-ibag-teg
do-COMPL-CONTIN do-3.REM.PST-SS.SEQ
'it was like this, he made them (all)'

filling_the_traps_011

Most of these multiple phrasing cues, however, are non-obligatory for IU boundaries. Boundaries without silent pauses, for example, therefore actually occur rather frequently in Yali narratives[13]. The chunks of speech in these cases are set off by melodic cues and possibly some other rhythmic cues like final syllable lengthening. An example of this can be seen in (2). Here, two IUs are delivered without intervening pause. The unit boundary between *tam* and *ololop* is clearly marked by a pitch reset (downwards), as well as lengthening of the syllable *tam,* the final syllable of the first IU, however.



a) b)

FIGURE 2: IU boundary without pause

(2) IU boundary without pause

a) *misig tam*
misig tam
one first

b) *ololopte* *ferisi*
ololop=te fe-tisi
full=TOP COMPL-1SG.PST
'the first one is already full'

pear_story_Lince_018

On the other hand, IU boundaries involving very long pauses also occur in Yali. The longest pause in the pear story retelling pear_story_Stefen_b, for example, spans as much as 7.3 seconds. Anything in between no pause and such a very extended pause is possible for IU boundaries, which means pause as a cue sometimes contributes a lot to the perception of unit breaks, sometimes somewhat less, and sometimes it is absent completely.

[13] Unit breaks without pauses, or even without any rhythmic break at all, are discussed in the literature on e.g. Conversation Analysis under the term *latching.*

Since many of the other cues can be scaled as well (e.g., final lengthening can be very strong/long, or just hinted, pitch resets can be large or small jumps), and more or less cues can be used to instantiate a single boundary, there are stronger and weaker IU boundaries in Yali. The boundary in (1) above, for example, is arguably stronger than that in (2): the former involves a silent pause, which the latter does not, and the final lengthening in (1) is stronger. Consequently, it is also easier to perceive. At the very end of the spectrum (on the weak side), this continuum of stronger and weaker boundaries therefore entails some ambiguity of identification for IU boundaries (i.e. of finding the point where a melodic break is so weak that it should not be considered a break anymore).

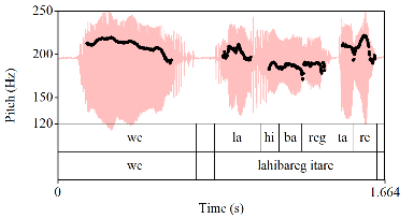
One cue, however, can probably be argued to be present in every break of melodic coherence and therefore considered a hard criterion. This is a pitch reset (see Himmelmann et al. 2018: 213 for a discussion of this cue and its relevance in the identification of IU boundaries). In practical terms, having this cue as a necessary condition for the assumption of an IU boundary does not resolve the ambiguity of identification for (some of the) weak breaks though, since pitch resets themselves can be hard to perceive or identify if they are very small. In Yali, they can also be masked by creaky voice or glottalization effects, which are often boundary markers as well, but may also occur IU-internally (e.g. with two adjacent vowels meeting at a word boundary).

Note that actually, the definition of an IU as a rhythmically and melodically coherent chunk of speech could also be read as a phonetic description of prosodic phrasing more generally: phonetically, prosodic constituents at many levels of phrasing are probably rhythmically and melodically coherent chunks. An additional smaller level of phrasing, distinct from the IU (e.g. under the name of a *phonological phrase*), if we were to assume one for Yali, for example, would be expected to be set off melodically as well, e.g. by a specific tonal boundary contour. Similarly, the larger prosodic units discussed as a larger level of prosodic structure in chapter 4 are expected to be rhythmically and melodically coherent as well, with coherence established for example via (melodic) declination lines or (rhythmic) chunking through pauses. The definition of an IU as a rhythmically and melodically coherent chunk of speech is therefore in itself well compatible with a model of prosodic phrasing as one continuous dimension of boundary strength from which one or more categories may emerge as unit type(s) (cf. the theoretical discussion of discourse models in section 1.2).

One way in which such attractor categories could emancipate themselves more clearly from other prosodic phrasing is the grammaticalization of certain boundary markers or patterns into distinct features of a level, e.g. as an inventory of unit-final intonation contours (boundary tones). Such grammaticalized inventories, in the words of Himmelmann et al. (2018: 240), are characteristic of *phonological* IUs (intonational phrases for Himmelmann et al. 2018), forming

language-specific categories of phrasing. For Yali, I will discuss such phonological IUs with the description of IU-final contours and tonal scaling in section 2.3.

Coming back to the very broadly defined phonetic IUs (to the rhythmically and melodically coherent stretches of speech), one final aspect is worth mentioning here: As a basic processing unit of (any) spoken language in the Chafeian sense, (phonetic) IUs are, besides their rhythmic and melodic coherence, further characterised by their very variable content and length (Chafe 1994). This variability is also a feature of the Yali IUs described here. In terms of morphosyntactic and segmental material, they may thus span anything from a single syllable up to multiclausal constructions. This is illustrated with a very short IU consisting of just the syllable *we* in FIG 3 transcribed as example (3), and a rather long and syntactically complex one in FIG 4 (example 4). The latter, morphosyntactically, corresponds to a sequence of a short clause chain with a medial clause *il* 'they said (that) and a final clause *larukim itano* 'they came', followed by a third clause *an hondo niya wamulusa ulug atam,* which is a clause of reported speech 'they will come to catch me he thought'.



a) b)

FIGURE 3: Short IU with just one syllable

(3) IU with just one syllable

c) *we*
we
PT

d) *lahibareg* *(i)tare*[14]
laha-ibag-teg ita=te
go.up-3.REM.PST-SS.SEQ DIST=TOP
'then they went up'

suit_13_052

[14] The notation *(x)* in the transcription marks syllables of a word that were not realised in the actual production.

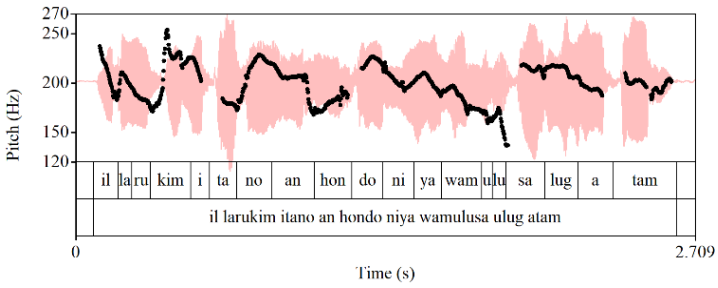


FIGURE 4: Long IU with complex syntactic structure

(4) Long IU with complex syntactic structure

il	*larukim*	*itano*	*an*	*hondo*	*niya*	*wamulusa*
il	la-tuk-im	ita=no	an	hondo	niya	waha-usa
say:CONTIN	go-INF-DS.SIM	DIST=GIV	1SG	close	1SG.OBJ:DIR	come-3.IM.FUT

(u)lug atam
ulug atam
QUOT PT
'saying that they came and he thought: they will come to catch me'

filling_the_traps_066

2.2 The tonal structure of IUs: Accentual Phrases and the Phonological Word

This section firstly describes the overall tonal structure of IUs in Yali, discussing the relevance of wordhood for it. Investigating the relation between words and tonal structure more closely, secondly, it identifies accentual phrases (APs) as a distinct level of prosodic phrasing in Yali.

2.2.1 Tonal rhythm and the phonological word

Intonation units in Yali are typically structured into a rather regular pattern of low (L) and high (H) tone alternation. That is, their melodic contours can mostly be described as a sequence of falling-rising-falling-rising-etc movements. The pattern is demonstrated in FIG 5 transcribed as (5) below[15].

[15] The AM conventions of intonation analysis in terms of (phonological) tonal targets, which I use here, are introduced in section 1.4.3.

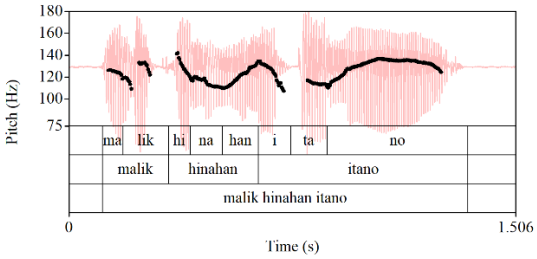


FIGURE 5: Tonal structure of IUs

(5) Tonal structure of IUs

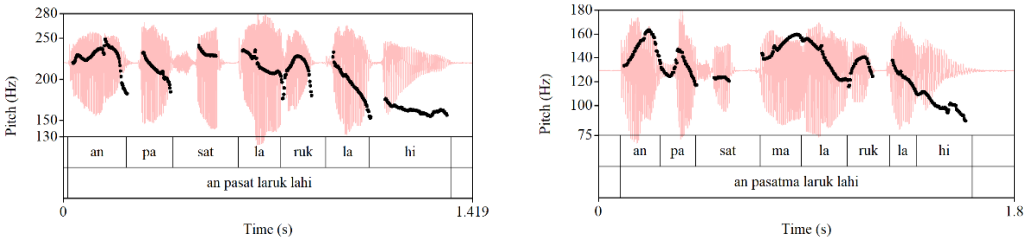
malik hinahan itano
L+H L+H L+H
malik hinahan ita=no
child three DIST=GIV
'the three children'

pear_story_Marthen_b_056

Generally, the peaks of this pattern are reached at the final syllables of words, i.e. aligning with *lik, han* and *no* in FIG 5, the troughs shortly before them, such that there is one fall-rise movement or one cycle of LH tone alternation per word. The pattern can thus be analysed as a H target occurring regularly at every word-final syllable, and a L target occurring equally regularly before it, as given in example (5). This analysis is congruent with the results of the acoustic exploration of Yali F0 contours in Kaland et al. (to appear), who found that word-final syllables (if IU-medial) in the majority of cases have rising contours in Yali. Note however that, at this stage of analysis, it cannot yet be decided what the exact point of association of the L target in this tonal alternation is (both the penultimate syllable or the beginning of the final syllable of words seem possible from the examples). At any rate, perceptually, this rather regular and short-windowed alternation of L and H tones creates a salient rhythmic effect, which I will refer to as a *tonal rhythm* here (see e.g. the discussion of macro-rhythm in Jun 2014, and the references to and summary of studies investigating rhythmic effects of tonal structure there, especially p. 522f).

Comparing the LH tonal rhythm to the morphosyntactic analysis of grammatical morphemes given in the toolbox database and lexicon of the corpus, its domain is the phonological word: both affixed forms and forms containing clitics are realised with just one H target (as one subunit of LH rhythm). With suffixes and enclitics (which are much more frequent than prefixes and proclitics in Yali), this H target occurs on the (word-final) grammatical marker, i.e. on the suffix or enclitic (the L target shortly before it, on the penultimate syllable or early in the final syllable). That is, where a syllable is added at the end of a word, the H target shifts to still stay word-final. This is demonstrated with the word *pasat* 'market', which occurs with a H target on *sat* (the stem-final syllable) in FIG 6a. For the form *pasatma* 'market=LOC' (FIG 6b), which

contains an enclitic, this H target has shifted to be realised on *ma* instead (the final syllable of the phonological word).



A: H tone on final syllable of bare form *pasat* B: H tone on clitic *ma* in *pasatma*

FIGURE 6: H tone shifting to clitic

(6) H tone shifting to clitic

A:	*an*	*pasat*	*laruk*	*lahi*
	L+H	L+H	L+H	L
	an	pasat	la-tuk	lat-ihi
	1SG	market	go-INF	go-1SG.IM.PST

'I am going to the market'

[elic]_Yali_prosody_Silpa

B:	*an*	*pasatma*	*laruk*	*lahi*
	L+H	L+H	L+H	L
	an	pasat=mu	la-tuk	lat-ihi
	1SG	market=LOC	go-INF	do-1SG.IM.PST

'I am going to the market'

[elic]_Yali_prosody_Mohi

The same is not true for grammatical morphemes analysed as free forms in the corpus, as for example for the modifying demonstrative *itano* 'DIST=GIV' in FIG 5 above. Where this demonstrative is added to a noun or a noun phrase (*malik hinahan* in the example), a high rise (mostly) still occurs on the final syllable of the element preceding it (i.e. on the numeral *hinahan*), such that the sequence of lexical element plus free grammatical marker forms two subunits of LH rhythm, or, two phonological words.

In this sense, free grammatical morphemes can be distinguished from bound forms in Yali based on prosodic realisation: a sequence of lexical item plus free grammatical marker may have two H targets (form two subunits of LH tonal rhythm), a sequence of lexical root/stem plus bound grammatical morpheme can only have one (be one subunit). A list of the most frequent Yali grammatical items from the prosodic subcorpus grouped into free versus bound forms according to their tonal realisation is given in Table 1. Note that the table is not an exhaustive list of all grammatical items in Yali though, and derived from a relatively small data sample only, such that it foremostly serves as a proof of concept here and not so much as a definite analysis of the individual items. To achieve the latter, a larger data set should be used by future research.

Table 1: Free vs bound grammatical morphemes distinguished by prosodic realisation

Bound forms		**Free forms**	
case markers	*=ma/=mu* 'LOC'	determinatives and demonstratives	*itno* 'DET'
	=en 'ERG/INST/ABL'		*eke* 'one'
	=et 'INST/COM'		*tu* 'PRX'
	=men 'from' (LOC=ABL)		*aru* 'PRX'
attributive marker	*=on*		*ari* 'MED'
definite marker	*=no* 'GIV'		*ita* 'DIST'
			and forms containing clititcs, e.g. *itano* 'DIST=GIV'
		postpositions	*fam* 'on/in'
infinitive marker	*-tuk* 'INF'		*feyeg/fahet* 'for'
directional linker	*-ik* 'DIR'		*fil* 'direction'
clause connectors	*-oho* 'ADV'		*famen* 'from'
	-tug/-lug 'SEQ'		*inim* 'with'
	=men 'NOM'	clause connectors	*eneg* 'NOM'
	=ma/=mu 'DS.SEQ'		*angge* 'NOM'
	-im 'DS.SIM'		*ambeg* 'NOM'
	-teg/-reg 'SS.SEQ'		*lit* 'SS.SIM'
all verbal tense/subject index morphemes (see Riesberg 2021: 29 for a paradigm)		all auxiliaries and light verbs (see Riesberg 2021)	
		auxiliary?	*fe* 'COMPL/CAUS'
		particles	*we* 'PT'
			te 'TOP'
			fug 'NEG'
			arat 'PT'
			yoho 'PT'
			yu/ya 'yes'
			eke 'and'
			ano 'Q'
			ulug 'QUOT'

As hinted at above, the prosodically-motivated grouping given in Table 1 largely corresponds to the analysis of free and bound forms in the glossings and word segmentation of the toolbox database, the original transcriptions of which were done by native speakers or in close consultation with them. However, there are a few forms for which the segmentation in the corpus is variable, especially the topic particle *te* and the verbal element *fe,* marking completive aspect (Riesberg 2021: 32). Both of these may occur with H tones on the item/syllable preceding them, wherefore they are grouped as free forms here. *fe,* as a free form, might then be the stem of the verb *feruk* 'to make', probably functioning as auxiliary and giving a causative meaning ('CAUS') as demonstrated in (7A). The combination of lexical base (*kilap*) plus *fe* and tense/subject suffixation is realised as two cycles of LH rhythm in (7A), while the same verbal root (*kilap*) does not have a final H tone when followed by a bound tense/subject marker directly in (7B).

(7) *fe* as auxiliary stem?

A: *kila* *fehekma*
L+H L+H
kilap fe-ehek=mu
go.down CAUS-3.SG.IM.PST=DS.SEQ
'after he dropped it'

pear_story_Marthen_055

B: *kilabehekteg*
L+H
kilap-ehek=teg
enter-3.SG.IM.PST=SS.SEQ
'after he filled them (into the bag)'

pear_story_Marthen_010

Note that the different realisations of verbal forms with and without *fe* cannot simply be attributed to rhythmic preferences where subunits of tonal rhythm longer than a certain number of syllables would be avoided. This is because segmentally (in numbers of syllables), *kila fehekma* (form with *fe,* two rhythmic subunits, 7A) is not longer than *kilabehekteg* (form without *fe,* one rhythmic subunit, 7B). In principle, subunits of tonal rhythm of five syllables are therefore possible. Since the syllabic make-up of words also does not play a role for the correspondence of tonal rhythm and words (one LH alternation per word permitted) the other way round, i.e. since short words can be a subunit of tonal rhythm on their own just like long words (cf. *an* in example 6A and 6B above), I conclude that phonological wordhood is indeed relevant to the tonal structure of IUs in Yali: a subunit of LH rhythm may not be shorter than a phonological word.

2.2.2 Diverging realisations of phonological words: tonal reduction and Accentual Phrases

Despite the relevance of the phonological word for the LH tonal rhythm in Yali, in practice, not really every word is realised with a (full) LH tone contour. Two exceptions to the correspondence can be identified.

Firstly, there are cases where the pitch contour does not fall again after a high peak reached at the end of one word. Instead, it stays level at roughly the same high pitch throughout the next word or words, creating (usually rather short) high plateaus in the melodic contour. This is exemplified with the high plateau on *(i)tano* in FIG 8 and example (8). Secondly, sometimes a subunit of LH tonal rhythm can also be longer than one word. Individual words, in this case, are then left without high peaks, as for example *iba-iba (u)ruk lit* in (9). Both of these options are not a feature of specific lexemes: the word *itano,* for example, which was realised as a high plateau in (8), can just as well be realised with the usual fall-rise or LH pattern, as in fact it was in example (5) in the previous subsection. Similarly, the word *uruk,* which does not have a final high peak in (9), may well have one in other contexts/realisations. Note that example (8), next to the high plateau on *(i)tano,* actually contains two cases of the second exception as well: its last two words, *og (i)rehek,* also form one subunit of LH rhythm together, as do its first two words *e anggen*.

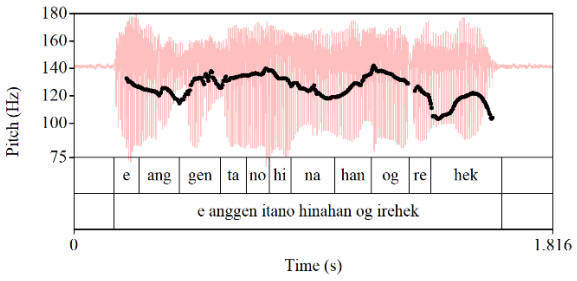


FIGURE 8: H plateau over the word (i)tano

(8) H plateau over the word (i)tano

e	*anggen*	*(i)tano*	*hinahan*	*og*	*(i)rehek*
[	L+H]$_{AP}$	[	H]$_{AP}$	[	L+H]$_{AP}$
e	anggen	ita=no	hinahan	og	it-ehek
tree	fruit	DIST=GIV	three	give	3SG.BEN-3SG.IM.PST

'he gave him three of the fruits'

pear_story_Stefen_b_060

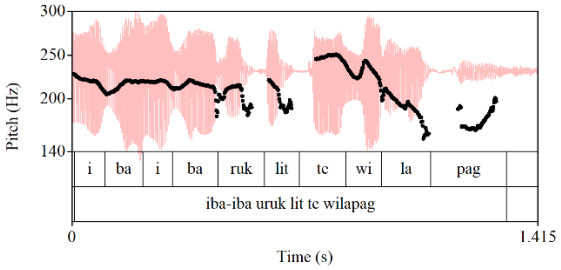


FIGURE 9: one cycle of LH rhythm spanning all the words *iba-iba (u)ruk lit te*

(9) One cycle of LH rhythm spanning all the words *iba-iba (u)ruk lit te*

iba-iba	*(u)ruk*	*lit*	*te*	*wilapag*
[			L+H]$_{AP}$	
[iba-iba	u-tuk	lit	te]$_{XP}$	wilat-pag
cry-REDUP	speak-INF SS.SIM		TOP	stay-3.REM.PST

'they were crying'

suit_13_016

For the first of these two exceptions, the high plateaus, I propose to view them as a (phonetic or phonological) variant of the L+H event, i.e. as a reduction pattern, where the underlying L tone of the word-sized LH alternation is omitted. In the surface structure, the word then has only a (final) H tone. Together with the H tone at the end of the previous word, this accounts for the high plateau (no trough in between two peaks). The resulting surface structure is schematised with the tonal annotation given for example (8) above.

This idea of a reduction pattern is based on the observation that, in fluent speech, the pitch trough of especially short and/or function words is often realised as a rather small movement only. Realisations of melodic contours of individual words thus actually form a continuum from clearly falling after the H peak of the previous word and rising again (usually up to the same level as the previous peak), over falling just a bit and then rising again and still slightly hinting a fall, up to not falling at all, just staying level (at the high level of the peak reached on the previous word). This continuum is schematised with the abstract word contours in FIG 10 and exemplified for the word *(i)tano* in FIGS 11A and B, compared to FIG 8 above and FIG 5 in the previous sub-subsection: in FIG 11A, *(i)tano* is realised with a somewhat upscaled L tone/smaller trough, corresponding to the second scenario of the continuum. In 11B, only a hint of a falling movement (if at all) can still be perceived on *(i)tano* (the third scenario of the continuum). In FIG 8 above, there was no fall at all at the word *(i)tano* (fourth scenario). In FIG 5 of the previous subsection, however, a full fall-rise movement occurred on *itano* (the first scenario).

FIGURE 10: Abstract word contours schematising a continuum from a fall-rise movement to a level contour

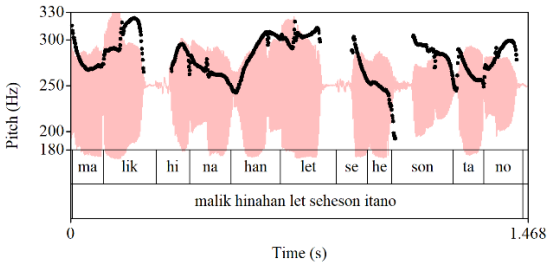


FIGURE 11A: Upscaled L tone on *ta* in *(i)tano*

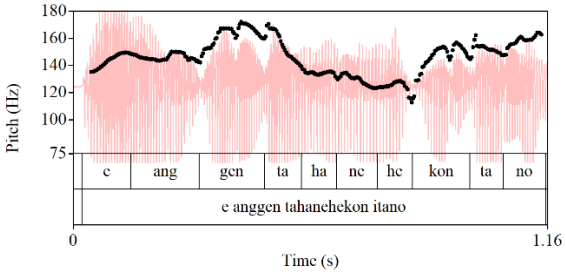


FIGURE 11B: Very minor fall (if any) on *ta* in *(i)tano*

(11) Reduced fall-rise movements with different realisations of *(i)tano*

A: *malik* *hinahan* *let* *seheson* *(i)tano*
[L+H]$_{AP}$ [L+H]$_{AP}$ [H]$_{AP}$[L+H]$_{AP}$ [^L+H]$_{AP}$
malik hinahan let su-ehesa-on ita=no
child three help do-3PL.IM.PST-NOM DIST=GIV
'the three children that had helped'

pear_story_Lince_056

B: *e* *anggen* *tahanehekon* *(i)tano*
[L+H]$_{AP}$ [L+H]$_{AP}$ [^L?+H]$_{AP}$
e anggen tahan-ehek-on itano
tree fruits pick-3SG.IM.PST-NOM DIST=GIV
'the fruits he had picked'

pear_story_Stefen_059

Fitting the analysis of a reduction pattern, it seems to be especially short words and/or function words that are realised with a high plateau/with no clear L tone, like the (modifying) demonstrative *itano.* Note as well that the tonally reduced realisations in FIGS 11 and 8 were also reduced on the segmental level: the word-initial syllable *i* was omitted in all three cases. Judging from examples (11A and B), a further relevant condition for the assimilation might also be the IU-final position, such that e.g. the last L tone in an IU would be upstepped or the like.

In this case, however, the rule would apply to some types of IUs only, as there was no upstep of the final L in (5) of the previous subsection. Whether systematic phonological conditions of the variant(s) can be identified therefore has to remain open at this point.

Note furthermore that an alternative analysis to the description given here could perhaps have been the assumption of toneless words keeping the pitch level reached with the H target of a previous word (i.e. *(i)tano* in 8 could have been assumed to have no tone at all, rather than a H tone as given here). This alternative description is disfavoured here, however, because it would have needed to explain for how long pitch contours stay level forming high plateaus in the absence of phonologically specified pitch targets (recall that AM theory assumes pitch contours to be a result of tonal targets and interpolation, such that by default pitch contours are expected to fall again towards the next L target after a H target, unless phonologically specified to do otherwise). Since the variants schematised in FIG 10 are clearly not lexically conditioned, the most likely explanation for this, however, would have been the assumption of a prosodic constituent until the end of which pitch will not fall anymore after reaching a H target. While this would be plausible for examples like (8), in other cases the resulting constituent should be distinctly odd: In (8), this alternative analysis would have grouped the expression *e anggen (i)tano* as one prosodic constituent (pitch stays high throughout *itano* after a H target on *anggen,* then starts falling again with the start of the next constituent *hinahan*). Corresponding to a syntactically well-formed expression (to the noun phrase 'those fruits'), this grouping would have been intuitive. In (11A), on the other hand, it would have grouped the expression *hinahan let* into one constituent, which is not intuitive at all, as the syntactically and semantically expected grouping should be [*malik hinahan* 'the three children']$_{AP}$ [*let seheson* 'which had helped']$_{AP}$, if any.

For the second exception to the rule of one LH contour per word, i.e. for the words without H peaks, in contrast, I do propose to analyse them as forming one tonally defined chunk together with the next word or words. Non-final word(s) in the chunk are toneless, as given in 9 above, and the so-defined chunk ends with the next (word-final) high peak. Subunits of LH tonal rhythm, therefore, correspond to a small prosodic constituent in Yali.

This analysis suggests that the word-final rise is in fact the edge tone of this prosodic constituent, which is not identical to the phonological word, since it can in some cases also be larger. For the remainder of this thesis, I will refer to this constituent as an Accentual Phrase (AP), in analogy to how this term is used in the prosodic description of especially Korean (Jun 1996): a small edge-tone-marked prosodic constituent that is word-sized in most cases, but can occasionally also be longer. The AP in Yali is defined by a L+H tone at its right edge, optionally reducible to H. The analysis of an edge tone is schematised in the tonal transcription tier of example (9) above and (12) below (as well as actually in 8 and 11).

This analysis of the (L+)H tone as a phrasing device (as the marker of the AP) is in line with the observation that the chunks of speech obtained from its segmentation generally also correspond to syntactically well-formed expressions. For example, in (9) above, this analysis gives the expression [*iba-iba (u)ruk lit te*] forming one AP together (as marked by the [] notation in the tone annotation tier). Syntactically, this AP corresponds to one full clause, consisting of a verbal complex with the coverb *iba-iba* 'cry' and the light verb *uruk* 'speak' (a coverb construction, cf. chapter 3), plus a clause-linking morpheme *lit* 'SS.SIM' and the topic-marking particle *te*. Choosing the boundary between *te* and *wilapag* as the place to start a new phrase is therefore not surprising, as it separates one clause from the next (which consists only of the independent verb form *wilapag*).

Note, however, that there is one special case of constructions that are frequently rendered as one AP but do not (necessarily) correspond to a full node in a syntactic tree. These are (mostly short) function words forming one AP together with the item or items preceding them. The determinative *itnoen,* for example, can form an AP together with a modifying adjective (e.g. *hahon*), but excluding the head noun (*mama Tenus/Wanina*) of the respective NP. This is demonstrated in example (12). The AP chunking is indicated in the tone annotation tier, syntactic phrasing by the brackets in the morpheme break tier.

(12) Function word as one AP together with preceding item: beginning cliticization?

mama	*Tenus*	*hahon*	*itnoen*	*Wanina*	*hahon*	*itnoen*	*te*	*eleg*
[	L+H]	[	L+H]	[L+H]	[	L+H]	[H]	
[mama	tenus	hag=on	itno=en]$_{NP}$	[Wanina	hag=on	itno=en	te]$_{NP}$	eleg
mother	PN	like=AM	DET=ERG	PN	like=AM	DET=ERG	TOP	NEG

‚the one like mama Tenus, the one like Wanina, did not'

suit_13_064

I suggest that these cases can be viewed as beginning cliticization of certain function words, which are in principle free forms (forming a phonological word on their own), but are sometimes also treated as clitics. Treated as clitics, they form a phonological word together with a preceding host (*hahon* in 12 above), and therefore also an AP, since APs may not be smaller than a phonological word.

One grammatical morpheme that may in principle occur with its own (L+)H tone, but is especially prone to this type of cliticization is the topic marker *te* mentioned at the end of section 2.2.1. This might show its beginning grammaticalization as a clitic and explain why native speakers sometimes analyse it as a separate word (as a free form) and sometimes not. Especially some very frequent combinations, as for example the demonstrative *ita* 'DIST' followed by *te,* are very prone to a realisation as just one AP (with just one H tone). This very frequent combination is therefore probably already lexicalising into one phonological word. It can function as a discourse marker with a meaning like 'and then'. Note that in this

combination, *te* is usually also pronounced (and transcribed by native speakers) as *re*. [r], usually, is the word-internal intervocalic allophonic variant of the phoneme /t/.

2.2.3 Interim Conclusion: Accentual Phrases

In conclusion, this section can be summarised as follows: I analyse IUs in Yali as being structured into APs, which are marked by a (L+)H tone on their right edge. APs, in my understanding, are small prosodic constituents, usually of the size of one phonological word. APs can also be larger than phonological words in some cases, however, they cannot be smaller.

2.3 IU-final contours and tonal scaling

IU-final intonation contours can be grouped into two different major types: IUs whose melody simply ends with the last LH alternation, and IUs with a falling contour throughout their final word.

IUs of the second type typically end on a very low pitch, distinctly below the level of IU-internal L targets. Their final fall can be analysed as a L boundary tone. Where this boundary tone occurs, it replaces the right-edge H tone of the last AP in the IU, i.e. pitch is falling over the whole last word of the IU, or, in rarer cases, over the last few words, if the IU-final AP spans more than a word. An example of an IU with L boundary tone was example (6b) in the previous section, which is repeated as FIG 13 and example (13) here.

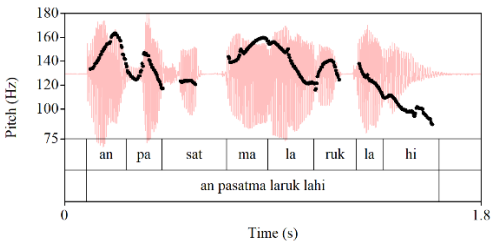


FIGURE 13: IU-level L boundary tone

(13) IU with L boundary tone

an	*pasatma*	*laruk*	*lahi*
[L+H]$_{AP}$	[L+H]$_{AP}$	[L+H]$_{AP}$	[L%]
an	pasat=mu	la-tuk	lat-ihi
1SG	market=LOC	go-INF	do-1SG.IM.PST

'I am going to the market'

[elic]_Yali_prosody_Mohi

Next to accompanying declarative statements (as in 13) and (some types of) turn transition points in dialogues and conversation, one major function of this L boundary tone is to signal finality in monologue. Monologue, therefore, can generally be described as consisting of sequences of non-L-boundary-tone IUs terminated by one IU with L boundary tone. For this reason, these L boundary tones will be one of the main features to be considered in discussing larger prosodic units in chapter 4.

The first major type of IU-final contours, the non-L-boundary-tone IUs, on the other hand, could in principle be described as IUs with no specific final contour at all. That is, in principle the final words (or final APs) of these IUs show a LH or falling-rising contour like any other non-IU-final word/AP as well, with a H target on their final syllable and a L target shortly before it. As with IU-medial words/APs, the L target may sometimes, especially if the relevant word is a short and/or function word, also be omitted to form H plateaus. This type of IU can therefore in principle be described as simply ending with the melodic contour of its last AP. Two examples, one ending with a fully realised L+H AP contour, the other one with a H plateau, are given in 14 and 15 respectively. Note that in combination with final lengthening, the fully realised L+H AP contour can also produce a high plateau (pitch staying level and high). This is the case in (14). This plateau, however, is realised over one single syllable only (the IU-final syllable *no*) and could in a way be regarded as the product of the substantive lengthening of this syllable. This is different for the final plateau in (15), which spans more than one syllable and can be analysed as a product of the omission of L tones. In this discussion, my interest lies on the second type of plateau.

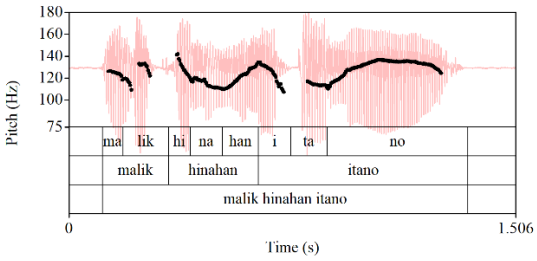


FIGURE 14 (repeated from FIGURE 5 in the previous section): IU ending with L+H tone of its last AP

(14) IU ending with L+H tone of its last AP

malik	*hinahan*	*itano*
[L+H]$_{AP}$	[L+H]$_{AP}$	[L+H]$_{AP}$
malik	hinahan	ita=no
child	three	DIST=GIV

'the three children'

pear_story_Marthen_b_056

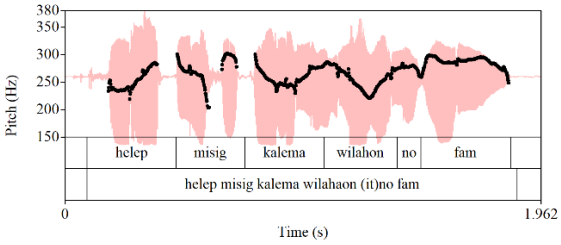


FIGURE 15: IU with final H plateau (L of last AP omitted)

(15) IU with final H plateau (L of last AP omitted)

helep	*misig*	*kalema*	*wilah(a)on*	*(it)no*	*fam*
[L+H]$_{AP}$	[L+H]$_{AP}$	[L+H]$_{AP}$	[	L+H]$_{AP}$	[^H]$_{AP}$
helep	misig	kalem=mu	wilaha=on	itno	fam
stone	one	way=LOC	stay:3SG.IM.PST-NOM	DET	NOM

'a stone is laying on the road'

pear_story_Lince_042

However, there may be differences in scaling between IU-medial and IU-final H tones. As evident in FIG 14, H tones throughout an IU in many cases stay quite neatly at the same pitch level in Yali. This pitch level may shift for the next IU, signalling the boundary between them ("register shift"; cf. example 1 in section 2.1). However, it is also possible that, while all other H tones in an IU are realised on the same pitch level, just the last one diverges, being up- or downscaled in comparison to IU-medial H tones. Two examples for this, one of an upscaled, one of a downscaled final H tone, are given in FIGS 16 and 17 respectively.

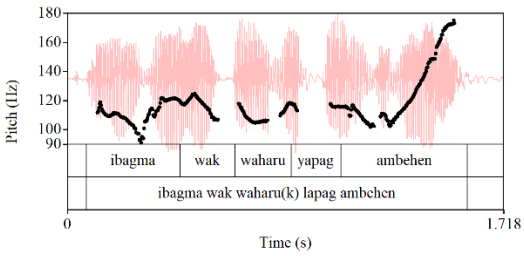


FIGURE 16: Upscaled IU-final H tone

(16) Upscaled IU-final H tone

ibagma	*wak*	*waharu(k)*	*lapag*	*ambehen*
[L+H]$_{AP}$	[H]$_{AP}$	[L+H]$_{AP}$	[H]$_{AP}$	[L+^H]$_{AP}$
ibag=ma	wa-ik	waha-tuk	lat-pag	ambehen
say:3.REM.PST=DS.SEQ	carry-DIR	come-INF	do-3.REM.PST	NOM

'after they said that, when he was coming'

landslide_ayabiye_016

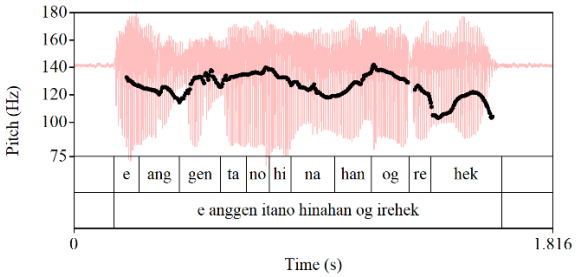


FIGURE 17 (repeated from FIGURE 8 in the previous subsection): downscaled IU-final H tone

(17) Downscaled IU-final H tone

e	*anggen*	*(i)tano*	*hinahan*	*og*	*(i)rehek*
[	L+H]$_{AP}$	[H]$_{AP}$	[L+H]$_{AP}$	[	L+!H]$_{AP}$
e	anggen	ita=no	hinahan	og	it-ehek
tree	fruit	DIST=GIV	three	give	3SG.BEN-3SG.IM.PST

'he gave him three of the fruits'

pear_story_Stefen_b_060

Upscaled IU-final H tones may be upscaled quite a lot, as is the case in FIG 16, or just a bit, as was the case in FIG 15 above, where the IU-final H plateau actually rises slightly from *(it)no* over the final word *fam*. A difference in function between the two (or three) different options of IU-final H tone scaling (between slightly raised versus substantially raised tones, and also between lowered and raised H tones more generally), is not obvious to me. It might be that questions are often accompanied by the high-raised version, but not all questions are, nor occur all high-raised H tones with questions. It might further be that raised and lowered H tones are preferred by different speakers respectively, or for different genres (to fulfil the same function though?). These are, however, only initial observations that need to be investigated more systematically in the future.

Importantly to the current discussion, regardless of their function or functions, both up- and downscaling of IU-final H tones could be viewed as evidence for an IU-final boundary tone that is added to the AP-level tonal specification. IUs with upscaled final H tone could thus be analysed as featuring a H boundary tone, which is scaled higher than AP-level H tones, or which 'meets' with the AP-level H tone on the last syllable of the IU, producing an extra high tone. IUs with a downscaled final H tone could be described as having a mid (M) boundary tone, for example, or a tone/tones invoking downstep or downdrift of AP-level H tones. Under this analysis, an inventory of IU-final boundary tones could be posited for Yali, e.g. a H (raised H tones), a M (lowered H tones) and a L (as described above) boundary tone. Such an inventory would be a strong argument for a phonological IU in Yali: an inventory of language-specifically conventionalised IU-final melodic contours.

However, there is one problem to this analysis: as the initial example for this type of IU-final contours in (14) above shows, a difference in scaling between IU-final and IU-medial H tones

is not obligatory in Yali. That is, it is also very well possible that the final H tone just stays at the same pitch level as all other H tones throughout the IU, as was the case with the final H tone on *itano* in example (14). Analysing the up- and downscaling of IU-final H tones as caused by a boundary tone, this would leave the IUs without up- or downscaling without boundary tone. An inventory of IU-final boundary tones in Yali would therefore need to include a zero boundary tone. Alternatively, the use of a boundary tone could be regarded as non-obligatory for Yali IUs. Both options are not very satisfying as an implementation of a Yali-specific distinct level of phonological phrasing.

Leaving the issue of phonological IUs and conventionalised Yali-specific inventories of phrasing devices thus unresolved at this place, all of these H-tone-final IU contours (be their last H tone upscaled, downscaled or neither of the two in comparison to the IU-medial H tones) can be used to signal continuation in discourse. In this sense, they all together form an opposition with the L boundary tone described as signalling finality above. For this reason, I will label the two types of IU-final contours identified in this section, IUs ending with the last (L)H alternation of their final AP and IUs with a final fall over their last word (or AP), *continuative* and *finalising* IU-final contours respectively. The opposition between the two is an important background to the remainder of this thesis and will play a major role in the discussion of larger prosodic units in chapter 4.

2.4 Comparing with the Dani relatives: Prosodic phenomena at a lexical level in Yali?

In light of the descriptions of related Dani languages discussing word stress (Bromley 1961, Burung 2017) and some pitch contours possibly occurring with specific lexemes/particles only (Burung 2017), the question arises whether similar phenomena exist in Yali as well, making the lexical and/or word level an additional player of prosodic structure in Yali. This question will be addressed in this section. The procedure is as follows: first, subsection 2.4.1 will think about the possibility of word-level stress patterns. Next, subsection 2.4.2 will continue with lexical pitch contours that some particles might possibly have. Both analyses will be refuted for Yali. Nevertheless, subsection 2.4.3 will still draw the conclusion that in its prosodic structure, Yali is probably quite Dani, sharing many features with its close neighbouring relatives. Different analytical categories are likely to some extent (though still not exclusively!) a result of different descriptions, perspectives and frameworks, rather than of differences in the phenomena observed, it will be argued.

2.4.1 Word stress in Yali?

From my data, at the current stage of analysis, I do not have any reason for assuming word stress in Yali. However, Yali does have a rather regularly word-final pitch rise, creating a salient rhythmic structure in its utterances. Describing "upgliding pitch" as one of the major acoustic correlates of the regular word-final stress of Lower Grand Valley Dani, Bromley (1961: 49), it seems, might thus actually describe a phenomenon rather similar to the situation in Yali. Similarly, the word-final stress of Wano, apparently involving high pitch (Burung 2017: 64), is not unlikely to be a close relative of Yali's word-final pitch rises as well.

Three reasons can be given here why I do not follow Bromley's and Burung's analyses of word-final stress in my description of Yali. Firstly, for Yali, I do not have any evidence for any other acoustic correlates of stress accompanying the word-final pitch movement so far. In fact, Kaland et al. (to appear) checked for a difference in duration (a cross-linguistically reliable cue of word stress, Gordon & Roettger 2017) between word-final and word-non-final syllables and found none. From my data, it is therefore more straightforward to attribute the pitch movement to a tonal event than to stress. Secondly, the word-final pitch movement is not lexically contrastive, but occurs completely regularly with just any (type of) word. Thirdly, and perhaps most importantly, its domain can sometimes be larger than a phonological word, i.e. not really every phonological word actually has the final rise. Together with the lack of contrastiveness, this last point, I suggest, favours an analysis of the pitch rise as a phenomenon of the phrasing level over an analysis of word stress. In total, therefore, I describe this pitch rise as an edge tone marking the right boundary of the AP in Yali, a mostly word-sized constituent that can sometimes also be larger, but never smaller than the phonological word (cf. section 2.2).

Note that despite this diverging analysis, the Yali AP edge tone might have some further similarities to Wano and Lower Grand Valley Dani word stress: Firstly, in my analysis, the rising (LH) edge tone in Yali can be reduced to a level (H) contour. This seems to happen especially with short and/or function words in Yali. The resulting pitch-movementless function words might have a parallel in the "unstressed clitics" (Bromley 1961: 49) of Lower Grand Valley Dani. Secondly, its minimal domain being the phonological word, the AP-final edge tone of Yali will shift to a bound morpheme where it is added at the right edge of a phonological word, but not to a free grammatical morpheme. This is reminiscent of the word-final stress in Wano, shifting to suffixes, but not to clitics (Burung 2017). In both cases, however, the relevant grammatical distinction is that between free and bound (suffixes and clitics) morphemes in Yali, while in Wano and Lower Grand Valley Dani, the cut off point is made between clitics and suffixes instead.

2.4.2 Lexical pitch contours in Yali?

The question of lexical pitch contours of perhaps just a few specific items is raised here because of a curious similarity between the Wano marker *o* 'pause' and some particles in Yali. Recall that for Wano, Burung (2017: 64ff) describes a falling intonation contour that at the one hand functions, among others, to mark finality in discourse, but on the other hand in his examples only ever occurs in combination with the particle *o* 'pause', raising the question of whether this falling contour might not also be a lexical contour of *o.*

Some particles in Yali, at first sight, evoke this ambiguity as well. Recall that in section 2.3, an IU-final falling intonation contour was identified as marking finality in Yali (just like the falling intonation of Wano). Investigating the distribution of this falling contour in discourse more closely, it appears that certain particles, at least for individual recordings, IU-finally only ever occur in combination with this contour, never without. An example for this is the particle *arat*, used, where it occurs in IU-final position, combined with falling intonation only e.g. in the narrative recordings filling_the_traps and landslide_ayabiye. This correlation is puzzling, because in many cases, it occurs at a point in discourse where finality marking is unexpected from the context, e.g. because of syntactic structure. This is exemplified in (18) and (19) with two such occurrences of the particle *arat* from the recordings landslide_ayabiye and filling_the_traps respectively.

(18) *arat* at the end of non-final clauses[16]

(a) *ibma /*
ibma
this

(b) *tabui* *wereg* *angge* *ari* *walugte* *arat *
tabui wereg angge ari wa-tug=te arat
hot.area EXIST NOM MED carry-SEQ=TOP PT

(c) *Tahi /*
tahi
PN

(d) *punumu* *ete /*
punu=mu ete
hill=LOC above

(e) *laharukmente* *arat *
laha-tuk-men=te arat
go.up-INF-NOM=TOP PT

(…)

'then, he brought everything there is at the hot area, he went up to the top of mount Tahi…'

landslide_ayabiye_072

[16] IU-final contours are indicated by the notation / for a rising/high contour (continuative IU contour) and \ for a falling contour (finalising IU contour, cf. section 2.3) at the end of the transcription line of the relevant IU.

(19) *arat* and falling intonation clause-internally

(a) *hinare* *itno* *we* *arat* ****
hin-are itno we arat
2.PL.POSS-friend DET PT PT

(b) *atukno* **/**
at-tuk=no
become-INF=GIV

(c) *hele* *paloho* *pilili* *isaruk* *latpag* *ari* ****
h-ele pal-oho pilili isa-tuk lat-pag ari
2.SG.POSS-voice cut-ADV diffused 3PL.OBJ-INF do-3.REM.PST MED
'at that moment the man cursed them all'

filling_the_traps_080

In (18), there are two occurences of *arat,* at the end of IUs (18b) and (18e) respectively. In both cases, *arat* is accompanied by a final falling contour. In both cases, however, *arat* is also preceded by a verb form indicating clause combination. These are *walug* in (18b), which is a medial verb (sequential marker *-tug,* see section 3.2), and *laharukmen* in (18e), which contains the nominal clause marker *-men* (see section 3.4). In both cases, the syntactic structure of the utterance therefore communicates continuation.

Even more unexpected, from a syntactic perspective, is the finality marking of the final fall accompanying *arat* in (19a): together with the particle *we, arat* here follows the NP *hinare itno* 'the man', which functions as the subject to the predicates *paloho* and *isaruk latpag* in (19c)[17]. *arat* and the assumed finality marking in this case therefore occur in the middle of a clause. A finality marking therefore seems to be at odds with the syntactic structure in (18b), (18e) and (19a) alike. Consequently, the idea arises that the falling pitch contour might actually not mark finality in these IUs, but be a feature of the particle *arat* itself.

However, this idea cannot withstand a more thorough investigation. This is firstly because *arat* may also appear in non-IU-final position. Where this is the case, it is also not accompanied by a falling pitch contour, but rather by the AP-final rising pitch like any other (IU-medial) word as well. The falling pitch, therefore, is a feature of the IU-final position rather than of the lexeme. Secondly, as hinted at above, *arat* is not the only particle that can accompany IU-final falling pitch in situations where the syntactic structure communicates continuation. Other such particles are for example *yoho* (suit_14) *we* (suit_13) and *te* 'TOP' (pear_story_Marthen_b). Thus, while *arat* occurs conspicuously often with a falling pitch contour in non-prototypical finality situations in one recording, it may not be used at all in this context in the next, where *yoho* seems to fill this slot instead. Generalising over different speakers and recordings, there is thus not a specific lexeme in Yali that would always have a falling pitch contour, but rather a

[17] The construction given can be analysed as a clause chain of two clauses, one medial clause with the predicate *paloho* 'to cut' and a final clause with the predicate *pilili isaruk latpag* 'diffuse them'. The NP *hinare itno* is the subject argument to both of them.

group of particles that can occur IU-finally with a final fall where the syntactic structure marks continuation. Note that these particles are also not mutually exclusive, as the examples above showed, where *arat* is in fact combined with *te* 'TOP' (18b and 18e) and *we* 'PT' (19a) respectively.

The most straightforward analysis of the falling pitch contours of these particles, therefore, is to assume an IU-level final fall, which marks finality just as it does everywhere else, I conclude. Accepting this conclusion, the relevant particles might then actually be used precisely *because* the syntactic context is at odds with the prosodic finality in the examples (18) and (19) above. Being translated as 'finish' by (some of) the native speakers that contributed to the transcription of the corpus, the particle *arat,* after all, has in some sense a finality component of meaning itself as well. It might therefore be used as a reinforcement of the intended finality of the unit, needed where syntax works against this reading. A similar finality component is also conceivable for particles like *yoho,* literally glossed as 'ok' in the database.

Simultaneously marked finality (via prosody and particles) and continuation (via syntax), in turn, could be understood as adding up to a meaning like 'weaker boundary', relating back to the Wano particle *o* 'pause' (stop, but also continue) that was also the starting point of this debate. Compared to this explicit marker, a similar function 'pause/boundary' might therefore exist in Yali, but in a less lexicalised way, such that a number of different particles can be used to achieve/mark it.

In conclusion, this section can thus be summarised as follows: At least for Yali, there is no substantive evidence for lexical pitch contours, not even marginally for just a few lexemes. IU-final falling intonation marks finality, even though the syntactic structure might sometimes be at odds with this marking. Where this is the case, particles can possibly be used as a reinforcement to the prosodically-marked finality. These particles (together with the falling intonation), can then perhaps be viewed as signalling a boundary in discourse. Compared to Yali, Wano, however, seems to have lexicalised this function/meaning further, such that one particle *o* specifically fills it, where in Yali a number of different lexemes can be used.

As a postscript to this conclusion, please note that Yali, in fact, also has a particle *o,* as well as a particle *a* like Wano's 'question'. While neither of the two is fully understood yet, both of them occur in clause-final position, *a* possibly as an emphatic marker, *o* most likely in an epistemic or evidential function, especially often with reported speech, but sometimes also e.g. with questions. Both of them may occur with a falling pitch contour in IU-final position, but also with a rising contour, according to context.

2.4.3 Summary: Yali and its close Dani relatives

Summarising over the last two subsections, I hypothesise correspondences between prosodic events of Yali and those described for its Dani relatives Wano and Lower Grand Valley Dani as follows:

1) As argued in subsection 2.4.1, what has been described as word stress for Wano and Lower Grand Valley Dani as a phenomenon likely corresponds to what I analyse as AP-final edge tones for Yali in this thesis.
2) As discussed in subsection 2.4.2, phrase-final falling intonation in Wano has its parallel in the (falling) finality-marking IU contours of Yali, its conspicuous correlation with the particle *o* marking 'pause' in the correlation of prosodic finality marking and certain discourse particles like *arat* in otherwise continuing discourse contexts of Yali.

Adding to this, the three levels of prosodic structure identified for Yali in this thesis (the AP and the IU as described above, and the larger prosodic unit discussed in chapter 4) might well have their correspondents in the three levels of structure of Lower Grand Valley Dani identified by Bromley (1961): Bromley's phonological word, defined by word stress, must be similar to my AP if the latter is defined by its edge tone, which, as argued above, as a phenomenon corresponds to what Bromley calls word stress. His intonation contour group, defined by its final contrastive contours, seems to find its parallel in the Yali IUs and their (contrastive) final contours. This correspondence is somewhat less clear, though, since Bromley does not give a concrete inventory of contours and since most of his examples of intonation contour groups give rather short phrases. If it is accurate, however, Bromley's third level of analysis, the prosodic sentence, should operate on a structural level above IUs, and might have a correspondence in the larger prosodic unit described in section 4.1.

Finally, Wano phrase-final intonation contours, described as falling, flat or rising by Burung (2017: 64ff), in some sense are also reminiscent of the IU-final contours observed in Yali: the falling contour, rather obviously, corresponds to the L boundary tones in Yali (finalising IU-contour). The contour labelled "flat" by Burung, the phrases simply ending with the high pitch induced by the (final) word stress of their last word, seems to actually be a good match for the continuative type of IUs in Yali, which, in principle, could also be described as ending simply with the high pitch induced by the (final) edge tone of their last AP. Burung's rising contours might then correspond to what I described as a (sometimes significantly) raised IU-final H tone above.

Despite the diverging analyses, overall, Yali thus likely actually shares quite a number of prosodic phenomena with the other Dani languages described so far. Note, however, that

proposing a correspondence between two phenomena in this context is not meant to imply that the prosodic events described are (necessarily) identical in the respective languages.

2.5 Interim summary: Yali prosodic phrasing

As a background to the discussion of a larger prosodic unit in chapter 4, this chapter described (phonetic) intonation units (IUs) and accentual phrases (APs) as two smaller levels of prosodic phrasing in Yali. Additionally, it found two major types of IU-final contours, marking continuation and finality respectively. Finally, the section discussed evidence for prosodic events at the lexical level and concluded that so far, there is none.

3. Clause combination

Yali morphology and basic syntax is described in Riesberg (2021). In particular, Riesberg treats nominal and verbal morphology and outlines basic clause structure and major word classes. Most importantly in the context of this thesis, the following major points are established there:

The basic and most frequent word order in Yali clauses is SOV (cf. example 1 and 2). OSV word order is also possible, but marked and requires morphological marking of the subject. In spontaneous speech, arguments are frequently omitted though, especially subjects, which are obligatorily indexed on the finite verb.

There are four major word classes (Riesberg 2021: 13), nouns, adjectives, independent verbs and coverbs, with the latter two both primarily functioning as predicates in a clause. Independent verbs and coverbs are distinct in that independent verbs take inflection directly, which coverbs cannot, therefore collocating with an inflecting light verb. This collocation will be referred to as a *coverb construction* (CVC) here, following Riesberg (2021: 29ff). CVCs are very frequent in Yali. Two examples of simple independent clauses, one with an inflected independent verb *namin* 'I will eat' as its predicate, the other one demonstrating a CVC are repeated from Riesberg (2021: 28/29) in (1) and (2) respectively. The CVC in (2) consists of the lexical element (the coverb) *lebe* 'move' and the inflected independent verb *simin* 'do.1SG.IM.FUT', here used as a light verb without lexical meaning. The clause is negated using the particle *fug,* which always follows the (verbal) predicate.

(1) Independent verb as verbal predicate of a simple clause

an	*suburu*	*namin*
an	suburu	na-min
1SG	sweet.potato	eat-1SG.IM.FUT

'I will eat sweet potatoes'

elic_field_notes/Riesberg 2021: 28

(2) Coverb construction as verbal predicate of a simple clause

yoho	*ante*	*lebe*	*simin*	*fug*
yoho	an=te	lebe	su-min	fug
today	1SG=TOP	move	do-1SG.IM.FUT	NEG

'Today, I will not move'

making_fire_027/Riesberg 2021: 29

Apart from a CVC or an independent (main) verb, verbal predicates frequently include further elements, for example auxiliaries and/or object verbs (Riesberg 2021: 35), such that verbal phrases can be quite complex. An example of an auxiliary construction is given in (3). The construction here expresses progressive aspect (see Riesberg 2021: 31).

(3) Complex predicate with auxiliary

mel	*itno*	*laruk*	*latisi*	*ari*
mel	itno	la-tuk	la-tisi	ari
ANA	DET	go-INF	do-3SG.PST	MED

'he was going'

conversation_1_167

Other minor word classes not treated in detail by Riesberg include at least numerals, postpositions, demonstratives and determiners, and a rich set of particles and discourse markers.

This as the bare bones of background, this chapter will describe the different morphosyntactic options of clause combination in Yali, distinguishing clause chaining (section 3.2), switch reference constructions (section 3.3), nominal clauses (section 3.4), and morphologically unmarked juxtaposition (section 3.5), as four major types. Their discussion will be preceded by an overview of (simple) independent clauses in Yali, serving as a point of comparison (section 3.1) and followed by a summary giving an overview of the forms and analyses presented (section 3.6). The chapter as a whole gives the background to the morphosyntactic part of the discussion of larger discourse units in the following chapters. The descriptions presented are informed by Riesberg's (2021) grammar overview, but build on it in that clause combination is not a central topic there.

3.1 Preliminaries: independent clauses

As (simple) independent clauses, clauses with finite verbal predicates (3.1.1), clauses with non-verbal predicates (3.1.2), and clauses with non-finite verbal predicates (3.1.3) can be distinguished in Yali. The latter are of two types, analysed as stative and infinitive verb forms respectively here.

3.1.1 Clauses with finite verbal predicates

Finite verbal predicates in Yali necessarily include a verbal element inflecting for tense and subject agreement (a finite verb form). This verbal element can be either an independent verb (also an auxiliary), or the light verb of a CVC. The inflection takes place in the form of a suffix attaching to the stem, indexing person and number of the subject and marking the clause for one out of five tenses differentiated in Yali (immediate past, past tense, remote past, immediate future, and future; cf. Riesberg 2021: 28). An example of first person immediate future is the suffix *-min* in (4) and (5) repeated from (1) and (2) in the introduction to this chapter. Since

verbal paradigms are complex and involve several verb classes, they will not be listed in detail here. An example paradigm showing all tenses and persons for one verb can be found in Riesberg (2021: 29), more paradigms for different verb classes in Zöllner (ms.). Note, however, that with some vowel-final stems, the subject/tense suffixes evoke a number of phonological processes, i.e. vowel assimilations and syllable conflations (e.g. *su-min -> simin* in 5).

(4) Independent verb as finite verbal predicate

an	*suburu*	*namin*
an	suburu	na-min
1SG	sweet.potato	eat-1SG.IM.FUT

'I will eat sweet potatoes'

elic_field_notes/Riesberg 2021: 28

(5) Coverb construction as finite verbal predicate

yoho	*ante*	*lebe*	*simin*	*fug*
yoho	an=te	lebe	su-min	fug
today	1SG=TOP	move	do-1SG.IM.FUT	NEG

'Today, I will not move'

making_fire_027/Riesberg 2021: 29

3.1.2 Clauses with non-verbal predicates

Non-verbal predicates can be formed (at least) by a nominal element or an adjective in Yali. An example of a nominal predicate is given in (6), an example of an adjectival predicate in (7). As shown in (6) and noted in Riesberg (2021: 15), nominal predicates give equational clauses.

(6) Nominal predicate

Fersus	*owe*	*tu*
fersus	owe	tu
PN	older.sibling	PRX

'is Fersus her older sibling?'

conversation_1_501

(7) Adjectival predicate

kinang	*fano*
kinang	fano
earth	good

'the earth is good (fertile)'

interview_IP_Obok_1801

3.1.3 Clauses with non-finite verbal predicates

Next to finite verbal and non-verbal predicates, independent clauses in Yali can also be headed by two types of non-finite verbal elements, formed from verb stems plus the suffixes *-eg* and *-tuk* respectively. *-eg* forms are used to express states and analysed as stative participles in Riesberg (2021: 40). Two examples are given in (8) and (9). As demonstrated in (8), stative

predicates can also be CVCs, usually using the stative participle *teg* of *turuk* ‘to do’ as a light verb. This light verb can possibly be analysed as a clitic (as given in 8), since it is usually realised using the word-internal allomorph [r] of the phoneme /t/ after vowel-final coverbs, and since stative CVCs are generally regarded as one word unit by native speakers. Example (9) shows a stative form of an independent verb, heading a transitive clause.

(8) Stative participle as predicate of an intransitive clause

selimut *lereg*
selimut le=tu-eg
blanket dry-do-ST.PART
‘the blankets are dry’

conversation_2_0724

(9) Stative participle as predicate of a transitive clause

hiyap *tu* *wanggun* *seneg*
hiyap tu wanggun sen-eg
woman PRX stick hold-ST.PART
‘the woman is holding a stick’

quis_task05_Danius_003

Verb forms of stem plus *-tuk* can probably best be analysed as verbal infinitives (Riesberg 2021: 28). As simple predicates of independent clauses, they are most often used to express third person (singular or plural) present tense meanings, as demonstrated in (10). Note that there is no dedicated specific present tense form in Yali verb inflection.

(10) Infinitival predicate

ah *we* *laruk*
ah we la-tuk
INTJ only go-INF
‘ah, it is running (the recorder is recording)’

conversation_1_527

In a second rather frequent usage, independent clauses with infinitival predicates also serve as impersonal constructions in explanatory instructions, as demonstrated in (11). The example is taken from an explanation of how to build a traditional Yali house.

(11) Impersonal construction with infinitival predicate

a) *ebesengge*
ebesengge
pillar

b) *humag* *piren*
humag piren
next.to two

c) *humag* *piren*
humag piren
next.to two

d) *pila* *feruk*
pila fe-tuk
enter CAUS-INF
'(one) inserts two pillars on each side'

honai_expl_Isak_063ff

Note that Riesberg (2021: 28f) analyses simple infinitives as third person forms in a paradigm of (finite) present progressive forms, as given in Table 1 (repeated from Riesberg 2021: 29). This is because for first and second person, immediate past tense progressive forms are frequently used to express present (progressive) meanings (such that in fact first and second person immediate past tense progressive constructions are ambiguous between a literal immediate past tense progressive and a present progressive reading). For third person, however, this is not the case, and immediate past tense progressive can usually be literally interpreted, while present (progressive) meanings are expressed by infinitive forms[18] (Riesberg 2021: 28f and 31f).

Table 1: Unmarked forms for expressing present progressive meanings of the example verb *paltuk* 'to cut' (repeated from Riesberg 2021: 29)

	SG		PL	
present	1s	*paltuk lahi*	1p	*paltuk lahe*
	2s	*paltuk lahen*	2p	*paltuk lahen*
	3s	*paltuk*	3p	*paltuk*

However, infinitival predicates can also be used with non-third person subjects, although for independent clauses third person subject usages are much more frequent. An example of a usage with second person subject is given in (12).

(12) Infinitival predicate with second person subject

hiren *te* *tang* *uruk*
hit=en te tang u-tuk
2PL=ERG TOP deceit speak-INF
'you are saying this without believing it'

conversation_2_1032

For this reason, I do not follow Riesberg's analysis at this point and suggest *-tuk* forms do not mark third person subjects (nor present tense or progressive) explicitly but acquire this reading

[18] Progressive forms in general are constructed as complex predicates of infinitive plus a finite form of the auxiliary *(wi)latuk* 'to stay', for immediate past tense progressive the immediate past tense form of *(wi)latuk.* See Riesberg (2021: 31) and cf. example (3) in the introduction to this chapter.

from context only, in the absence of (contextual) evidence against it. This is in line with their usage in nominal and switch-reference clauses, where they regularly occur with subjects of all persons and different tense interpretations. For examples of nominal clauses with infinitival predicates see section 3.4, for examples of switch-reference clauses section 3.3. Lacking tense-marking, I list *-tuk*-marked predicates as non-finite usages here.

3.2 Clause chaining

Clause chaining is widely discussed in the Papuanist literature (e.g. Longacre 1972, Foley & van Valin 1984, Longacre 2007 (1985), Foley 1986, Foley 2010, Sarvasy 2015, Fedden 2020, Sarvasy 2021), where the term refers to a sequence of n dependent, but not embedded, clauses, followed by one independent clause, some grammatical values of which have scope over the whole sequence, most typically TAM values, but possibly also e.g. negation. The relation of non-embedded dependence between the last and all other clauses in the sequence has coined the term *cosubordination* in syntactic analysis, originally proposed in Foley & van Valin (1984).

Clause chains are defined by their verb forms, distinguishing *medial verbs* as "morphologically impoverished" (Fedden 2020: 35) forms, predicating the dependent clauses, and *final verbs* as fully inflected predicates of their independent last clause. Formally, medial verbs most prototypically consist of just the verb stem plus one (or sometimes two) medial verb markers. Semantically, these markers typically indicate subject continuity vs. change of subject between their medial clause and the next clause in the chain (*same subject* vs *different subject*), and/or relative tense relations, e.g. sequentiality vs. simultaneity of the events denoted by the clauses. This is commonly referred to as a *switch reference* system (Foley 1986, Fedden 2020, among others). An example chain demonstrating a typical, morphologically reduced medial verb of stem plus a medial verb marker in Mand is repeated from Fedden (2020: 36), citing Daniels (2015: 484), in (13). The medial verb marker *-c* here indicates a change of subject to the next clause (different subject, DS).

Mand (Daniels 2015: 484, cited after Fedden 2020: 36)

(13) Typical medial verb form

pipia	*na-n*	*vra-c*	*wadwi*
debris	DEM-ACC	sweep-DS	go:HODPST

'She swept the debris away.' (lit: she swept the debris and it went)

Lacking further morphological marking, medial verbs typically depend on the final verb for their interpretation of at least absolute tense (past in 14). Since they are dependent forms, usages of medial clauses in isolation or without a following final clause usually evoke specific and marked interpretations (Sarvasy 2015, Fedden 2020: 38), e.g. eliciting an answer/a reaction (because they are incomplete or open utterances), conveying stance, or being interpreted as relating to a preceding construction or utterance. Such usages are referred to as *non-canonical medial clauses* in Sarvasy's (2015) investigation of their communicative functions in Nungon. I will borrow this term in the following description of Yali.

In this description, three medial verb forms are identified for Yali here. These are forms of the verb stem plus one of the three morphemes *-tug* (allomorph *-lug*)*, -il,* and *-oho* (allomorph *-oko*)*.* A fourth morphologically similar verb form of stem plus the morpheme *-ik* is differentiated from them, assuming a non-clausal status. This fourth verb form will still be introduced here (3.2.2), however, because some usages of medial verbs resemble its most common usage, such that a comparison suggests that medial verbs might also have non-clausal usages in Yali. The issue will be (shortly) commented on in section (3.2.2). Although no differentiation between clausal and non-clausal usages of medial verbs will be made in this thesis, this being neither possible nor central to the topic within the scope of this thesis, the description of clause chains given here (section 3.2.1) should therefore be read under this disclaimer.

3.2.1 Clause chains in Yali

Yali verb forms of stem plus one of the morphemes *-tug, -il,* and *-oho* are typical Papuan medial verbs in that they are morphologically reduced verb forms lacking tense marking[19], heading clauses that form chains of events ended by one independent clause, by the final clause (and/or forming chains of events ended by one fully inflected verb, the final verb). Yali clause chains minimally consist of one medial and one final clause/verb, as demonstrated in (14), but can also be longer, as in (15) (three medial and one final clause/verb). In the examples throughout this section, medial verbs will be marked in bold, final verbs will be underlined.

(14) Short chain of one medial and one final clause/verb

Waniyok	***lalug***	*sani*	*eserehesa*
Waniyok	la-tug	sani	eset-ehesa
PN	go-SEQ	stone.oven	cook-3PL.IM.PST

'after they went to Waniyok, they cooked a sani'

elic_example_sentences 011

[19] Note, however, that some additional verbal morphology (next to the verb stem and the medial verb marker) may still occur in medial verbs (as well as in *-ik* forms), e.g. causative and object marking, as in (16b) below.

(15) Clause chain with three medial clauses/verbs

piren toho	***tikik toho*** *<yil- ampu->*	***yitil***	*ampuhuken*	*ulug*
piren tu-oho	tikik tu-oho	yit-il	ambu-uhuk=en	ulug
two do-ADV	cut do-ADV	knot-CONT IN	go.down-1.FUT=NOM	QUOT

'I will make two (bags)' (lit: I will do two, cutting and knotting and (then) going down)

conversation_2_0817

Medial clauses in Yali are not embedded, but dependent, in that the tense marking of the final clause/verb has scope over the whole chain. In (14), the whole chain is therefore interpreted as happening in the immediate past, in accordance with the tense inflection of its final verb *eserehesa*, while (15) is an example of a future tense chain, marked in *ambuhuk* 'I will go down'. Whether or when the same is true for other grammatical marking of final clauses/verbs as well has not been investigated systematically yet (note that in (15), however, it also applies to quotative marking[20]).

In line with what has been described for non-canonical medial clauses in other languages, using medial clauses/verbs in isolation or otherwise without a corresponding/following final clause/verb evokes specific marked interpretations in Yali. An example of this is (16), where the medial clause/verb *yinggi feselug* 'he slept with her', which is not followed by a final clause/verb, is interpreted as belonging to the previous chain, giving a clarification of what was just said.

(16) Non-canonical medial clause/verb

a)

kulugte	***embeselug***
ku-tug=te	embese-tug
enter-SEQ=TOP	leave-SEQ

b)

laruk	*lapag*	***yinggi***	***feselug***
la-tuk	lat-pag	yinggi	fe-se-tug
go-INF	do-3.REM.PST	sleep	CAUS-OBJ-SEQ

'he went in and out and then just left her, after he slept with her'

suit_14_045f

Note, however, that while non-canonical medial clauses/verbs might be regarded as exceptional usages judging from monologue texts like narrations, explanatory texts etc., they are actually used quite frequently in spontaneous multi-party conversations, as demonstrated by the sequence in (17), which is built exclusively from non-canonical medial clauses/verbs. One frequent interpretation of such medial clauses/verbs there seems to be that a reaction or answer is expected.

(17) Sequence of non-canonical medial clauses/verbs in a conversation

a)

A:	*ari*	***roho***	***walug***
	ari	tu-oho	wa-tug
	MED	do-ADV	take-SEQ

[20] Quotative (*ulug*) is a marker of reported speech in Yali and used when expressing thoughts and intentions, as well as in literally reporting speech (see section 4.3.1.3)

b) B: *dorong* *dorong* ***walug***
dorong dorong wa-tug
push push take-SEQ

c) A: *dorong* *dorong* ***walug***
dorong dorong wa-tug
push push take-SEQ
'A: he was taking it (a motorcycle) like this B: he was pushing it? A: he was pushing it'
conversation_1_110ff

Semantically, the three medial verbs are not fully clear yet. *-tug* and *-il* likely form an opposition of relative tense, with *-tug* (usually) being used in sequential contexts (gloss 'SEQ'), i.e. where one event happens after the next (event of medial clause before event of final or next medial clause). Examples of this are (14) and (16). *-il* often marks continuous relations (gloss 'CONTIN'), where one event (expressed in the *-il* verb) has duration (continues) over the next event, as demonstrated in (18). Note that *-il* forms have not been investigated extensively yet, however, such that this description is somewhat preliminary. Distinctions between sequential and continuous clause relations are a typical semantic dimension of medial verbs in the Papuan literature though, and reported for other languages as well, e.g. for Kâte (Pilhofer 1933). Most typically, however, medial verb paradigms also exhibit a simultaneous form (e.g. in Kâte), which seems to be absent in Yali.

(18) Continuous medial clause/verb

a) *um* *bola ahap* *huluwon*
um bola ahap hulu=on
HES ball skin red=AM

b) *toron* *misig*
tot=on misig
small=AM one

c) ***hik*** ***tombo*** ***lahabil*** *humag* *filen*
hik tombo laha-il humag fil=en
jump jump go.up-CONTIN side direction=ABL

d) *sahowon* *humag* *filen* *humag* *fil*
saho=on humag fil=en humag fil
blue=AM side direction=ABL side direction

e) *laruk*
la-tuk
go-INF
'the red ball, the small one is jumping up and down and (then) (continuing to jump) moving next to, next to the blue one next to'
ECOM_sr_KW_058ff

The third medial verb marker, *-oho* (allomorph *-oko*), is semantically more difficult to place yet and occurs with causal (19), purposive (20), or manner (21) interpretations of clause relations, to give some examples. Since the latter seems to be the most frequent usage (cf. also 16 above), I will gloss it as adverbial 'ADV' here, following Riesberg (2021: 38ff) and Zöllner (ms.), who describe it as a modifier or marker of manner relations. Its semantic opposition to the

other medial verbs is not really clear yet, however, since situations like (19) and (21) could probably also be expressed using *-il* 'CONTIN' ('he likes his dog and starts smiling (still liking the dog)' and 'he pulls his knife (like a machete) and still pulling it to free the way goes down'), and situations like (20) using *-tug* 'SEQ' ('he opens the window and then looks outside')[21].

(19) Causal interpretation of medial clause/verb with *-oho*

amene	*fahet*	***ahiyeg***	***toho***	*olohore*	*unda*	*yatuk*	*ari*
a-mene	fahet	ahiyeg	tu-oho	olohore	unda	yat-tuk	ari
3SG.POSS-dog	for	like	do-ADV	face	laugh	hit-INF	MED

'he is laughing because he likes his dog'

frog_story_Silpa_Fince_247

(20) Purposive interpretation of medial clause/verb with *-oho*

a) *yendela* ***buka*** ***roho***
yendela buka tu-oho
window open do-ADV

b) *yendela* *eye* *keyen*
yendela eye ke=en
window hole direction=ABL

c) *selma* *fikit* *yer* *ha* *laruk* *ari*
sel=mu fikit yet ha la-tuk ari
outside=LOC direction see see:DIR go-INF MED

'he opens the window to look (for it) outside' (lit: he opens the window and goes to see (it) outside through/from the window hole'

frog_story_089ff

(21) Manner interpretation of medial clause/verb with *-oho*

a) *kirag* *bahaya* *segma* *itare*
kirag bahaya su-eg=mu ita=te
banana dangerous do-ST.PART=NOM DIST=TOP

b) *karog* *itno* ***lisokore***
karog itno lisu-oho=te
chopping.knife DET pull-ADV=TOP

c) *ambibag* *ari*
ambu-ibag ari
go.down-3.REM.PST MED

'there were many wild bananas (growing there), so he went down pulling his chopping knife (like a machete to free the way)'

suit_13_154ff

Concerning the reference tracking typically expected in switch-reference marking, all three medial verbs in Yali seem to be restricted to same-subject contexts. There is thus no different-subject medial verb in Yali, such that medial verbs do not really form a reference tracking (or switch reference) paradigm. This is quite unexpected in that Yali does have a fully-fledged (and semantically prototypical) switch reference paradigm of reference tracking (same subject vs. different subject) and relative tense (sequential vs. simultaneous clauses) (see next section). This paradigm, however, operates outside of clause chains. To avoid confusion between the

[21] An example of a semantically probably rather similar medial verb in another Papuan language can be found in Wambon (de Vries & de Vries-Wiersma 1992). There, it is described as "typically used in contexts (…) where the medial verb semantically functions as modifier or qualifier of the next verb" (ibid: 19).

two paradigms in question, I will reserve the term *switch-reference marker* to the semantically (but not structurally) prototypical paradigm introduced in the next section in this thesis, and refer to the forms discussed here simply as medial verbs, although two of them (probably) also mark relative tense. Note, however, that there is a semantic overlap between the paradigms: there are two dedicated sequential clause connectors in Yali that can be used in same-subject contexts, one medial verb and one switch-reference marker.

In terms of usage, shorter and middle-sized clause chains like the examples above occur in all genres in Yali, including narratives and spontaneous conversations. They are also very frequent in stimulus-based descriptive tasks, like space games or picture descriptions. Very long chains of seven, eight, nine or more clauses/medial verbs, however, seem to be largely restricted to procedural and explanatory texts and instructions. An example of such a long chain is given in (22) (example after Riesberg 2021: 17, syntactic analysis and display mine).

(22) Chain with 7 medial clauses/verbs

a) *e saloma* ***wak*** ***lalug***
e saloma wa-ik la-tug
woodk.o.tree take-DIR go-SEQ

b) *itanoen*
ita=no=en
DIST=GIV=ABL

c) *el*
el
sugar.cane

d) *ka haruk lahebon aru* ***wak*** ***lalug***
ka ha-tuk la-ehep=on aru wa-ik la-tug
sugar.canesee-INF do-2PL.IM.PST=NOM DET take-DIR go-SEQ

e) *itanoen*
ita-no=en
DIST-GIV=ABL

f) *tul huhubi tul fam*
tul huhubi tul fam
cleaver cassowary.bone cleaver with

g) *huhubi tul fam te yaha ebe yaha itno fam*
huhubi tul fam te yaha ebe yaha itno fam
cassowary.bone cleaver with TOP stone.axe stone.axe DET with

ahandimano alma tam ***waltefelug*** *itnoen* ***tung*** ***sil*** ***tung*** ***sil***
ahandi=mu=no alma tam wal-te-fe-tug itno=en tung su-il tung su-il
beneath.it=LOC=GIV under first form-SF-CAUS-SEQ DET=ABL cleave do-CONTIN cleave do-CONTIN

h) *tomimu lemano* ***lahalug***
tomi=mu le=mu=no laha-tug
on.top=LOC over.there=LOC=GIV go.up-SEQ

i) *pom itno fene*
pom itno fene
k.o.tree DET on.top

j)	*pom*	*itno*	***empeik***	***lalug***	*itno*	*fene*
	pom	itno	embe-ik	la-tug	itno	fene
	k.o.tree	DET	put-DIR	go-SEQ	DET	on

k)	*ap*	
	ap	
	man	

l)	***lahalug***	*wam*	*abug*	*uruk*	*latpag*
	laha-tug	wam	abug	u-tuk	lat-pag
	go.up-SEQ	pig	story	speak-INF	stay-3.REM.PST

'**a)** they took the Saloma wood and went, **b)** then **c)** sugar cane **d)** they took the Ka sugar cane, which you have seen many times, and went **e)** and then **f)** with a cassowary bone **g)** with a cassowary bone, with a stone axe, they split (the wood) first at the bottom, and then they split it, they split it **h)** going up to the top, **i)** the Pom wood on top **j)** they put the Pom wood there **k)** the men **l)** went up and they discussed the "pig talk" (= taboo term for *initiation*)'

1st_initiation 047ff/(Riesberg 2021: 17)

As a final remark on clause chains, note also that final clauses of Yali clause chains are necessarily independent clauses, but not necessarily finite. That is, all types of independent clauses described in the previous section can in principle be used as a final clause, and especially final clauses with (non-finite) infinitival predicates are in fact not infrequent. Examples of this were (18), (19) and (20) above. The interpretation of absolute tense of the whole chain still depends on the interpretation of the final clause in these cases, which is by default a (third person) present tense interpretation, as in the examples above, but can also differ according to context (see section 3.1.3 on the interpretation of infinitival predicates in independent clauses).

Furthermore, final clauses can also be marked for switch reference or by markers of nominal clauses, and thus be combined further with the next clause to follow (see section 3.3 and 3.4). An example of a nominal final clause was (15) above (nominal marker *=en*). An example of a final clause marked for switch reference is given in (23) (same subject sequential marker *-teg*). Neither nominal nor switch reference marking is usually possible for medial clauses (see sections 3.3 and 3.4 for more detail).

(23) Switch-reference-marked final clause

ambilikmu	***saluk***	***toho***	***walug***	*lahareg*
ambilik=mu	saluk	tu-oho	wa-tug	laha-teg
mouth=LOC	bite	do-ADV	take-SEQ	go:3SG.IM.PST-SS.SEQ

'it took it in its mouth and brought it'

ECOM_sr_Nias_032

3.2.2 Non-clausal medial verbs

The fourth verb form to be discussed in this section is formed from verb stems plus the morpheme *-ik,* which is described as an intentional and directional linker in Riesberg (2021: 42) and glossed as 'DIR' for 'directional' here. Constructions with this verb form have some resemblance of (short) clause chains, as demonstrated in (24). They have been argued to be much more restricted in their usage and to form a syntactically closer unit than (at least some usages of) medial verbs in Yali and are regarded as single complex predicates in Riesberg (in prep), however. Following this analysis, I assume that *-ik* forms have non-clausal status and do not list them as medial verbs here.

(24) Complex predicate with *-ik* verb

winahik	*kehek*	*ari*
winag-ha-ik	ku-ehek	ari
look.for-3SG.OBJ-DIR	enter-3SG.IM.PST	MED

'it was looking for it inside' (lit: it went inside to look for it)

frog_story_070

However, as also argued in Riesberg (2022, in prep), there are some usages of medial verbs in frequent collocations with final verbs that are probably on their way to becoming lexicalised expressions, analysed more felicitously as a complex predicate like the *-ik* construction than as a clause chain proper at the current stage of their development. While Riesberg shows this for the combination of *walug* 'take-SEQ' and a following verb of movement demonstrated in (25) (example repeated from Riesberg, in prep: 11), it is not clear yet whether the same also applies to some other collocations with medial verbs. A possible candidate could for example be some collocations of *-il* forms and motion verbs, as suggested by example (26), which cannot be transparently interpreted as one event continuing over the next (anymore). In the case of *walug* plus motion verb (example 25), the lexicalising construction serves to express bringing and taking events. Note the negation marker following the second verb, which has scope over both verbs in the example.

(25) Clause chain lexicalising into complex predicate

an	*uang*	***walug***	*larikik*	*fug*
an	uang	wa-tug	la-tikik	fug
1SG	money	take-SEQ	go-1SG.PST	NEG

'I did not take any money'

conversation_2_0110/Riesberg (in prep: 11)

(26) Lexicalising collocations of *-il* verbs?

yik	***angge***	***sil***	*libag*	*libag*	*libag*	*libag*	*libag*
yik	angge	su-il	la-ibag	la-ibag	la-ibag	la-ibag	la-ibag
fight	thing	do-CONTIN	go-3.REM.PST	go-3.REM.PST	go-3.REM.PST	go-3.REM.PST	go-3.REM.PST[22]

'they were permanently hitting each other' (not: they were fighting and going)

fighting_a_ghost_104

Since lexicalising collocations of medial verbs have not exhaustively been investigated yet, no systematic distinction between complex predicates of the *-ik* type demonstrated in (24) and (short) clause chains can be made in this thesis. To still enable a consistent segmentation of examples, I will therefore not include medial clauses in the clause segmentation indicated by the roman numerals in the remainder of this thesis, but rather treat (all types of) clause chains as one unit in this segmentation. This is not to be mistaken as an indication of monoclausal status for all clause chains discussed, but merely meant to enhance clarity and better readability of the examples. The internal structure of clause chains (where relevant to the discussion) will be indicated by highlighting medial verbs in bolt and underlining final verbs instead, as was already the case in the examples throughout this section. Neither of the two differentiates between clausal and non-clausal usages of medial verbs. As a final remark on this issue, note also that *-oho* verbs have a yet different frequent usage suspicious of grammaticalisation into possibly more adverbial than verbal phrases, an example of which was *ari roho* 'like this' in (17a) above. This further usage, as well, is not fully understood yet and no analysis as either clausal or non-clausal will be given here. A short description of some of the most common collocations in this usage and their respective meaning will be given in section 4.3.1.1.

3.3 Switch reference

Next to clause chaining, Yali uses a paradigm of switch reference morphemes for clause combination, distinguishing same-subject from different-subject clause relations, and sequential from simultaneous actions. The paradigm operates *outside* of clause chains, and is analysed as combining independent clauses here. Note again that this is not per default expected from the Papuanist literature, where switch reference marking is primarily discussed as a feature of medial clauses (cf., however, the "anticipatory actor suffixes" in subordinate verb forms in Foley 1986: 198, e.g.).

[22] The reduplication of verb forms (or clauses) can be used to express repeated actions (among others) in Yali.

The relevant morphemes are *-teg* (allomorph *-reg*) 'SS.SEQ', *=mu* (allomorph *=ma*) 'DS.SEQ', *lit* 'SS.SIM' and *-im* 'DS.SIM'. All four of them attach to the (verbal) predicate of independent clauses, relating them to the next clause to follow. They differ, however, in that the sequential forms *-teg* and *=mu* generally select finite clauses as a host, while the simultaneous forms *lit* and *-im* attach to non-finite predicates, especially infinitives, *lit* also to stative participles. Examples for the four markers each are given in (27)-(30). For the remainder of this thesis, I will refer to the clauses they mark as *switch-reference clauses,* distinguishing them from medial clauses as they are described in the previous section, as well as from nominal clauses in the following section.

(27) Same subject sequential switch-reference clause

i.

at	*taksifam*	*kantor*	*lahareg*
at	taksifam	kantor	laha-teg
3SG	car with	office	go:3SG.IM.PST-SS.SEQ

ii.

itanoen	*ar*	*yabuk*	*mo*	*hinahanan*	*simisi*
ita=no=en	at	yabuk	mo	hinahan-an	su-imisi
DIST=GIV=ABL	3SG	work	sun	three-?	do-3SG.IM.FUT

'he came to the office by car, and now he will work for three hours'

elic_field_notes

(28) Different subject sequential switch-reference clause

i.

huluon	*alulukmu*	*wahama*
hulu=on	aluluk=mu	waha=mu
red=AM	close=LOC	come:3SG.IM.PST=DS.SEQ

ii.

sahowon	*laha*
saho=on	laha
blue=AM	go:3SG.IM.PST

'the red one came close (to the blue one), then the blue one moved away'

ECOM_sr_Edison_W_051

(29) Same subject simultaneous switch-reference clause

i.

at	*sawe*	*naruk*	*lit*
at	sawe	na-tuk	lit
3SG	breadfruit	eat-INF	SS.SIM

ii.

Masahangguli	*larisi*
Masahangguli	la-tisi
PN	go-3SG.PST

'While eating breadfruit, he walked to Masahangguli'

elic_complex_sentences_012

(30) Different subject simultaneous switch-reference clause

i.

tuluk	*surukim*
tuluk	su-tuk-im
shift	do-INF-DS.SIM

ii.

an	*wenenggak*	*nin*	*hinogog*	*hiyamin*	*ari*
an	wenenggak	nin	hinogog	hiya-min	ari
1SG	sound.of.news	againask	give	2SG.OBJ-1SG.IM.FUT	MED

'While you are working (shifting charcoal), I want to ask you some things'

burning_garden_003

Analysing switch-reference clauses as independent clauses, I propose here that there is no relation of scope between switch-reference clauses and tense values of the clause they are combined or linked with. This is in contrast to the relation between medial and final clauses, which was analysed as a cosubordinating clause combination in the previous section. Switch-

reference clauses can therefore probably best be analysed as establishing a coordinating clause relation in Yali.

For sequential switch-reference clauses marked by *-teg* and *=mu*, this absence of temporal scope is quite clear, as they are generally fully finite clauses and include tense marking on their own. Their tense values may in principle also differ from the tense values of the following clause, provided their temporal order is compatible with the notion of sequentiality marked by *-teg* and *=mu* (i.e. the switch-reference clause can happen earlier in time than the next clause, but not later). An example of this was (27) above (immediate past tense for the switch-reference clause, but immediate future for the clause it is linked to).

For simultaneous switch-reference clauses marked by *lit* and *-im,* however, it requires some explanation. This is because simultaneous switch-reference clauses are generally non-finite and do not mark absolute tense on their own. Being underspecified in this respect, their interpretation will thus be deduced from context, and the most relevant context information in this case is likely the notion of temporal simultaneity with the next clause that they mark, such that simultaneous switch-reference clauses will usually be interpreted as logically inheriting the tense interpretation from the next clause. This is the case for example in (29) above, where the switch-reference clause *at sawe naruk lit* 'he is/was/will be eating breadfruit' logically has a past tense reading in accordance with the tense marking of the next clause.

Tentative evidence against an analysis of tense-marking scope, however, can be found in constructions of reported speech, which involve a perspective shift in Yali (shifting to a protagonist's perspective, see section 4.3.1.3). This is demonstrated in (31), where an extension of the immediate future marking in (31ii.) ('they will come to catch me') to (31i.) 'they were saying this (and going)[23]' is not a possible reading. Note as well that the quotative marking of (31ii.), explicitly marking the clause as reported speech, does not extend to (31i.) either.

(31) Simultaneous switch-reference clause not under the scope of tense marking of next clause

i.	***il***	*<u>larukim</u>*	ii.	*itano*	*an*	*hondo*	*niya*	*wamulusa*
	il	la-tuk-im		ita=no	an	hondo	niya	waha-usa
	say:CONTIN	go-INF-DS.SIM		DIST=GIV	1SG	close	1SG.OBJ:DIR	come-3PL.IM.FUT

ulug	*atam*
ulug	atam
QUOT	PT

'when they were saying this (and going) he thought they will come to catch me'

filling_the_traps_066

[23] The switch-reference verb *larukim* here is in fact the final verb of a short clause chain. In line with what has been described in 3.2.2 in the previous section (cf. especially example 26 there), it is not very clear here whether the chain should really be regarded as a bi-clausal structure meaning 'they were saying this and going' or rather as a grammaticalized complex predicate meaning just 'when they were saying this'. From the context of the story, the latter interpretation is somewhat more felicitous.

Examples like this should be treated with some caution, however, because syntactic properties of reported speech have not extensively been investigated in Yali yet, such that the analysis of no tense-marking scope between simultaneous switch-reference clauses and the next clause given here has to remain somewhat preliminary at this point. Still, note as well that the temporal interpretation of simultaneous switch-reference clauses may sometimes also remain ambiguous. An example of this was (30) above, where a possible reading is also that the 'you' is working already, and while it continues to do so, the 'I' will now start asking questions. In this latter interpretation, there would also not be a temporal scope relation between (30ii.) and (30i.).

In relation to clause chains, switch-reference clauses are final clauses (like other independent clauses), and medial verbs cannot usually be combined with the four switch-reference markers discussed here (though see below). Note that this entails that clause chains can be combined further with the next clause in discourse, suggesting there is a higher level of structure working above chaining relations. An example of a switch-reference final clause/verb is given in (32i.), a second one was (31i.) above. Recall that the segmentation given in the romance numerals in the examples is in principle a clause segmentation, but one that ignores or skips medial clauses.

(32) Switch-reference clause/verb as final clause/verb of a chain of medial clauses/verbs

a) i.
sum	*misihon*	*itno*
sum	misig=on	itno
net.bag	one=AM	DET

b)
hilalug	*singgonggo*	*fam*	*embik*	*lahakekteg*
hila-tug	singgonggo	fam	embe-ik	laha-ehek-teg
take-SEQ	bike	on	put-DIR	go.up-3SG.IM.PST-SS.SEQ

c) ii.
we	***hilalug***
we	hila-tug
PT	take-SEQ

d)
katek	*ehek*	*ari*
katek	ehek	ari
run	say:3SG.IM.PST	MED

'he took one of the baskets and put it on to his bike then he took it and ran off'

pear_story_Isak_038

As for other final clauses, the tense marking of switch-reference final clauses has scope over the chain preceding them (immediate past tense in 32i.).

Still, exceptional usages of medial clauses with switch reference marking are attested as well. These are not very well understood yet and tentatively suggested to be cases of non-canonical medial clause usages. An example of this is (33).

(33) Non-canonical medial clause marked for switch reference[24]

A	a)	i.	*hale*	*tu*	*kemon*			*warikip?*	
			hale	tu	ke=mu=on			wa-tikip	
			k.o.tree	PRX	direction=LOC=AM			take-2PL.PST	
B	b)	ii.	*halere*		*tom*	*fene*	*fare*	*ke*	
			hale=te		tom	fene	fare	ke	
			k.o.tree=TOP		mountain	on	forest	direction	
	c)		***hiyaho***	***lit***					
			hiyag-oholit						
			find-ADV	SS.SIM					
	d)	iii.	*alempal*	*isihi*		*ha*	iv.	***pelug***	
			alempal	isa-ihi		ha		pe-tug	
			root cut	3.OBJ-1SG.IM.PST		see:POT		think-SEQ	

(…)

'A: and hale tree, where did you find that? B: hale we find in the forests in the mountains and we are careful not to cut the root (lit: we think I could cut the root) (…)'

making_net_bag_102ff

In terms of usage, switch reference clauses are very typical especially for narratives in Yali. They occur in all other genres as well, however, maybe somewhat less frequently in explanatory texts and instructions. They can form sequences of switch-reference-related events, as given in (34)[25]. Such sequences often contain medial clauses/verbs, or (short) clause chains, as a lower level of sequencing, so to say. In example (34), the sequence in fact consists of clause chains only, i.e. of two clause chains with switch-reference final clauses (34i.-ii.), followed by one clause chain with a non-switch-reference final clause (34iii.). The chains contain one medial clause/verb each, with the predicates *witil, tahanokore,* and *walug* respectively. Note that the latter is arguably a non-clausal medial verb.

(34) Sequence of switch-reference clauses

a)	i.	*kayo-kayo*	***witil***	*lahakektegte*		ii.	*etemanoente*	
		kayo-kayo	wit-il	laha-ehek-teg=te			ete=mu=no=en=te	
		wood-wood	build-CONTIN	go.up-3SG.IM.PST-SS.SEQ=TOP			above=LOC=GIV=ABL=TOP	
b)		*e*	*anggen*	*itno*	***tahanokore***	*arat*		
		e	anggen	itno	tahan-oko=te	arat		
		tree	fruit	DET	pick-ADV=TOP	PT		
c)		*mel*						
		mel						
		thing						
d)		*no*						
		itno						
		DET						

[24] The capital letters A and B denote different speakers.

[25] Note that I explicitly refrain from referring to these sequences as *chains of clauses,* although in a literal sense of the expression, they could of course be considered chains: one clause following the next, each of them linked to its predecessor. This is because the term *clause chain* has a more narrow usage in the Papuan literature, i.e. referring specifically to cosubordination or medial clause chains, as described in 3.2. Since such clause chains in a narrow Papuan sense exist as well in Yali, the term will be reserved to them in this thesis, and other types of sequential clause combination will simply be described as clause *sequences.*

e) *sum* *sarung* *tu*
sum sarung tu
netbag sarong PRX

f) <xxx> *fam* *kilabik* *kehektegte*
<xxx> fam kilap-ik ku-ehek-teg=te
<unintelligible> in enter-DIR enter-3SG.IM.PST-SS.SEQ=TOP

g) iii. *amigmu* *ruma*
amig=mu tu=mu
chest=LOC PRX=LOC

h) *onte* ***walug*** *ambehek*
on=te wa-tug ambu-ehek
and=TOP take-SEQ go.down-3SG.IM.PST
'he made a ladder and went up, then picked down the fruits eh that into a net bag, then he brought (them/it) down on his chest'

pear_story_Edo_024

In most cases, however, event sequences in Yali are not build from clause chains and switch-reference clauses exclusively, but also include nominal clauses as a third possibility of clause combination. This will be introduced in the next section.

3.4 Nominal clauses

In the Papuan literature, there is ample discussion of clauses or verb forms that can take (some) nominal morphology. They are usually regarded as (predicates of) subordinate clauses, most notably in Foley (1986: 198ff), and later works citing him (e.g. Reesink 1994, de Vries 2006). More recently, they have also been subsumed, together with some other structures, under the term *thematization* in de Vries (2005, 2006)[26], who refers to them as *thematic subordinate clauses*.

Such clauses in Papuan languages typically establish a relation between the nominally marked clause and the next clause to follow, which, in terms of meaning, however, remains rather open, and has been suggested to be best described simply by the notion of "relevance" (e.g.

[26] *Thematization* as a term goes back to Heeschen (1998) and is used in the Papuan literature to refer to theme-rheme constructions of the type 'as for X, Y', where the exact semantic relation between the two constituents has to be inferred from context. It covers relations between two clauses as they are discussed here, but is equally applicable to relations between (left dislocated) noun phrases and a subsequent predication. Thematization constructions are very frequent in Papua, such that they have been described as a "strong preference" of the region (de Vries 2006: abstract).

de Vries 2005, 2006), or “givenness” (Foley 1986: 200), where clause 1 (the nominally marked clause) is relevant to clause 2 (the next clause), or ‘given clause 1, clause 2 applies/occurred’.

The construction is typically used in a wide range of different contexts, most notably in situations corresponding to the use of relative clauses and adverbial clauses in other languages, but also e.g. to relate perception events to the expression of what is perceived, among others (see Foley 1986: 198ff, de Vries 2006). Note that this entails that in Papuan languages, there is often no structural distinction between relative and adverbial clauses (this has first been observed in Haiman 1978). Rather, the two are two different possible interpretations of the same structure, readings inferred from context.

Turning to the description of Yali, a set of nominal morphemes that can be added to clauses, or to verbal predicates, can indeed be identified as well. In line with what is reported for other Papuan languages, they establish a relation between the marked clause and the next and are employed in a wide range of different contexts, covering among others relative and adverbial clause interpretations (see below). These morphemes will be discussed as *markers of nominal clauses* (gloss ‘NOM’) in this section, and the clauses they mark as *nominal clauses.* The terminology is chosen seeking to be neutral and avoids both the term *subordinate clauses* used in Foley (1986) and subsequent works, and the term *thematization* or *thematic clause* used in de Vries (2005, 2006), for two reasons: Firstly, at least at the current state of research, it is not apparent to me (yet) whether and if so in how far all typical usages of nominal clauses in Yali are syntactically subordinating. I therefore somewhat tentatively suggest an analysis of a structurally very loose clause relation instead, which allows for different usages and different interpretations according to context. Note that nominal clauses are still considered a morphosyntactic mechanism of clause combination here, since they establish a clause relation with the help of a morphosyntactic process (by adding a set of nominal items to verbal predicates).

Secondly, the term *thematization,* although in itself applicable to the structure discussed here, is used as a wider concept in the literature and can also be applied to other phenomena in Yali, most notably to clauses and noun phrases marked by the topic particle *te* (cf. the discussion in Himmelmann & Riesberg 2026: 3ff). Since this particle is distinct from the markers of nominal clauses discussed here, most notably in having different combinatorial properties (*te* being less restricted), it is useful to the description of Yali to keep the two phenomena apart. To avoid terminological confusion, I will therefore leave the broader term *thematization* in this thesis to this information-structural particle, and the notion of *thematic clauses* to clauses marked by it.

Furthermore, note that the terminology chosen equally avoids the term *nominalized clause,* as it is not clear yet whether (some of) the clauses discussed here should be regarded as nominalizations proper or not.

3.4.1 Formation and meaning

Nominal clauses in Yali can be formed by adding one out of a number of different nominal morphemes/items to the verbal predicate of a clause. Nominal morphemes/items attested in this usage include at least the postpositions *famen* (fam=en 'for')*, feyeg* and *fahet* ('for')*,* the case markers *=mu* (locative), *=en* (ablative/ergative/instrumental) and *=men* (composite, combination of *=mu* locative and *=en* ablative), the attributive marker *=on,* the nouns *ambeg* ('place'), *angge* ('thing') and *ke* ('direction'), the case-marked noun *ambehen* ('from this place'), and some other items that can be used in noun phrases but are not well understood yet, e.g. *eneg* ('only', also as *eneg-eneg*). All of them can be added to both finite and non-finite predicates, except *=men* and possibly *=mu,* which seem to have a strong preference for non-finite clauses. Nominal clause markers cannot (usually) be combined with medial verbs, nor with switch-reference marking[27]. Two examples of nominal clauses, one with a finite, the other with a non-finite (here an infinitive) predicate, are given in (35) and (36) respectively. Note that the finite predicate of the nominal clause *laharuk latpag ambehente* in (35) is complex, consisting of an infinitive plus a finite auxiliary, and expresses progressive aspect. Note as well that further nominal morphology can (optionally) be added to nominal clauses, e.g. determiners and demonstratives. An example of this is *itno* (determiner) in (41) below.

(35) Nominal clause with a finite predicate

a) i.
laharuk	*latpag*	*ambehente*	ii.	*Seluk*	*ahil*	*eke*
laha-tuk	lat-pag	ambehen=te		Seluk	ahil	eke
go.up-INF	do-3.REM.PST	NOM=TOP		k.o.tree	ripe	one

b)
Polik	*alma*	*etema*	*wilapag*
Polik	alma	ete=mu	wilat-pag
PN	under	above=LOC	stay-3.REM.PST

'when he was going up there was a ripe Seluk tree growing at the foot of Polik mountain'

man_and_pig_032f

(36) Nominal clause with a non-finite predicate

a) i.
e	*fam*	*laharukon*
e	fam	laha-tuk=on
tree	on	go.up-INF=NOM

[27] Marginal exceptions to both of this, again, exist. For medial clauses, also again, they are tentatively suggested to fall under the notion of non-canonical usages of medial clauses. For switch-reference marking, they are not understood at all yet. Note, however, that one canonical or canonical-becoming exception to this rule might exist as well, however, in the combination of adverbial medial clauses marked by *-oho* and the attributive marker *=on,* which is attested rather frequently. The usage is not very well understood yet and awaits further research.

b) ii. *yal itno pugtefehek*
yal itno pug-te-fe-ehek
stair DET tie-SF-CAUS-3SG.IM.PST
'because he (wanted to) climb the tree he made a ladder/(the man) who (wanted to) climb the tree made a ladder'

pear_story_Isak_023f

Most often, nominal clauses use just one of the above-listed markers, e.g. just *ambehen* in (35) and just *=on* in (36). In principle it is also possible to use two of them together, however, as demonstrated in (37). No difference of meaning or structure has been discovered so far for these combined usages.

(37) Double marking of nominal clause

a) i. *Semuelen ari irision famente*
Semuel=en ari irisi=on famen=te
PN=ERG MED speak:3SG.REM.PST=NOM NOM=TOP

b) ii. *lahik waharikik arire eke*
laha-ik waha-tikik ari=te eke
go.up-DIR come-1SG.PST MED=TOP and
'because Semuel had told me this I went up and (…)'

conversation_2_0187

Nominal clauses in Yali are generally non-complete utterances and relate to another clause to follow in a broad range of different semantic relations, as described for clauses with nominal morphology in other Papuan languages above. Typical usages include the expression of given or backgrounded states or events, preconditions to a following event, scene setting e.g. on a temporal or locative level, and the introduction or identification of participants of the following event, as well as perception events to be followed by something that is perceived. Examples of this are (35) (temporal scene setting), (36) (precondition), and (37) (given/backgrounded event) above, as well as (38) (identification of participant) and (39) (perception event) below.

(38) Nominal clause identifying a participant of the next event

a) i. *og naptuk larision*
og nap-tuk la-tisi=on
take 1SG.THEME-INF go-3SG.PST=NOM

b) ii. *ari wabul ulug*
ari wat-ul ulug
MED hit-1PL.IM.FUT QUOT
'the one who was accompanying me, they wanted to hit him'

conversation_1_075

(39) Nominal clause expressing a perception event

a) i. *yet harukmen*
yet ha-tuk-men
see see-INF-NOM

b) ii. *e anggen wilaha*
e anggen wilaha
tree fruit stay:3SG.IM.PST
'he saw that the tree had fruits'

pear_story_Edo_070f

Through this wide spectrum of usages, semantic interpretations of nominal clauses cover adversative relations as given in (40), temporal relations (35) and cause-result relations (36, 37), among others, but also relative clause readings (38). Furthermore, nominal clauses can (semantically) sometimes also be interpreted as arguments of the following clause, since it is not obligatory to include a coreferential expression in the second clause of the construction, as was the case with the demonstrative *ari* in (38). This is demonstrated in (41) with a nominal clause used to identify the location/direction of the following event. The nominal clause here can be translated as a locative/oblique argument of the next clause.

(40) Nominal clause with adversative interpretation

i.	*tu*	*polu*	*paleg*	*famen*	ii.	*an*	*salahrefihi*
	tu	polu	pal-eg	famen		an	salah-te-fe-ihi
	PRX	k.o.clay	cut-ST.PART	NOM		1SG	wrong-SF-CAUS-1SG.IM.PST

'this one is already brown, but I was wrong' ('I made this brown, but I did it wrong')

making_net_bag_02_055

(41) Nominal clause with argument interpretation

a) i.

inggik	*ahap*	*suruk*	*harukuk*	*ambeg*	*itno*
inggik	ahap	su-tuk	ha-tukuk	ambeg	itno
claw	skin	do-INF	see-1PL.PST	NOM	DET

b) ii. *lul*
la-ul
go-1PL.IM.FUT

'we will go to the place where we have previously seen trails of their claws (of cuscus)'

fighting_a_ghost_052f

Crucially, although nominal clauses can be marked by a large set of different markers, it is not very straightforward to establish 1-1 correspondences between individual markers and the different usages or semantic interpretations, where cause-result relations e.g. would always be expressed through nominal clauses marked by =*on* (as in 36), or nominal clauses marked by =*on* would always mark cause-result relations. For this reason, as a working hypothesis to future research, I suggest here that the different semantic interpretations of nominal clauses listed above (at least in many cases) primarily rely on context rather than being explicitly marked in the construction, such that a more literal translation of (many of the) above examples should be 'given state x, y' (e.g. 'given that he wanted to climb the tree, he made a ladder' in 36). This is in line with what has been argued for similar constructions of other Papuan languages (de Vries 2006: 814f) and the idea of a clause combination simply marking a notion of relevance between two clauses described in the introduction to this section.

Note, however, that the large set of nominal clause markers in Yali is also not fully synonymous, i.e. at least some of the different items may also retain (some of) their lexical meaning in nominal-clause-marking function. A rather clear example of this is the nominal-clause marker *ambeg* in (41), which is literally a noun meaning 'place', a reading that it clearly contributes to the interpretation of the construction here. Furthermore, although there is never an absolute correspondence, some markers seem to be more likely than others for some specific interpretations. An example of this are relative-clause readings, which seem to be much more likely for nominal clauses marked by =*on* than for nominal clauses marked by other markers (e.g. 38 above, see also Riesberg 2021: 19f). The correspondence does not hold the other way round, however, in that every nominal clause marked by =*on* would be best or even easily interpreted as a relative clause. Example 36 above, e.g., is probably more straightforwardly interpreted in a causal reading, and example 37 does not have a useful relative-clause reading at all.

3.4.2 Structural properties and usage

Nominal clauses in Yali are independent from the clause they relate to, in that there is no relation of tense-marking scope between the two, similarly to what has been argued for switch-reference clauses in section 3.3. This can be easily seen where nominal clauses have finite predicates, e.g. in (37) and (41), and also in (38)[28] above. Examples like (36) suggest it also applies to non-finite nominal clauses, however, since the nominal clause here (36i.) has an irrealis interpretation, which is not compatible with the immediate past tense marking of (36ii.). This is in line with what has been observed for nominally-marked clauses in other Papuan languages (e.g. Foley 1986: 198ff, discussing also illocutionary force), and sets them apart from medial clauses and cosubordinating clause relations.

Other than that, however, the structural analysis of nominal clauses in Yali (e.g. as co- or subordinating) is not very clear at this point (yet). For this reason simply listing observations of their most common usages here, the best description that I can give so far is that they allow for different usages and leave room for interpretation.

[28] (38), however, is again an example of reported speech. Recall from the discussion of temporal scope over switch-reference clauses in section 3.3 that the syntactic properties of reported speech in Yali are not well understood yet. Still, note as well that, as was also the case for switch-reference clauses, in (38) again the quotative marking of (38ii.) does not extend to the nominal clause (38i.).

This is because firstly and perhaps foremostly, nominal clauses in Yali are used to form sequences of related clauses in discourse, typically (but not obligatorily) in alternation with switch-reference clauses. Three examples of this are given in (42)-(44). Of these, (42) and (43) alternate between nominal and switch-reference clauses, (44) is an example of a nominal-clause only sequence.

(42) Sequence of nominal and switch-reference clauses

a) i.	*ambilikmu*	***saluk***	***toho***	***walug***	*lahareg*	
	ambilik=mu	saluk	tu-oho	wa-tug	laha-teg	
	mouth=LOC	bite	do-ADV	take-SEQ	go:3SG.IM.PST-SS.SEQ	

b) ii.	*emberumu*	*embehekon*	*itno*	iii.	***yu***	***roho***	*ambehek*
	emberu=mu	embe-ehek=on	itno		yu	tu-oho	ambu-ehek
	on.top=LOC	put-3SG.IM.PST=NOM	DET		break	do-ADV	go.down-3SG.IM.PST

'(it) brought it in its mouth, put it on top, and it broke and fell down'

ECOM_sr_Nias_032

(43) Sequence of nominal and switch-reference clauses

a) i.	*nohorukmu*								
	noho-tuk=mu								
	sleep-INF=NOM								

b) ii.	*ap*	*piren*	*itano*	*kibareg*					
	ap	piren	ita=no	ku-ibag-teg					
	man	two	DIST=GIV	enter-3.REM.PST-SS.SEQ					

c) iii.	*yer*	*hibag*	*ambehen*						
	yet	ha-ibag	ambehen						
	see	see-3.REM.PST	NOM						

d) iv.	*e*	*e*	*arep*	*itano*	*unggul*	*hop*	***toho***	*nohoruk lit*		
	e	e	arep	ita=no	unggul	hop	tu-oho	noho-tuk	lit	
	wood	wood	board	DIST=GIV	head	board	do-ADV	sleep-INF	SS.SIM	

e) v.	*pik*	*areben*	*lel*	*pa*	*uwi*	
	pik	arep=en	lel	pa	uwi	
	k.o.tree	board=INST	try	see:POT	EXCL	

'while he was sleeping the two men entered and saw that he was sleeping using two pieces of wood to lie his head on them and (therefore) could strike (them) with the pik wood, uwi!'

filling_the_traps_055ff

(44) Sequence of nominal clauses

a) i.	*e*	***wiroko***	*re*	*ti*	***roho***	*kilabik*	*waharukon*	*feyeg*
	e	wit-oho	te	ti	tu-oho	kilap-ik	waha-tuk=on	feyeg
	wood	split-ADV	TOP	MED	do-ADV	enter-DIR	come-INF=NOM	NOM

b) ii.	*hondokma*	*yaltukmu*	*oho*	*re*	
	hondok=mu	yal-tuk=mu	oho	te	
	fire=LOC	burn-INF=NOM	PT	TOP	

c) iii.	*o*	*hobuen*	*yet*	*harukon*	*itno*	
	o	hobu=en	yet	ha-tuk=on	itno	
	place	smoke=ERG	see	see-INF=NOM	DET	

d) iv.	*yaleferukmu*	v.	*hondo*	*fano*	*naruk*
	yal-e-fe-tuk=mu		hondo	fano	na-tuk
	burn-SF-CAUS-INF=NOM		fire	good	eat-INF

'split the wood and put it (here) like this (lit: split the wood and doing like this insert it coming here), because when (something) burns in the fire place, the smoke comes to the place (where you put the wood), so when you burn it (later) the fire burns well (because the wood is dry from the smoke)'

honai_expl_Isak_164ff

As all three examples demonstrate, these sequences of clauses may also include (short) clause chains, to which both switch-reference and nominal clauses function as final clauses. This is the case in (44i.) (nominal final clause, predicate *kilabik waharukon feyeg*), (43iv.) (switch-reference final clause, predicate *nohoruk lit*) and (42i.) (switch-reference final clause, predicate *lahareg*). In these examples, nominal clauses could therefore be assumed to combine clauses on a structural level that is superordinate to the level of clause chaining (on the same level as switch-reference clauses), as also suggested in the segmentation of the romance numerals in the examples.

On the other hand, however, nominal clauses may also occur *within* clause chains, relating either to a medial or to the final clause of the chain. Examples of this are the nominal clause *e anggen wehek angge* 'the fruits he was taking' in (45d), which identifies a participant of the following medial clause *ibmanoen nin ku itno fam kilaboko* 'they put them back into the basket' in (45e-f); and the nominal clause *ir oho kalem pikit atukno larukmu* 'they were walking on the way over there' in (46b-d), which gives the temporal setting or the perceivee to the perception event of the following final clause *yer hehesa* 'he saw (it/them)'. Note that nominal clauses within clause chains are not included in the clause segmentation indicated by the Roman numerals in the examples. To enhance readability of the examples they are therefore indicated via bracketing [ ] instead.

(45) Nominal clause within chain relating to medial clause

a) i. *ehesareg*
ehesa-teg
say:3PL.IM.PST-SS.SEQ

b) ii. *inggik* ***lisoko***
inggik lit-oho
hand pull-ADV

c) *ibmano*
ibma=no
DIST=GIV

d) *e* *anggen* *wehek* *angge*
[e anggen wa-ehek angge]NOM
tree fruit take-3SG.IM.PST NOM

e) *ibmanoen* *nin* *ku*
ibma=no=en nin ku
DIST=GIV=ABL again basket

f) *itno* *fam* ***kilaboko***
itno fam kilap-oho
DET in enter-ADV

g) *ita* ***roho*** *og* *irehesareg*
ita tu-oho og ut-ehesa-teg
DIST do-ADV give 3SG.BEN-3PL.IM.PST-SS.SEQ

'they said (that) and then pulled his hand (pulled him up by his hand) and put the fruits he was taking back into the basket for him (lit: given that he had taken fruits, they put them back into the basket, they did that and gave it/them to him)'

pear_story_Edo_121ff

(46) Nominal clause within chain relating to final clause

a) *hun* *itno* ***yer*** ***hil*** ***hil***
hun itno yet ha-il ha-il
man DET see see-CONTIN see-CONTIN

b) *ir* *oho*
[it oho
3PL PT

c) *kalem pikit* *atukno*
kalem pikit atuk=no
way direct over.there=GIV

d) *larukmu*
la-tuk=mu]NOM
go-INF=NOM

e) *yer* *hehesa*
yer ha-ehesa
see see-3SG.IM.PST

'the man was watching and when they came walking on the way over there he saw (them/it)'
pear_story_Isak 083ff

Contrary to their usage in (42-44) above, in examples like (45-46), nominal clauses can be interpreted as subordinate to the event line of clause chains, if anything. Adding to this impression, in both (45) and (46), the nominal clause is also exempt from the same-subject restriction that usually holds for clause chains. It could therefore be seen as skipped by the clause relation/combination established by the preceding medial clause (i.e. there is a same-subject relation between the two medial clauses in (45b) and (45e-f), and not between the medial clause in (45b) and the nominal clause in (45d), e.g.). Note that the same could possibly be said of a continuative relative tense indicated by the medial verb (CVC) *yer hil hil* in (46a), i.e. a continuative relative tense between the medial clause in (46a) and the final clause of the chain in (46d) ('the man is watching, and while he continues watching he sees them') is likely a more felicitous interpretation of the example than a continuative relative tense between the medial clause in (46a) and the nominal clause in (46b-c) ('the man is watching and while he continues watching they start walking there'). Further and more systematic research is required here.

Finally, and somewhat at odds with both a subordinate status of nominal clauses deduced from examples (45-46) and an above-clause-chain structural level formed by nominal and switch-reference clauses together (examples 42-44), the data suggest as well that nominal clauses, at least semantically, do not necessarily always relate to exactly one clause to follow, but (at least in some cases) can also relate to longer sequences of clauses as a whole. Of the examples above, the clearest in this regard is (43), which exhibits two nominal clauses, (43i. and iii.). Semantically, both of them (probably) relate to the whole sequence following them: (43iii.) gives a perception event followed by two clauses expressing what is perceived (43iv.-

v., note that 43iv. is also a clause chain), (43i.) sets the temporal frame for the whole sequence of clauses (i.e. everything is happening while he is asleep). This rather seems to put nominal clauses on a superordinate level (even compared to switch-reference clauses), if anything. Whether it corresponds to a systematic structural trait or is just an interpretation from context, however, is unclear at this point. Note that the same could in principle also be said of the nominal clause (42ii.) though (relating to the whole chain 42iii., not only or specifically to its medial clause), and perhaps also of the nominal clause within the clause chain in (45). The latter can be interpreted as a patient or theme argument of not only the medial clause following it directly ('they put them back into the basket'), but also at least of the final clause of the chain ('they gave them to him'). For example (44), however, which shows four nominal clauses in a row (44i.-iv.), such an interpretation would get very complicated and is not very intuitive.

Leaving their structural analysis thus at this open stage, as a final remark it can still be added here that nominal clauses are ubiquitous and occur in all genres of Yali.

3.5 Juxtaposition

For the sake of completeness, it should be added here that two clauses in Yali can of course also relate to each other without any further morphosyntactic marking of this relation other than simple juxtaposition (possibly helped by prosodic integration). An example of this is (47).

(47) Clause combination by juxtaposition only

a) i.

nit	*neneluk*	*ari*
nit	nin-eluk	ari
1PL	1PL.POSS-know[29]	MED

b) ii.

yuhun	*kosong*	*laruk*	*lahe*	*fug*	*ari*
yuhun	kosong	la-tuk	lat-ehe	fug	ari
without	empty	go-INF	do-1PL.IM.PST	NEG	MED

'we know this, that we cannot go without (taking) anything'

landslide_ayabiye_176

As there is no overt marking or morphosyntactic process involved, such usages will not be treated as a structural morphosyntactic clause combination here. The example is thus regarded as two morphosyntactically *non-conjoined* clauses in this thesis.

[29] There is a small group of (probably) adjectival elements in Yali that combine with possessive prefixes to form predicates of (non-verbal) clauses. They express cognitive or emotional states like 'know', 'be afraid', or 'not want to', e.g.

3.6 Interim Summary: Overview of clause combination

In this chapter, three (main) types of morphosyntactic clause combination in Yali were described. These are clause chaining using medial verbs, switch-reference marking and nominal marking of clauses. They are used in alternation and combination in discourse. Switch-reference clauses and clause chaining were proposed to operate on two different levels of structure, such that switch-reference marking connects clause chains as full chunks. Nominal clauses, on the other hand, could not be ascribed to either level, since they are used on both of them, likely with their own specific rules that are not well understood yet.

For the three types of clause combination, their morphosyntactic marking and properties, as well as their meaning, were described as summarised in Table 2.

Table 2: Overview of morphosyntactic clause combination in Yali

	Type		
	Medial verb (chaining)	Switch-reference marking	Nominal clause marking
semantics	relative tense and manner (?)	reference tracking and relative tense	according to context; covering relative clause and adverbial clause interpretations, among others
markers	*-tug* 'SEQ', *-il* 'CONTIN', *-oho* 'ADV'	*-teg* 'SS.SEQ', *=mu* 'DS.SEQ', *lit* 'SS.SIM', *-im* 'DS.SIM'	nominal morphemes, e.g. postpositions, case markers, attributive marker *=on,* some nouns
formation	attaching to verb stems	combining with finite verbs (*-teg* and *=mu*) or non-finite verbs (*lit* and *-im*); not with medial verbs	combining with finite or non-finite verbs; not with medial verbs (possibly 1 exception)
structural properties	same subject restriction; dependent (scope of tense marking in final clause)	independent (no scope of tense marking)	independent (no scope of tense marking)
syntactic analysis	cosubordination; some collocations lexicalising into complex predicates	coordination	unclear

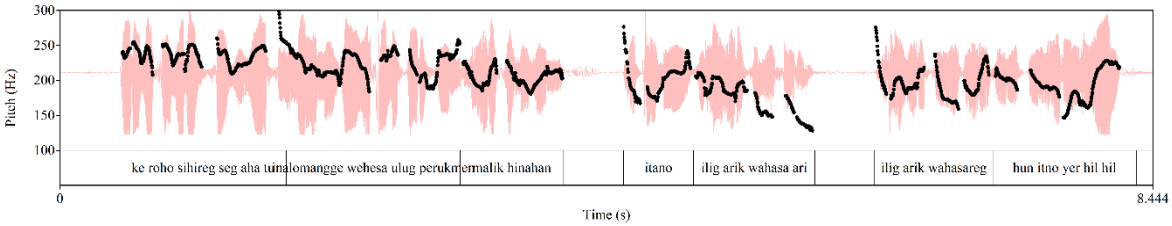
Juxtaposition as a fourth type of clause combination was excluded from further discussion and morphosyntactic analysis.

4. Larger discourse units: major prosodic and syntactic boundaries

This chapter describes major prosodic and major syntactic boundaries (sections 4.1 and 4.2 respectively) as the two most salient and regular structural markers of larger discourse units in Yali. Furthermore, it investigates their correlation in the narrative subcorpus, distinguishing between *aligned usages,* where both of them occur together, and *misaligned usages,* where one of them occurs without the other. This will be done in section 4.3, which additionally gives a quantification of the lengths of larger units delimited by the two types of major boundaries each. Following this, section 4.4 will zoom in on the misaligned usages and their effects, assuming aligned usages to be the default case from which misaligned usages diverge. This assumption, which was also the initial working hypothesis of this thesis (see section 1.1), is backed-up by the frequencies of the two usages found in 4.3. Finally, section 4.5 will discuss the findings of this chapter, comparing larger prosodic and larger syntactic units as delimited by the two types of boundaries with each other and reflecting on the idea of major discourse boundaries as a result of both of them together.

4.1 Larger prosodic units and major prosodic boundaries

In this thesis, *larger prosodic units* are understood to be (any kind of) prosodically defined groupings of intonation units (IUs). For Yali, such groupings can most clearly be described in terms of IU-final contours, distinguishing continuative and finalising IU contours as described in section 2.3: finalising IU contours end with a right-edge L boundary tone corresponding to an IU-final falling contour, continuative IUs end with a H tone, which might be analysed as simply the final H tone of their last AP, as a H and/or M boundary tone, or as a combination of both (see the discussion in section 2.3). In this opposition, IU-final intonation contours segment larger units as a sequence of n IUs with continuity intonation ended by one IU with finality intonation, as demonstrated in (1). Note that such oppositions between continuous contours and finality intonation are also widely assumed for other languages and incorporated into prosodic typology most notably by Gussenhoven (e.g., Gussenhoven 2010).



a) b) c) d) e) f) g)

FIGURE 1: Larger unit marked by finality intonation (1e)

(1) Larger unit marked by finality intonation

a) *ke* *roho* *sihireg* *seg* *aha* *tu* /
ke tu-oho su-ihi-teg seg aha tu
Q do-ADV do-1SG.IM.PST-SS.SEQ DONE become:3SG.IM.PST PRX

b) *inalomangge* *wehesa* *ulug* *perukmen* /
in-alomangge wa-ehesa ulug pe-tuk-men
3PL.POSS-steal carry-3PL.IM.PST QUOT think-INF-NOM

c) *malik* *hinahan* /
malik hinahan
child three

d) *itano* /
ita=no
DIST=GIV

e) *ilig* *arik* *wahasa* *ari* \
ilig at-ik waha-ehesa ari
upward become-DIR come-3PL.IM.PST MED

f) *ilig* *arik* *wahasareg* /
ilig at-ik waha-ehesa-teg
upward become-DIR come-3PL.IM.PST-SS.SEQ

g) *hun* *itno* *yer* *hil* *hil* /
hun itno yer ha-il ha-il
man DET see see-CONTIN see-CONTIN
(…)

'what has happened here? they stole them he was thinking when those three children came from below. they came from below and the man was watching while (…)'

pear_story_Isak_079

In (1), all IUs except (1e) end on a H tone (continuous intonation, indicated in the transcription as /). (1e), analysed as finality intonation (falling contour, indicated as \), therefore, delimits a larger unit of IUs (1a-e) (four continuous IUs and one final). (1f), ending on a H tone again (continuous) then starts the next larger unit, to be continued over (1g) and further.

These units of IU-final contours are the larger prosodic units I will investigate in this thesis, and their boundaries are what I will refer to as *major prosodic boundaries.* In practical terms, major prosodic boundaries are thus defined by the presence of finality intonation, which has the advantage of presenting a discrete and (largely) unambiguously identifiable boundary cue:

Larger prosodic units defined in this way come with a clear opposition between unit-internal and unit-final IUs.

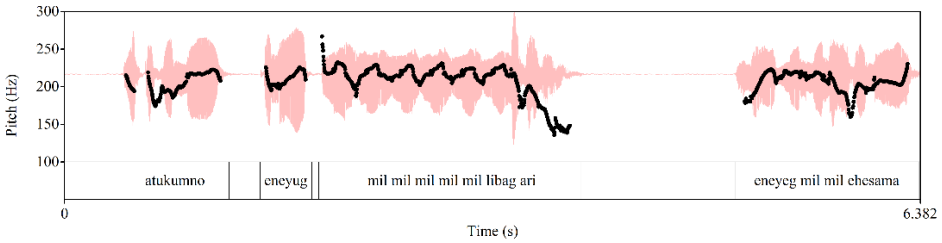
However, although finality intonation is the clearest and primary defining criterion, other prosodic cues contribute as well to the grouping effect of the larger unit described here. A second important cue, e.g., are *downtrends*, where the word serves as a cover term for phenomena of tone realisation involving lowering of pitch levels among tones of the same phonological quality (*like tones;* e.g., lowering of H tones compared to other H tones. See Downing & Rialland 2017 and Connell 2001 for terminological discussion, among others). The cover term will be used here, because at the current state of knowledge on Yali prosody a more concrete analysis is not feasible within the scope of this thesis yet. Given IU-final contours as a primary (and discrete) unit cue, it is also not strictly needed for the current purpose of identifying larger prosodic units. Since the focus is on the larger units, the following should thus primarily be read as a description of additional helpful boundary cues and only in a secondary function as offering the first working hypotheses on downtrends in Yali to language description and prosodic typology.

A downtrend related to larger units in Yali emerges most clearly in the data as successive lowering of at least H, probably also L tones in approaching major prosodic boundaries. This can be seen in (1) above, where especially every H (and L) tone throughout (1e) (the last IU before the boundary) is realised on a lower pitch level than the H (and L) tone preceding it. The result of this is a downtrend sequence, which is reset with the major boundary between (1e and f) (tones in 1f start out on a higher pitch level again).

As in (1), the downtrend is perceptually typically most clear over a pre-boundary interval of roughly one IU (here 1e), where often literally every tone is realised on a lower pitch than the preceding (like) tone. It actually probably starts already earlier though, but as a slower degration of less than one step per tone and/or with smaller pitch differences between tones. In (1), the last peak of (1c), e.g., seems to already be a bit lower than the peak in the middle, which again is realised just slightly lower than the peaks in (1b), etc. Globally, over the larger unit, pitch levels thus seem to form more a downward curve, rather than a linear slope. The trend observed could therefore perhaps be a case of what is usually referred to as *automatic downstep* in the literature: successive lowering of tones in sequences of H and L tone alternation, as a feature or output of the phonological structure (cf. e.g. Downing & Rialland 2017: 2)[30]. Curve-shaped pitch level degration has been discussed as a feature of successive downstep since Liberman & Pierrehumbert 1984.

[30] In contrast to *declination,* automatic downstep is usually not regarded as a general phonetic effect (caused e.g. by speech physiology), but as part of the phonological contour. It is therefore expected to apply with specific tone combinations and/or in specific contexts.

Note, however, that at least in practical terms (at the current state of knowledge and with the present methods of auditory and visual inspection), this downtrend is much less reliable than finality intonation as a cue to major prosodic boundaries. This is foremostly because it is not present or clear at every major boundary. This is demonstrated in (2), where no pitch lowering can be observed over the H tones of (2c), although (2c) is marked as a boundary IU by means of finality intonation. Note the additional second tier of transcription, which gives an AP analysis of the example (bracketing), as well as a representation of the surface tone structure.



a) b) c) d)

FIGURE 2: Major prosodic boundary without automatic downstep

(2) Major prosodic boundary without downstep

a) *atukumno* **/**
[L+H]$_{AP}$
at-tuk=um=no
happen-INF=NOM=GIV

b) *eneyug* **/**
[L+H]$_{AP}$
in-eyug
3PL.POSS-foot

c)

mil	*mil*	*mil*	*mil*	*mil*	*ibag*	*ari* ****
[H]$_{AP}$	[H]$_{AP}$	[H]$_{AP}$	[H]$_{AP}$	[H]$_{AP}$	[L+H]$_{AP}$	[L%]$_{AP}$
mil	mil	mil	mil	mil	ibag	ari
stemp	stemp	stemp	stemp	stemp	say:3.REM.PST	MED

d)

eneyug	*mil*	*mil*	*ehesama* **/**
[L+H]$_{AP}$	[H]$_{AP}$	[H]$_{AP}$	[L+H]$_{AP}$
in-eyug	mil	mil	ehesa=mu
3PL.POSS-foot	stemp	stemp	say:3PL.IM.PST=DS.SEQ

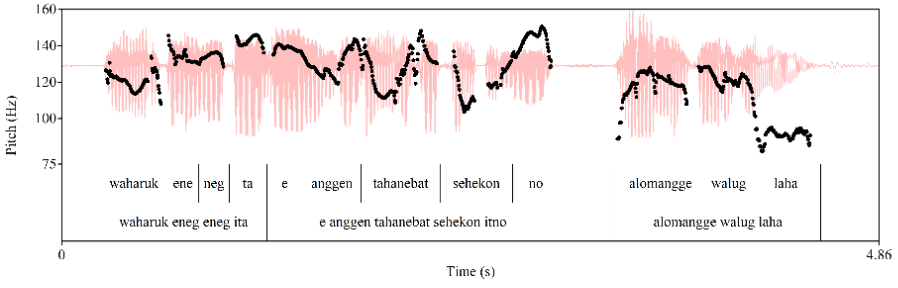
(…)
'at that moment there was the sound of stemping feet (lit: their feet were stemping). there was the sound of stemping feet then (…)'

filling_the_traps_027

Two reasons for the absence of the downtrend seem plausible in (2): firstly, the example might be a case of an iconic contour, used to expressively relive the sound of stomping feet, for the sake of which the usual downtrend has been suspended. Secondly, the absence of downtrend might also be due to the phonological structure of the IU, since it is in fact (at least on the surface) not a sequence of alternating L and H tones, but a sequence of H tones only. The latter, should it proof to be systematic for sequences of like tones, would be another argument for an analysis of the downtrend as automatic downstep (rather than e.g. declination), since it would then occur with specific tone combinations only.

Whatever its reasons, examples like (2) make the downtrend a non-obligatory cue to major boundaries in Yali. Additionally, at the current state of research, there are many confounding factors to its identification: as a global downtrend, it can be masked by any other phenomenon of tone realisation, upscaling or downscaling alike. For Yali, however, such other phenomena are not understood yet, most notably differences in scaling between IU-medial and IU-final H tones (see section 2.3 discussing these differences and a possible analysis as IU-level boundary tones, and IUs (2d) and (3b) for examples of a lowered and upscaled H tone respectively in IU-final position). The question of possible prosodic highlighting in Yali, additionally, has not been asked yet at all.

Next to this global trend, two further, probably more local downtrends emerge as related to major boundaries as well in the data. These are a significant lowering of L tones (compared to preceding L tones) directly prior to major boundaries, and a distinctly smaller pitch range for L-H alternations in pre-boundary IUs. The two most saliently occur together, resulting in an IU contour of initially very minor pitch movements, followed by an abrupt clear fall, after which the pitch stays on a very low level (perhaps still falling slightly) until the end of the unit. This is demonstrated in (3), where the last L tone in (3c) (on *laha*) is realised much lower than any preceding trough throughout the example, and preceded by a stretch of very small pitch movements only, over *alomangge* and *walug.* At least for *alomangge,* analysed as one AP here, a LH tone alternation can still be determined though (initially falling, then pitch jump up with the stop sound /g/), although the pitch movement is much smaller than for the other APs that precede it. For *walug,* a movement is less clear still, but tentatively assumed to still be hinted at here.



a) b) c)

FIGURE 3: Register compression on *alomangge walug* and final lowering on *laha,* both in c)

(3) Register compression and final lowering before major boundary?

a)	*waharuk*	*eneg-(e)neg*	*(i)ta I*
	[L+H]$_{AP}$	[H]$_{AP}$	[H]$_{AP}$
	waha-tuk	eneg-eneg	ita
	come-INF	NOM-REDUP	DIST

b)	*e*	*anggen*	*tahanebat*	*sehekon*	*(it)no I*
	[	L+H]$_{AP}$	[L+H]$_{AP}$	[	H]$_{AP}$
	e	anggen	tahan-e-bat	su-ehek=on	itno
	tree	fruit	pick-SF-?	do-3SG.IM.PST=NOM	DET

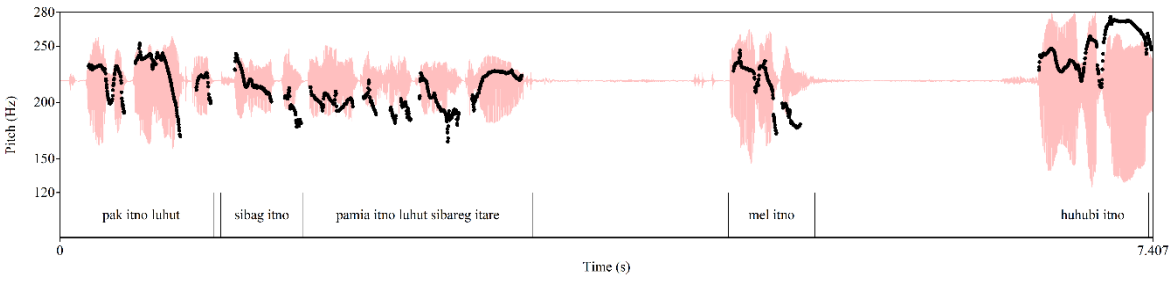
c) *alomanggewalug* *laha* \
[L+H]$_{AP}$ [L+H?]$_{AP}$ [L%]$_{AP}$
alomangge wa-tug laha
steal take-SEQ go:3SG.IM.PST
'he came, (the thing) for picking the fruits into it, he stole (it)'

pear_story_Stefen_028

The pattern could perhaps be described as a combination of register compression (the smaller pitch range) and final lowering (the last very clear downscaling), though further investigation is needed here. Note that the final lowering, if assumed, would occur with the IU-level L boundary tone (L%) in this case, and not with the AP-level L tones that precede, such that from the example, it can also not be excluded that the scaling difference is a feature of the phonologically distinct L tone. At least at the current state of analysis, it is not a defining criterion of finality intonation (i.e. of the L%), however, which is characterised by the shape of the contour (falling only throughout one AP), not by its pitch level.

At any rate, at least on auditory and visual inspection only, the pattern is a salient cue of some major boundaries only, and can, for the current purposes, be regarded as an optional additional helpful cue. Whether it is used e.g. specifically by some speakers, but not by others, or in certain (semantic) contexts only, etc, remains to be investigated.

Next to finality intonation and downtrends, (long) pauses can be a further cue to larger prosodic units in Yali. The pause following IU (1e) above, e.g., certainly helps to make the major boundary clearer, as does the pause after (2c). Similar to downtrends, however, pauses are also not obligatory for major boundaries. This is demonstrated in (4), where finality intonation (IU-final falling contour) signals a major boundary after IU (4b). (4b), however, is not followed by a pause.



a) b) c) d) e)

FIGURE 4: Major prosodic boundary without pause after b)

(4) Major prosodic boundary without pause

a) *pak* *itno* *luhut* **/**
pak itno luhut
cuscus DET catch

b) *sibag* *itno* \
su-ibag itno
do-3.REM.PST DET

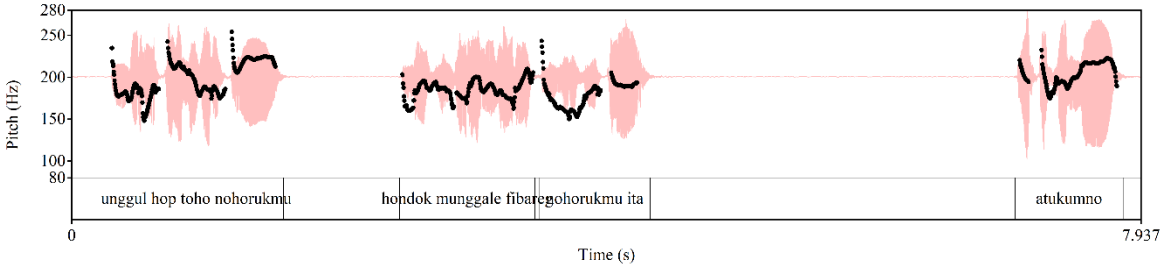
c) *pamia* *itno* *luhut* *sibareg* *itare /*
pamia itno luhut su-ibag-teg ita=re
k.o.cuscus DET catch do-3.REM.PST-SS.SEQ DIST=TOP

d) *mel* *itno *
mel itno
thing DET

e) *huhubi* *itno /*
huhubi itno
cassowary DET
(…)
'he cought the cuscus. He caught the cuscus, then the thing, the cassowary…'

suit_13_129

Pauses, where they do occur, furthermore, are still not a reliable cue to larger units in themselves, but only in combination with finality intonation (and, usually, downtrend). This is because pauses are also a cue of IU boundaries, such that the occurrence of a pause in itself does not enable a distinction between the two levels of structure. Consequently, (clear and long) pauses also occur without major boundaries, or 'disjoint' from the other cues. The former can be seen in (5): two clear pauses, the second of which is very long, separate four IUs with continuity intonation and without (obvious) downtrend into three blocks in this case. They might have various (non-major-boundary-related) reasons, including story telling effects like suspension/building up tension and planning of subsequent discourse (note that the second block of IUs 5b-c clarifies/adds detail to the first proposition in 5a).



a) b) c) d)

FIGURE 5: Long pauses without major boundary

(5) Long pauses without major boundaries

a) *unggul* *hop* *toho* *nohorukmu /*
unggul hop tu-oho noho-tuk=mu
head board do-ADV sleep-INF=NOM

b) *hondok* *munggalefibareg /*
hondok munggal-e-fe-ibag-teg
fire light-SF-CAUS-3.REM.PST-SS.SEQ

c) *nohorukmu* *ita /*
noho-tuk=mu ita
sleep-INF=NOM DIST

d) *atukumno* /
at-tuk=um=no
happen-INF=NOM=GIV
(…)
'he was sleeping, after he lid a fire he was sleeping and at that moment (…)'
filling_the_traps_024

The latter is especially salient with tail head linkage (THL) constructions in the data: THL in Yali occurs at structural boundaries, as a recapitulation of the last part of one chunk as first part of the next (see chapter 5 for more detail). This can be seen e.g. in (4) above, where the last two IUs of a previous sequence of events, (4a-b, 'he caught a cuscus'), are recapitulated as the first IU of the next sequence in (4c). Further examples are (1) (IU 1e repeated as 1f), and (2) (IUs 2b-c repeated as 2d). With these constructions, pauses as cues to major boundaries should be expected between the boundary IU (e.g. 1e) and the repetition (e.g. 1f), where indeed they occurred in both (1) and (2). However, a second frequent option in the data is the pattern demonstrated in (4): no pause at the boundary, but a (long) pause following the repetition (4c). In this latter version, the pause is not fully helpful for locating the major boundary, since it is 'disjoint' from the other cues, occurring only one IU later. The pattern might, for example, be something like a floorholding or attention-keeping strategy, where the THL mechanism is exploited for already indicating a continuation of the story before pausing, for planning of the next chunk, to let the previous chunk settle in, or still in underlining the boundary, all might be possible explanations. Note that the construction easily lends itself to be used in such a way, since THL is a very regular and in this sense expected event at major boundaries in Yali, and the repetition itself is more or less predictable and does not require planning effort.

Finally, various other (phonetic) cues can likely contribute to the perception of larger prosodic units as well, for example marked phonation like breathy or creaky voice, or overall changes in loudness. These have not been investigated in more detail yet, however, such that no clearer description can be given at this stage.

Importantly, however, due to this large (and still open) inventory of possible boundary cues, all of which, except finality intonation, are (probably) non-obligatory, larger prosodic units in Yali can be marked clearer or less clear, by stronger or weaker boundaries, such that their boundaries are sometimes easier and sometimes more difficult to identify. Examples for this are the boundaries after IU (4b) and (1e) above: of the two, the boundary in (1) is certainly more salient and easier to perceive, since the finality intonation is reinforced by a very clear downtrend and a pause. In (4), in contrast, a pause occurs only later, and a downtrend, at least, is not obvious. Furthermore, final falls (finality intonation) as well may be realised clearer or less clear, i.e. as a steeper or less steep and longer or shorter falling contour, adding to the

(perceptual) gradience of the strength of the boundaries of larger units. Overall, major prosodic boundaries are thus in their nature (multiple non-obligatory cues with (so far) only one really obligatory criterion, which, however, can be realised clearer or less clear) rather similar to the boundaries of phonetic IUs described in section 2.1. In line with this observation, the two of them also share at least one of their boundary cues (pauses), possibly even more (e.g. marked phonation? Investigation pending).

4.2 Larger syntactic units and major syntactic boundaries

Larger syntactic units, in this thesis, are understood to be (any kind of) morphosyntactically marked groupings of clauses. Note that in this way, the thesis does not join the debate around the terms *sentence* and *paragraph* raging elsewhere in the Papuan literature (cf. section 1.2). Rather, the two (under any definition, as long as their clause combination is morphosyntactically overt) are simply both subsumed under this broad definition and not differentiated further. This also entails that I do not commit to either of the two terms for the larger morphosyntactic units discussed here.

The morphosyntactic means of such groupings in Yali have been introduced in chapter 3, distinguishing clause chaining or medial verbs, switch reference marking and nominal clauses as main possibilities of clause combination. Their properties have been summarised in Table 2 of that chapter, which is repeated for convenience and easier reference here as Table 1.

Table 1: Overview of morphosyntactic clause combination in Yali (repeated from Table 2 in chapter 3)

	Type		
	Medial verb (chaining)	Switch-reference marking	Nominal clause marking
semantics	relative tense and manner (?)	reference tracking and relative tense	according to context; covering relative clause and adverbial clause interpretations, among others
markers	*-tug* 'SEQ', *-il* 'CONTIN', *-oho* 'ADV'	*-teg* 'SS.SEQ', *=mu* 'DS.SEQ', *lit* 'SS.SIM', *-im* 'DS.SIM'	nominal morphemes, e.g. postpositions, case markers, attributive marker *=on,* some nouns
formation	attaching to verb stems	combining with finite verbs (*-teg* and *=mu*) or non-finite verbs (*lit* and *-im*); not with medial verbs	combining with finite or non-finite verbs; not with medial verbs (possibly 1 exception)
structural properties	same subject restriction; dependent (scope of final clause)	independent (no scope)	independent (no scope)
syntactic analysis	cosubordination	coordination	unclear

From the three mechanisms of clause combination in Yali, different larger syntactic units can be derived. However, only one of them is selected for the further investigation of larger discourse units in this thesis. This unit is defined in terms of its endpoint, as the largest morphosyntactic grouping that can be formed in Yali, ending only where a clause is not overtly connected to the next clause at all. Medial clauses, switch-reference clauses and nominal clauses are all internal to this largest unit, which ends where a non-nominal final clause is also not switch-reference marked. These non-connected clauses will be referred to as *major syntactic boundaries* in this thesis.

Units delimited by major syntactic boundaries as they are defined here enable consistent and (largely) unambiguous identification in the data (though see the discussion on reported speech in section 4.3.1.3), since there is a discrete opposition between unit-final and (three types of) unit-internal clauses. Furthermore, they do not require a decision on hierarchical relations among the different clause combining mechanisms of Yali, which at least at the current state of research is an advantage, since there is no clear empirical basis (yet) for assuming such a relation in a stable way between nominal clauses and clause chaining on the one, and nominal clauses and switch-reference marking on the other hand.

More importantly still, among all other possible definitions of larger syntactic units in Yali, major syntactic boundaries under the current definition are the most interesting for the discussion of larger units here, since these are the syntactic boundaries that prototypically correlate with major prosodic boundaries and THL in Yali.

Structurally, the unit they delimit is somewhat heterogenous though, being composed by any or all of three different clause combinations. Recall that the different combining constructions have different syntactic properties, most notably concerning dependency relations (medial clauses are cosubordinated, switch-reference and nominal clauses are not). Similarly, they are semantically different in that switch-reference clauses, and probably also medial clauses (largely), mark semantically defined relations of relative tense and, for switch-reference markers, reference tracking, while nominal clauses establish a semantically very open relation to be interpreted according to context. An example of such a heterogenous larger unit is given in (10). The example consists of a chain of two clauses (10i.), the final clause of which is also a nominal clause (and therefore not a major syntactic boundary), followed by two nominal clauses (10ii.-iii.), a switch-reference clause (10iv.), and finally another chain of two clauses (10v.), the final clause of which implements the major boundary. Note also that the NP in (10e) is not really integrated into either of the two next clauses following it (10iii. and 10iv.), but most likely interpreted as a patient argument to the medial clause *hililoko* of the final chain (10v.) of the sequence. This is indicated in the transcription by counting it as part of clause (10v.), which is then a non-linear clause.

(10) Structurally heterogenous sequence of clauses ended by a major syntactic boundary

a) i. ***hilalug*** *larukmen*
hila-tug la-tuk-men
take:SB-SEQ go-INF-NOM

b) ii. *kalemen*
kalem=mu=en
road=LOC=ABL

c) *hulani* *misig* *inim*
hulani misig inim
girl one with

d) *salkal* *ehesa* *ambeg* *itanoen*
salkal ehesa ambeg ita=no=en
meet say:3PL.IM.PST NOM DIST=GIV=ABL

e) v. *e* *anggen* *itno*
e anggen itno
tree fruit DET

f) iii. *helep* *misig* *kalema* *wilahaon* *itno* *fam*
helep misig kalem=mu wilaha=on itno fam
stone one road=LOC stay:3SG.IM.PST=NOM DET with

g) *eh*
HES

h) iv. *sultuk* *suruk* *laharegte*
sultuk su-tuk laha-teg=te
bump do-INF do:3SG.IM.PST-SS.SEQ=TOP

i) v. ***hililoko*** *ambehek* *ari*
hilil-oho ambu-ehek ari
spill-ADV go.down-3SG.IM.PST MED
'he stole it (lit: took it for himself) (a basket with fruits) and when he went (with it on a bike) he met with a girl on the road such that the fruits, because there was a stone lying on the road and he bumped into it, he spilled them and fell down'

pear_story_Lince_038

Still, larger units delimited by major syntactic boundaries as they are defined here are syntactic units at least in terms of cohesion: every clause in the unit has an overtly marked cohesive link to the next clause, although speakers have a choice between three different constructions for establishing it.

Note as well that not all units delimited by major syntactic boundaries in the subcorpus are as long, nor as complex or heterogenous as example (10), i.e. structurally homogenous units occur as well. This is demonstrated with the sequence in (11), which can be analysed as a (pure) sequence of switch-reference clauses (clauses 11i. and 11ii.), ended by an unconnected clause as major syntactic boundary (11iii.).

(11) Switch-reference sequence with major syntactic boundary

a) i. *war* *apagma* *itare*
wat at-pag=mu ita=te
die become-3.REM.PST-DS.SEQ DIST=TOP

b) ii. *Wanya* *hahon* *itno*
wanya hag=on itno
PN like=AM DET

c) *amloho* *<xx>*
amloho
son *unintelligible*

d) *Tenus* *hahon* *itno* *inimte*
tenus hag=on itno inim=te
PN like=AM DET with=TOP

e) *iba-iba* *uruk* *lit* *te*
iba-iba u-tuk lit te
cry-REDUP speak-INF SS.SIM TOP

f) iii. *wilapag*
wilat-pag
stay-3.REM.PST
'after he died the one like Wanya with her son, the one like Tenus, cried and stayed' (i.e. cried for a longer time)

suit_13_014

Alternative options of larger syntactic units in Yali would have included most notably clause chains, which can also be regarded as forming a supra-clausal unit in themselves. Compared to the larger unit investigated in this thesis, this unit is on the one hand structurally more

straightforward: It corresponds to a syntactically homogeneous structure and can be described as a unit of cosubordination. On the other hand, however, the unit 'clause chain' also brings a definitorial problem in Yali, which lies in its relation to nominal clauses. This is because nominal clauses may occur preceding, within or as final clauses of clause chains alike, such that they cannot clearly be ascribed to a structural level subordinate to chaining, nor to a superordinate level (yet) (see section 3.4.2). Note as well that compared to other larger units, e.g. to prosody, clause chains in the narrative corpus investigated are often actually not very long. Examples like (10i.) and (10v.) above, of chains with two clauses made up by just two verb forms, are rather typical and frequent (in narration as elsewhere). Examples of longer chains with more clauses and/or overt arguments from the subcorpus include (12) and (13), but although they do occur, they are not typically the dominating structure of narration.

(12) Chain with three medial clauses from the narrative subcorpus

a) *inibam* *Fari* *aru*
in-iam fari aru
3PL.POSS-village PN PRX

b) *he* ***roho*** *malik* ***toho*** *wam**toho***
he tu-oho malik tu-oho wamtu-oho
mother do-ADV child do-ADV pig do-ADV

c) *wilatfag*
wilat-pag
stay-3.REM.PST
'they lived in Fari like a family (lit: they lived in their village Fari having wives, having children and having pigs)'

suit_14_109

(13) Medial clause with two overt arguments

a) *ap* *misig* *eke*
ap misig eke
man one one

b) *wam* *eke* ***hilalug***
wam eke hila-tug
pig one take:SB-SEQ

c) *ahandima* *filen*
ahandi=mu fil=en
beneath.it=LOC direction=ABL

d) *ilig* *arik* *waha* *ari*
ilig at-ik waha ari
upward become-SIM come:3SG.IM.PST MED
'a man took a pig and came upwards from below'

pear_story_Isak_017

As clause chains are often very short in narration, their boundaries do not have the same striking correlation with major prosodic boundaries and THL that major syntactic boundaries as described above have. This is interesting to note, as it sets the typical Yali usage of clause

chains in narration apart from what has been described for several other languages of the region, where clause chains *do* have this striking correlation. This has been described for clause chaining and prosody for Matukar Panau (Mansfield & Barth 2021) and Nungon (Sarvasy 2017), e.g., and for clause chains and THL e.g. for Korafe (Farr 1999).

4.3 Comparison: prosodic and syntactic larger units in the narrative subcorpus

This section investigates the relation between major prosodic and major syntactic boundaries as defined in the previous two sections in the narrative subcorpus of Yali. It does so by segmenting the subcorpus according to both of them, comparing the two resulting segmentations, and by quantifying their alignment. It is structured into two subsections, firstly outlining the procedure of segmentation used (4.3.1), and secondly presenting its results (4.3.2).

4.3.1 Segmentation procedure

Both major prosodic and major syntactic boundaries were annotated manually using the praat software (Boersma & Weenink 2021), as well as the morpheme analysis of the narratives available in the toolbox database. Prior to the annotation of major boundaries, however, the data was segmented into IUs and clauses, as larger prosodic units are assumed to be groupings of IUs and larger syntactic units groupings of clauses. Of the two, IUs were chosen as a reference interval for the comparison of units delimited by major prosodic and syntactic boundaries respectively in Yali, as well as for the investigation of boundary alignment. However, as the logical reference interval for larger syntactic units are actually clauses (they are groupings of clauses), larger syntactic units were segmented twice, to check on the divergence that a segmentation with IUs as a reference interval presents from the conceptually more accurate clause-based segmentation.

An IU segmentation existed prior to the present investigation in the transcription that is part of the corpus used. It was done by native speakers and language experts together. This segmentation was used as a basis for the current segmentation, but checked and altered where not in accordance with the analyses outlined in chapter 2 of this thesis, as it represented a state of research prior to a systematic investigation of prosodic structure in Yali. In the final version, the subcorpus was segmented exhaustively into 1055 IUs. Of these, 10 were excluded

from further analysis for featuring a song as part of one of the narratives, such that the total number of IUs entering the investigation is 1045.

A clause segmentation was not given in the database and involved several structural decisions, such that the procedure adopted will be outlined in the first subsection here (4.3.1.1). Following this, the annotation of major prosodic and major syntactic boundaries respectively will be outlined in subsections (4.3.1.2) and (4.3.1.3).

4.3.1.1 Clause segmentation

In principle, the clause segmentation used here was done following the annotation conventions of the GRAID scheme (Haig & Schnell 2014)[31]. They were relevant in the current context especially for the treatment of noun phrases that are syntactically not fully integrated into clausal constructions: all such NPs were regarded as part of a clause, functioning e.g. as appositions or as (left or right) dislocated topics (Haig & Schnell 2014: 13). Additionally, hesitations, filled pauses and self-corrections were treated as clause internal, such that an exhaustive segmentation of the corpus into 846 clauses was possible. The song featuring in one of the narratives, again, was excluded from annotation and analysis.

However, the clause segmentation given represents the current state of knowledge on Yali syntactic structure, which means that some decisions had to be made on structures that are not well investigated yet. These concerned most importantly the placement of clause boundaries before or after certain particles or discourse markers and the clausal or non-clausal status of certain verbal elements.

For the former, prosodic structure was used as decisive criterion[32], resulting in an analysis where certain particles and discourse markers can occur both in clause-initial and in clause-final position. The two usages are differentiated by prosodic structure, as demonstrated for the particle *arat* in examples (14), where it occurs in IU-final position (recall that the line break represents IU boundaries in the examples), and (15), where it is used IU-initially, respectively. Note that the meaning of *arat* is not well understood yet for either of the two usages, such that semantics cannot disambiguate which clause it belongs to.

[31] Note that the GRAID annotation scheme does not only cover clause segmentation, but also argument roles and parts of speech, which were not used in the current annotation.

[32] The idea of using prosodic structure as a source of information in syntactic analyses is a product of the argumentation in Himmelmann (2022), showing how certain kinds of syntactic structures, especially left or right dislocations, rely on prosodic information as a distinctive criterion.

(14) *arat* clause final

a)	i.	*surukmen*	*surukmen*	*surukmen*	*surukmen*	*arat*
		su-tuk-men	su-tuk-men	su-tuk-men	su-tuk-men	arat
		do-INF-NOM	do-INF-NOM	do-INF-NOM	do-INF-NOM	PT

b)	ii.	*fobikon*	*itno*	*we*
		fobik=on	itno	we
		later=AM	DET	PT

c)	*kong*	*fulu*	*roho*	*itno*
	kong	fulu	tu-oho	itno
	many	many	do-ADV	DET

(…)
'they did that again and again until in the end there were a lot of them (…)'

filling_the_traps_038

(15) *arat* clause initial

i.	*arat*	*wahet*	ii.	*ibag*
	arat	waha-ehep		ibag
	PT	come-2PL.IM.PST		say:3.REM.PST

'have all come? he said'

filling_the_traps_043

For the latter, the clausal or non-clausal status of certain under-researched verbal elements, especially three structures emerged as problematic in the annotation. The first of them were repetitions of predicates, which are often used to express repeated actions or actions continuing over a longer period of time in Yali, as demonstrated in (16). Since predicates or VPs alone may be a full clause in Yali, these repetitions are ambiguous in their analysis as one reduplicated predicate or multiple (identical or similar) clauses. Again, prosodic structure was used as decisive criterion, treating them as one reduplicated predicate if they were realised as or within one IU, and as multiple clauses where every repetition was realised as a separate IU. An example of the former is (14i.) above, an example of the latter is (16).

(16) Repeated predicate as multiple clauses

a)	i.	*ti*	*itnore*	*we*	*embik*	*laruk*
		ti	itno=te	we	embe-ik	la-tuk
		dance	DET=TOP	PT	put-DIR	go-INF

b)	ii.	*embik*	*waharuk*
		embe-ik	waha-tuk
		put-DIR	come-INF

c)	iii.	*embik*	*laruk*
		embe-ik	la-tuk
		put-DIR	go-INF

d)	iv.	*embik*	*waharuk*
		embe-ik	waha-tuk
		put-DIR	come-INF

(…)
'they were dancing and dancing and dancing and dancing'

suit_13_206

The second and third problematic cases both pertained to the clausal or non-clausal status of certain medial verbs and follow from the discussions of section 3.2.2: a decision had to be taken both on collocations of medial and final verbs that might lexicalise into complex

predicates, and on adverbial medial verbs with *-oho* that might grammaticalize into adverbial (rather than verbal) phrases/usages.

Concerning the former, only collocations of *walug* 'take-SEQ' and motion verbs were treated as non-clausal here, since this is the only construction explicitly established as a complex predicate so far (Riesberg 2022, in prep.). All other combinations of medial and final verbs (or two medial verbs in non-chain-final position) were treated as two distinct clauses.

Concerning the latter, only a set of very frequent collocations of demonstratives, certain adjectival or adverbial elements, and an interrogative pronoun with the adverbial medial verb *toho/roho* 'to do', were treated as non-clausal. An example of their usage for the phrase *nenhen toho* 'a lot' is given in (17), the full list of these collocations in Table 2. Note that the meaning of the phrases listed is also not fully transparent from the lexical meaning of their elements and the construction, e.g. from *nenhen* in (17), which is literally an adjective meaning 'big', while the collocation with *toho* 'to do' means 'a lot'.

(17) Non-clausal collocation with *toho*

a) (…) *ti* *itnore*
ti itno=te
dance DET=TOP

b) ***nenhen*** ***toho*** *suruk* *lapag* *ari*
nenhen tu-oho su-tuk lat-pag ari
big do-ADV.PART do-INF do-3.REM.PST MED
'(…) he was dancing a lot'

suit_14_049

Table 2: Non-clausal collocations with the adverbial medial verb *toho/roho*[33]

	collocation	translation
toho/roho plus demonstrative	*ari roho* 'MED do-ADV' *ti roho* 'PRX do-ADV' *tu roho* 'PRX do-ADV' *ita roho* 'DIST do-ADV'	'like this' 'like this' 'like this' 'like this'
toho/roho plus interrogative pronoun	*ke roho* 'what do-ADV'	'how'
toho/roho plus adverbial element	*obog toho* 'all do-ADV' *nenhen toho* 'big do-ADV' *bahaya roho* 'dangerous/big do-ADV'	'all' 'a lot' 'a lot'

The operationalisation adopted views the expressions listed in Table 2 as single constituents functioning as (adverbial) modifiers of a following predicate (i.e. of *suruk lapag* in 17). This is in line with their description in Riesberg (2021: 38ff). However, there is no previous research on a (possible) distinction between truly clausal and modifying adverbial usages of medial

[33] The variation between *toho* and *roho* is an allophonic one, where /t/ is realised as [r] in intervocalic position. The process is assumed to apply for all productive morphophonemic processes (Riesberg 2021: 8), but other than that, its domain has not been clearly established yet.

verbs, such that the decision on the set of structures subsumed under this usage is to some degree arbitrary and largely based on the seeming lexicalisation of the phrases.

4.3.1.2 Annotation of major prosodic boundaries

Major prosodic boundaries were annotated in the narrative corpus as follows: The main and defining criterion for the assumption of a boundary was finality intonation, as it is the clearest and most stable and discrete of the boundary cues. All IUs in the corpus were therefore annotated as final or non-final IUs according to their final intonation contour (finality intonation – final IU, continuity intonation – non-final IU). For a few cases of unclear final contours, other boundary cues, especially downtrends, were used for disambiguation. This is demonstrated with a truncated final intonation contour in (18), presumably arising from the IU-final word's shortness and final voiceless stop (*at* '3SG'). The IU was grouped as a final IU, judging from the overall downtrend evident at least in its H tones (pitch peaks).

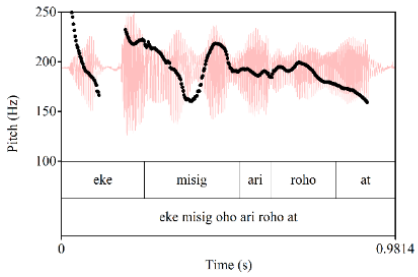


FIGURE 18: Truncated IU-final contour on *at*

(18) truncated IU-final contour

eke	*misig*	*(oho)*	*ari*	*roho*	*at*
eke	misig	oho	ari	tu-oho	at
and	one	too	MED	do-ADV	3SG

'and another one like this he'

filling_the_traps_038

Additionally, three types of other IU-final contours that fitted neither the description of finality nor that of continuity intonation emerged in the annotation. All three of them occurred very marginally in the narrative corpus used here. They were: a question contour (2 cases), an exclamative contour (3 cases) and a listing contour (4 cases). The former two were treated as marking final IUs, since they mark the end of a speech act. The latter was assumed to mark non-final IUs.

The grouping of intonation contours resulted in an annotation of 324 final and 682 non-final IUs in the corpus. Of the remaining 39 IUs, 21 had been abandoned by the speakers without

final contour (mostly for self-correction or hesitation), and 18 presented filled pauses. Both cases were treated as non-final. The distributions of the different contours and their analysis as final or non-final are summarised in Table 3.

Table 3: Distribution of IU-final contours

	final			non-final				IUs in total
occurrences	324			721				1045
percentages	31.00			68.99				100
	finality intonation	question contour	exclamative contour	continuity intonation	listing contour	abandoned contour	filled pause	
occurrences	319	2	3	678	4	21	18	1054
percentage	30.25	0.19	0.29	64.88	0.38	2.01	1.72	100

From this annotation, the corpus was then segmented into larger prosodic units such that every final IU closes one unit, which includes all the non-final IUs preceding it. All eight stories in the corpus ended with a final IU, such that exhaustive segmentation was possible.

4.3.1.3 Annotation of major syntactic boundaries

Major syntactic boundaries were annotated in the narrative corpus as follows: a major syntactic boundary was assumed at the end of every clause without morphosyntactic linking to the next clause. Under this definition and in parallel to the prosodic procedure described above, every clause in the subcorpus was annotated as major-boundary or non-major-boundary clause. Non-major-boundary clauses were medial clauses, switch-reference clauses, and nominal clauses. Major-boundary clauses were clauses that did not fall under any of these three categories. Note that this includes finite as well as non-finite clauses, and also clauses with non-verbal predicates. Additionally, end points of speech acts were considered major boundaries.

As potentially problematic to the definition of major boundaries, constructions of reported speech emerged in the annotation. They were treated as follows: end points of sequences of reported clauses were considered major boundaries where they were not followed by an overt verbalisation of the speech (or thinking) event, but as non-preboundary clauses where such a verbalisation followed. Clauses within sequences of reported speech were never considered as major boundaries. Since reported speech is very frequent in Yali (in general as well as in the narrative subcorpus), being used not only to literally report speech, but also to report

thoughts and express intentions, these decisions are not marginal to the investigation of major boundaries. Since there is also no previous treatment of reported speech in Yali available, I will therefore give a short description of the phenomenon here as a quick excursion at the end of this section, illustrating the argumentation behind them in more detail. Note, however, that the description (and analysis) given is based on the narrative subcorpus only and to a systematic description of reported speech in Yali very preliminary. Apart from enabling a consistent annotation and treatment of the phenomenon here, it can thus perhaps be regarded as a first working hypothesis or pilot to future research.

Before diving into reported speech more closely, however, it remains to be added that the above definition enabled an exhaustive grouping of clauses in the subcorpus into 299 pre-boundary and 547 non-pre-boundary clauses. From this annotation, the corpus was segmented into larger syntactic units such that every pre-boundary clause closes one unit, which includes all the non-pre-boundary clauses preceding it. No further distinction between the different types of clauses subsumed under the category 'non-pre-boundary clause' was made. Again, all eight stories in the corpus ended with a major syntactic boundary, such that an exhaustive segmentation was possible.

Furthermore, for the sake of comparison with larger prosodic units, major syntactic boundaries were annotated a second time using IUs instead of clauses as a reference interval. In this second round of annotation, every IU in the data was annotated as containing a major syntactic boundary or not. IUs with major syntactic boundaries were those IUs that contained the final element of a major boundary clause (a morphosyntactically not linked clause), where final element was understood in a temporally linear sense, i.e. the element realised last in time. IUs containing filled pauses, hesitations, or were abandoned midway, again, were included in the analysis as non-boundary IUs. From this, all IUs in the corpus were grouped as containing a major syntactic boundary (n=292) or not (n=753), and larger syntactic units were segmented again, such that every unit ended with a boundary IU and included all the non-boundary IUs preceding it.

Note, however, that this second annotation is actually not fully accurate for the morphosyntactically defined units investigated, because major syntactic boundaries do not necessarily have to also be IU boundaries. In the data, this means that 10 cases of IU-internal major syntactic boundaries occurred, 7 of them in IUs containing two major syntactic boundaries, the other 3 in IUs where a major syntactic boundary was followed by something else (a clause that did not implement a major boundary, or the beginnings of a clause continued in the next IU). With the former, there are actually 7 larger syntactic units that have a length of less than one IU, which were not captured in the second version of the segmentation using IUs as reference intervals.

Note furthermore on the relation between IUs and clauses in the data that overall, there are 368 IUs in the corpus that do not end with a clause boundary, 28 of which, however, still contain one (4 of them even more than one). IUs containing multiple clause boundaries are less frequent, n = 125. In line with this, the corpus overall contains more IUs than clauses (1045 compared to 846).

Since the first procedure of segmentation using clauses as a reference interval is more accurate, but the second using IUs needed for comparison to prosody, the results of both segmentations will be reported on here. Nevertheless, for the quantification of boundary alignment, only the IU-based segmentation will be used, putting up with its inaccuracy in 10 cases for the sake of practicability.

Excursion: reported speech

Following insights from typological discussions of reported speech, most notably in Nikitina & Spronck (2019), reported speech in Yali can probably be regarded as a dedicated syntactic domain in its own right, with internal coherence and set apart from other syntactic constructions. It is marked by a perspective shift, taking the perspective of a protagonist. Morphosyntactically, this perspective shift is evident at least in the use of person and tense categories. This is demonstrated in (19) e.g. with the first person (possessive) pronouns in (19i.-iv.) and the future tense (first person) verb form *wilaruhuk* in (19iv.). For easier identification, reported speech in the examples throughout this subsection is colour-coded in red, while non-reported discourse again taking the narrator's perspective is marked in blue.

(19) Perspective switch in reported speech

a) i.
nambirak *o*
n-ambirak o
1SG.POSS-lazy PT

b) ii.
ante *nahun* *ketiaseg* *atisimure*
an=te n-hun ketiaseg at-tisi=mu=te
1SG=TOP 1SG.POSS-husband now DONE become-3SG.PST=DS.SEQ=TOP

c) iii.
nahun *uangma* *ungkum* *angge* *laharuk* *elehente*
n-hun uangma ungkum angge laha-tuk eleg=en=te
1sg.poss-husband grave sprout thing go.up-INF NEG=NOM=TOP

d) iv.
nibam *wilaruhuk* *o*
n-iam wilat-uhuk o
1SG.POSS-village stay-1.FUT PT

e) v. vi.
fobikenegte *bisa* *o* *ibagmare* *we*
fobikeneg=te bisa o ibag=mu=te we
later only=TOP can PT say:3.REM.PST=DS.SEQ=TOP PT

'I don't want to, my husband has died only recently and nothing is growing yet on his grave, therefore I will stay in my village, only later I can (come with you), she said (…)'

suit_13_040

Additionally, reported speech in Yali is often marked by the quotative particle *ulug,* as demonstrated in (20). If more than one clause is reported (i.e. two clauses in 20, clause i. and clause ii.), the particle occurs only once, with the last reported clause, but can probably be assumed to have scope over the whole reported sequence. Quotative marking is not obligatory for reported speech though, as evident in example (19) above[34], and in rare cases (n=4 in the narrative subcorpus), it appears to be replaceable by the adjectival element *niken,* which literally means 'like'. In all four of these cases, the reported clause expresses a protagonist's false believe. An example of this is given in (21).

(20) Reported speech marked for quotative

a)	i.	*tiare*	*hinahan*	*embihi*	*angge*	*famen*
		tia=te	hinahan	embe-ihi	angge	famen
		here=TOP	three	put-1SG.IM.PST	NOM	NOM
b)	ii.	*piren*	*wereg*	*ulug*		
		piren	wereg	ulug		
		two	EXIST	QUOT		
c)	iii.	*indimu*	*ebet hehekteg*			
		indi=mu	ebet ha-ehek-teg			
		heart=LOC	think see-3SG.IM.PST-SS.SEQ			

(…)
'I put here three but there are only two, he thought by himself (…)'

pear_story_Isak_076

(21) *niken* 'like' as marker of reported speech (false believe)

a)	*o*	*itno*			
	o	itno			
	house	DET			
b)	*winama*	*kuruk*	*lahi*	*nikente*	
	wina=mu	ku-tuk	lat-ihi	niken=te	
	different=LOC	enter-INF	do-1SG.IM.PST	like=TOP	

'he thought he was entering a different house (lit: he was like 'I am entering a different house')

suit_13_216

As in (19) and (20), constructions of reported speech are often followed by an overt verbalisation of the corresponding speaking or thinking event back in the narrator's perspective (hence a *speech clause*, 20iii. and 19vi.). Again, this is not obligatory though, as demonstrated in (22).

(22) Reported speech not followed by a speech clause

a)	i.	*eleg o*	ii.	*numalik*	*nindi*	*o*		
		eleg	o	n-malik	n-indi	o		
		NEG	PT	1SG.POSS-child	1SG.POSS-heart	PT		
b)	iii.	*we*	*ninim*	*lul*	*o*	*ulugte*	*we*	
		we	n-inim	la-ul	o	ulug=te	we	
		PT	1SG.POSS-together	go-1PL.IM.FUT	PT	QUOT=TOP	PT	

[34] Note additionally that the particle *o* is also very frequent in constructions of reported speech (e.g. 19i.,iv. and v. above). In contrast to *ulug,* however, *o* also occurs outside of such constructions and is therefore likely not a dedicated marker of quotation.

c) iv. *libag*
la-ibag
go-3.REM.PST
'no, my child is my heart, we go only with it she said. they went on'

suit_13_073

In the absence of a speech clause, the last clause of reported sequences (21iii. here) was assumed to be a major syntactic boundary in the annotation of larger units. Cases where this last clause of such sequences was marked as a nominal or switch-reference clause or predicated by a medial verb would in principle have been non-major-boundary usages of reported speech, but did not occur in the narrative subcorpus. Whether this is a gap in the data or due to combinatorial restrictions remains to be investigated. Note, however, that at least an example of a nominal clause as the last clause of a reported sequence is attested as example (15) in section 3.2 of this thesis. The usage might still be marginal, though, or less appropriate in the narrative genre.

In the presence of a speech clause, on the other hand, the last clause of reported sequences (20ii. and 19v.) was *not* assumed to be a major boundary. This decision entails the assumption of a clause combination between speech clauses and reported speech, which is semantically very obvious, but on a syntactic level actually not investigated yet for Yali. Note that there is also no overt connector morpheme between the two constituents which would make the combination explicit.

Still, a syntactic clause combination was assumed here, judging, apart from semantics, also from the possibilities of left dislocation which seem to be given for NPs expressing arguments of speech clauses: such NPs regularly occurred preceding the reported sequence corresponding to the speech clause in question in the data, as demonstrated in (23) for an NP expressing the addressee of the speech event ('a man'). Assuming in parallel to other usages of left dislocations that such dislocated constituent orders are not possible across major syntactic boundaries[35], the usage was taken as an indication of a clause combination and the absence of a major boundary between reported speech and speech clauses.

(23) Argument of speech verb preceding reported speech

a) *at* *misig*
at misig
3SG one

b) i. *tu* *fikirente*
tu fikir=en=te
PRX direction=ABL=TOP

[35] An example of a left dislocation without reported speech is e.g. (10e) in section 4.2.

c) *sak* *wak* *lag* *o* *ulug* ii. *ibag*
sak wa-ik lag o ulug ibag
pandan carry-DIR go:2SG.IMP PT QUOT say:3.REM.PST
'to a man, bring pandan from there, they said'

land_slide_ayabiye_014

Note that the pre-reported-sequence word order of arguments of speech clauses is still regarded as a dislocation here. This is because it is not obligatory, such that arguments of speech clauses may just as well follow the corresponding reported clause(s). An example of this is the NP *hinehe itnore* 'the woman' expressing the speaker in (24b).

(24) Subject of speech verb following the reported speech

a) i. *yu* *o* *ulug*
yu o ulug
yes PT QUOT

b) ii. *hinehe* *itnore* *ibag*
hin-ehe itno=te ibag
2PL.POSS-female.friend DET=TOP say:3.REM.PST
'yes, said the woman'

suit_13_050

Note as well that the concept of a speech clause, as it is primarily based on semantics, also leaves some room for interpretation concerning the lexical concepts that can be used to report speech and thoughts (and intentions). The category was used in a rather broad sense here, including lexical concepts such as 'be confused' (i.e. 'to wonder'), 'cry', 'praise' and 'find out'. An example for the lexical concept 'to find out' is (26) in section 4.4.1.

Finally, clauses *within* sequences of reported speech were assumed to never instantiate major syntactic boundaries here, assuming a morphosyntactic connection between them manifest at least in their shared perspective shift and the scope of the quotative marker *ulug*. This, however, could be seen as somewhat at odds with the original description of major syntactic boundaries as the points in discourse where medial clause relations, nominal clause marking and switch-reference marking are all absent (see section 4.2). This is because clauses within such sequences may also be combined with each other using these mechanisms, just like non-reported clauses can. Examples of this are (24ii. and iii., switch-reference and nominal clause respectively), (20i., nominal clause), and (19ii. and iii., switch-reference and nominal clause respectively) above. Consequently, clauses without such combination (e.g. 19i. and iv., 21i. and ii. above) could by contrast be regarded as major boundaries within reported speech. The decision to not annotate them as major boundaries therefore actually implies an assumption of different layers of clause combination, a reported and a non-reported one, corresponding to two perspectival layers of protagonist and narrator respectively.

4.3.2 Results

The annotation of major prosodic boundaries in the corpus resulted in a segmentation of the data into 324 larger prosodic units with a mean length of 3.23 IUs, standard deviation 2.41, range 1 to 15 IUs per unit. Shorter larger prosodic units were much more frequent, such that 98.77 % (n=320) of all units were between 1 and 9 IUs long, and 90.12 % (n= 292) between 1 and 6. The full distribution of lengths in IUs is visualised in FIG 19.

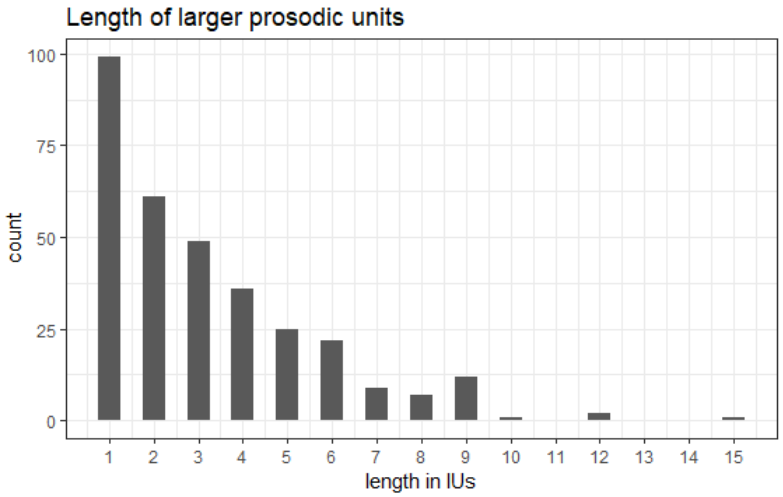


FIGURE 19: Distribution of lengths of major prosodic units; length in IUs plotted on the x-axis, number of occurrences on the y-axis.

From the annotation of major syntactic boundaries, on the other hand, the data was segmented into 299 larger syntactic units, ranging between 1 and 15 clauses in length, with a mean length of 2.83 clauses and a standard deviation of 2.16. Shorter units again were more frequent, such that 95.65 % (n= 286) of all stretches had a length of 1-7 clauses, and 84.28 % (n= 252) were between 1 and 4 clauses long. The full distribution of length in clauses for all units delimited by major syntactic boundaries is given in FIG 20. Note that the segmentation procedure allows units of just one clause, which are in fact also the most frequent. They correspond to simple, syntactically not linked independent clauses.

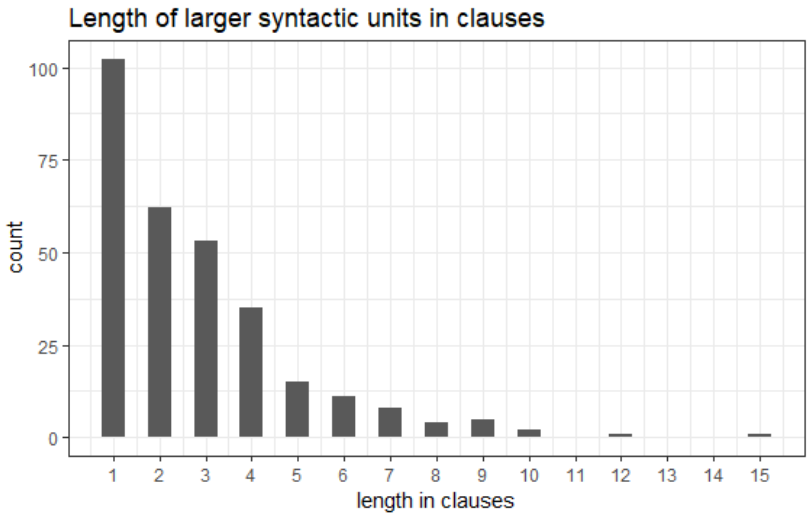


FIGURE 20: Distribution of length in clauses for larger syntactic units

Counting again in IUs, the same data was segmented into 292 larger syntactic units, with a mean length of 3.58 IUs, sd 2.65 IUs, range 1 to 15 IUs. Yet again, shorter units were much more frequent, with 96.23 % of larger syntactic units ranging between 1 and 9 IUs in length (n=281), and 86.64 % between 1 and 6 (n=253). The full distribution of unit lengths in IUs is given in FIG 21.

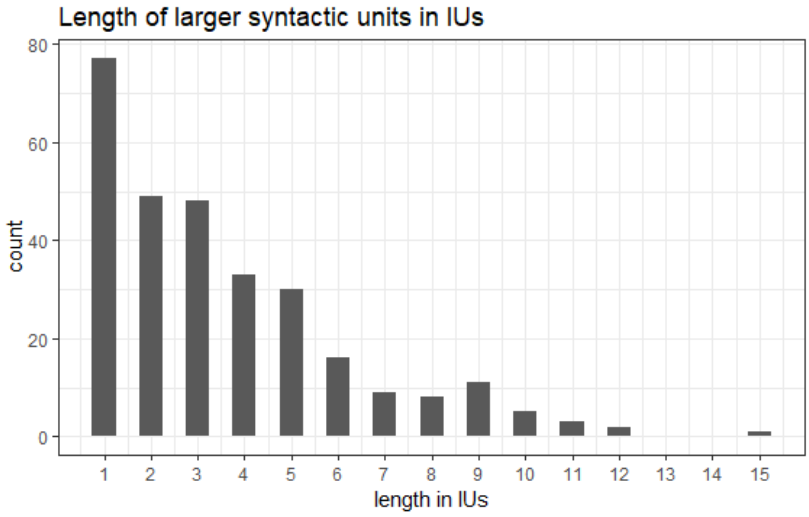


FIGURE 21: Distribution of length in IUs for larger syntactic units

Comparing the two larger units using IUs as reference intervals, syntactic units are on average slightly longer (3.58 IUs vs. 3.23 IUs for prosodic units), which is also reflected in the lower total count of syntactic units (292 units vs. 324 prosodic units). Most notably, there are more syntactic units in the extreme part of the range: for syntax, there are 11 units of 10 or more IUs (4 times 10 IUs, 3 times 11, 2 times 12 and once 15), while for prosody there are only 4 (one case with 10 IUs, 2 with 12, 1 with 15). Consequently, the distribution of syntactic units is also slightly more spread out, as reflected in the slightly higher standard deviation of 2.65 IUs,

compared to 2.41 IUs for prosodic units. As a coarse trend, their length distributions look rather similar though, and the range of unit lengths is the same for both (1 to 15 IUs).

Finally, alignment rates of major prosodic and major syntactic boundaries are presented here as Table 4. In the table, the first row counts major prosodic boundaries, differentiating between boundaries correlating with major syntactic boundaries ('aligning') and those that do not ('misaligning'). The second row does the same for major syntactic boundaries, correlating with prosodic boundaries ('aligning'), or not ('misaligning'). As the table shows, major syntactic boundaries correlate with major prosodic boundaries in a slightly higher proportion than the other way round, i.e. there are more prosodic boundaries without syntactic boundaries than vice versa. This is in line with the higher total number of prosodic boundaries compared to syntactic boundaries. In the third row, prosodic and syntactic boundaries are added up to give an overall alignment rate of 74.68 percent for larger prosodic and syntactic boundaries in the data.

Table 4: Alignment of major prosodic and syntactic boundaries

	aligning		**misaligning**		**total**	
	%	n	%	n	%	n
major prosodic boundaries	70.99	230	29.01	94	100	324
major syntactic boundaries	78.77	230	21.23	62	100	292
total	74.68	460	25.32	156	100	616

4.4 Misalignments of major prosodic and major syntactic boundaries

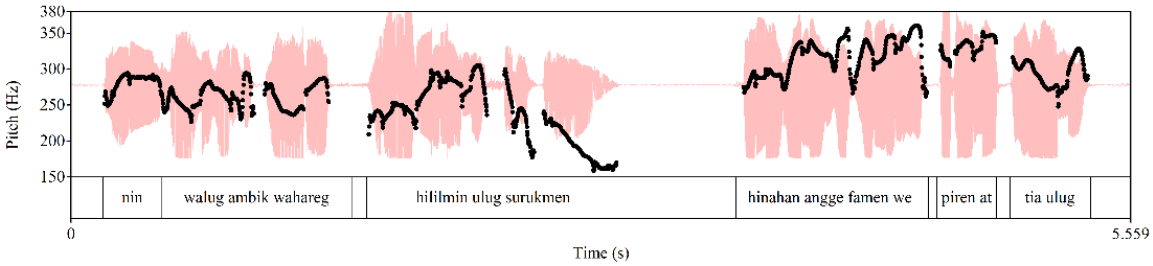
As detailed out in the previous section, 21.23% of all major syntactic boundaries in the narrative subcorpus are not accompanied by a corresponding prosodic major boundary, and 29.01% of all major prosodic boundaries do not co-occur with syntactic major boundaries. These misaligned usages of prosodic and syntactic structure will be described in more detail here. The description will tackle the two possible types of misalignments separately, and refer to them as misalignment *scenario 1* and *scenario 2* respectively, for easier reference. Of the two, *scenario 1* are major prosodic without syntactic boundaries, i.e. major prosodic boundaries that occur with medial, switch-reference or nominal clauses, or clause internally. This type of misaligned usages will be described in 4.4.1. *Scenario 2* are major syntactic without prosodic boundaries, i.e. major syntactic boundaries that occur with continuity intonation or IU internally. This second type of usage will be described in 4.4.2. Arguing for their special status, boundary

misalignments within constructions of reported speech, as well as prosodic boundaries with medial, switch-reference and nominal clauses that relate to a preceding unit, finally, will shortly be described additionally in subsection 4.4.3.

4.4.1 Scenario 1: Major prosodic without syntactic boundaries

Misalignments of scenario 1 can be described as weaker discourse boundaries compared to aligned usages of major boundaries, because they still overtly indicate a cohesive relation between the two segments the boundary separates. The cohesive relation, for scenario 1, is made explicit (to some degree) in morphosyntax.

An example of a misaligned boundary usage scenario 1 is given in (25). In the example, a nominal clause (25iii.) is realised with a major prosodic boundary (finality intonation in 25f, indicated in the transcription as \). Still, the nominal marking of the clause indicates a relation with the next chunk, which in the example can be interpreted e.g. as the nominal clause setting the temporal scene for what is to follow (as given in the translation). This is a rather typical semantic relation for nominal clause combinations in Yali (cf. section 3.4, esp. example 35). Note that the example includes two constructions of reported speech (colour-coded in red), the first of which is followed by a speech clause (in blue), which is also the nominal clause in question (25iii.). The second construction of reported speech (25iv.-v.) was realised without a speech clause.



d) e) f) g) h) i)

FIGURE 25: Major prosodic boundary with nominal clause on *surukmen* in f)

(25) Major prosodic boundary with nominal clause before climatic moment

a)	i.	*hinare*	*itno l*
		[[36]hin-are	itno
		2PL.POSS-friend	DET

[36] For easier identification of major syntactic boundaries, larger syntactic units are additionally segmented using bracketing [ ] in the morpheme tier for the examples throughout this section. [therefore represents the start of a unit,]$_{SYNT}$ a major syntactic boundary.

b) *ninikni* *itno* **/**
nin-ikni itno
1PL.POSS-father DET

c) *e* *famen* **/**
e famen
tree from

d) *nin* **/**
nin
again

e) *walug* *ambik* *wahareg* **/**
wa-tug ambu-ik waha-teg
take-SEQ go.down-DIR come:3SG.IM.PST-SS.SEQ

f) ii. *hililmin* *ulug* iii. *surukmen* ****
hilil-min ulug su-tuk-men
spill-1SG.IM.FUT QUOT do-INF-NOM

g) iv. *hinahan* *angge* *famen* *we* **/**
hinahan angge famen we
three NOM NOM PT

h) v. *piren* *at* **/**
piren at
two just

i) *tia* *ulug* **/**
tia ulug
here QUOT

'the man, the father, brings more (fruits) down from the tree and when he wants to take them out (of his bag into his baskets) 'there were three (baskets), now there are only two' he thinks'

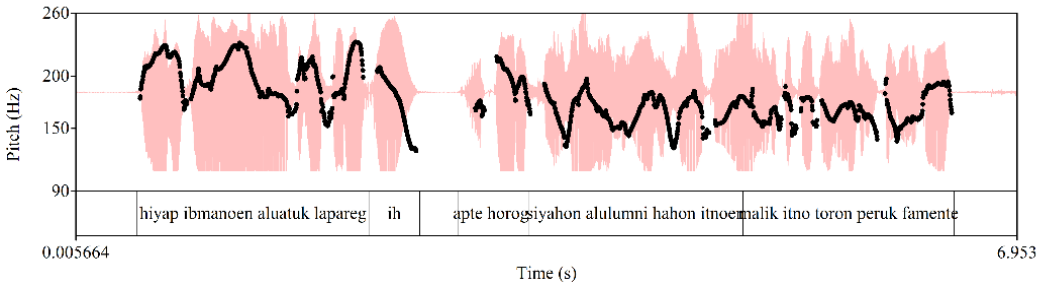
pear_story_Lince_056

On top of a (weaker) boundary and a (also weaker[37]) cohesive tie, misaligned boundaries of scenario 1 arguably have additional meaning components and special story-telling effects that aligned boundaries usually do not have: typically, these boundaries occur around climatic moments or in passages with high emotional involvement, where they probably serve to create tension, draw attention, express emotional (or other) stance, lend emphasis, etc. In (25) above, e.g., the misaligned boundary occurs directly before the main climax point of the story, which is a pear story narration in this case (Chafe 1980): the man discovers that one of his baskets into which he is picking fruits is gone. The prosodic boundary preceding his discovery can therefore e.g. be described as creating tension before the dramatic moment in suspending the awaited reaction of the man (the major prosodic boundary in this case comes with a pause), as drawing attention to it by the unexpected combination of structures, or similar.

A second example of scenario 1 showcasing a narrative passage with high emotional involvement is given in (26), where a major prosodic boundary (finality intonation) at the end of (26f) correlates with a switch-reference clause (26v.; SS.SEQ). In this case, the usage can

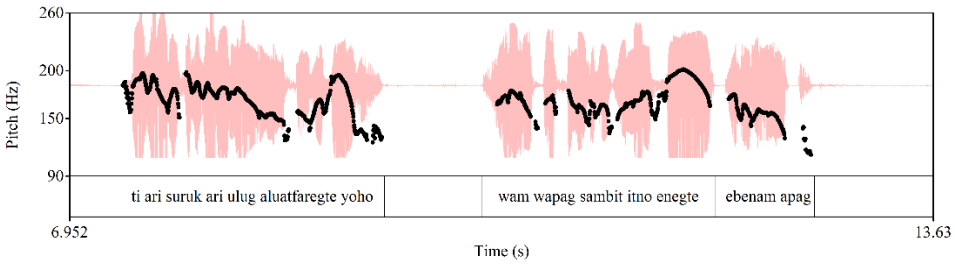
[37] Just as the construction can be seen as a weaker boundary, it can of course also be seen as a weaker indication of cohesion, compared to a usage of clause combination with prosodic continuity, on the other end of the spectrum.

probably be interpreted as conveying emotional stance or fostering emotional expressiveness, highlighting the women's confusion: they knew that he was a bad man, just a boy (not mature), but now they saw him dancing (like only true men can), how could that be? Again, there are two constructions of reported speech in the example, both followed by a speech clause, the second of which is the switch-reference clause in question (26v.). Note additionally the exclamation in (26b), highlighting the emotional involvement of the narrator.



a) b) c) d) e)

FIGURE 26A: IUs a-e



f) g) h)

FIGURE 26B: Major prosodic boundary with switch-reference clause, IUs f-h; misaligned boundary at IU f

(26) Major prosodic boundary with switch-reference clause for emotional stance

a)	i.	*hiyap*	*ibmanoen*	*aluatuk*	*lapareg I*
		[hiyap	ibma=no=en	aluat-tuk	la-pag-teg
		woman	these=GIV=ERG	observe-INF	go-3.REM.PST-SS.SEQ
b)		*ih*			
		ih			
		EXCL			
c)	ii.	*apte*	*horog I*		
		ap=te	horog		
		man=TOP	like		
d)		*siyahon*	*alulumni*	*hahon*	*itnoen I*
		siyag=on	alulumni	hag=on	itno=en
		bad=AM	bad	like=AM	DET=ERG

e) *malik* *itno* *toron*[38] iii. *peruk* *famente* **/**
malik itno tot=on pe-tuk famen=te
child DET little=AM think-INF NOM=TOP

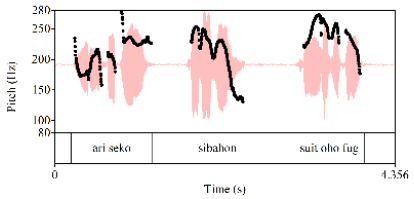
f) iv. *ti* *ari* *suruk* *ari* *ulug* v. *aluatfaregte* *yoho* ****
ti ari su-tuk ari ulug aluat-pag-reg=te yoho
dance MED do-INF MED QUOT observe-3.REM.PST-SS.SEQ=TOP PT

g) vi. *wam* *wapag* *sambit* *itno* *enegte* **/**
wam wat-pag sambit itno eneg=te
pig kill-3.REM.PST NOM DET NOM=TOP

h) vii. *ebenam* *apag* ****
ebenam at-pag]SYNT
visible become-3.REM.PST
'the women were observing him, ih, and although they thought he was a bad man, he was (just) a little boy, they (now) found out (lit: observed) that he could dance (like an adult man). and when they had a pig party (lit: killed a pig), (indeed) he became normal'

suit_14_052

In addition to climatic and emotional passages, finally, misalignments of scenario 1 sometimes also occur in opening and closing statements of narratives in the data, as demonstrated in (27) with a story closing. In these cases, they probably convey emphasis, stance, or something related. The example given here is a short clause chain (27i.), the final clause of which is a nominal clause, indicating a cohesive relation with the next clause (27ii.). The nominal clause, however, was realised with finality intonation (27b).



a) b) c)

FIGURE 27: Major prosodic boundary with nominal clause in closing statement

(27) Major prosodic boundary with nominal clause in closing statement

a) i. *ari* ***seko*** **/**
[ari su-oho
MED do-ADV

b) *sibahon* ****
su-ibag=on
do-3.REM.PST=NOM

c) ii. *suit* *oho* *fug* ****
suit oho fug**]SYNT**
legend too NEG
'it was (really) like this, (so) this is also not a fairy tale'

filling_the_traps_106

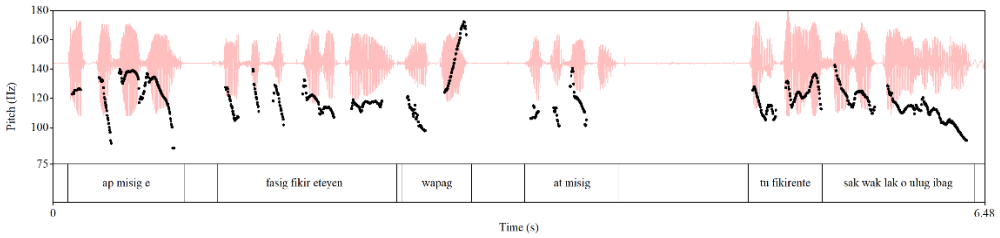
Before closing this section as well, note, finally, additionally, that misaligned boundaries of scenario 1 frequently occur with clause-final particles, especially with *arat* and *yoho.* An

[38] (26ii.) was analysed as a clause with a non-verbal (nominal) predicate *malik itno toron,* and a (complex) subject NP *apte horog siyahon alulumni hahon itnoen* here.

example for *yoho* was (26f) above. The usage is not well understood yet (nor are the particles themselves), but was shortly discussed in section 2.4.2. As testified in (25) and (27), however, the usage of particles is not obligatory.

4.4.2 Scenario 2: Major syntactic without prosodic boundaries

Similar to misalignments of scenario 1, misalignments of scenario 2 can also be regarded as weaker discourse boundaries, where cohesion with the next segment is still indicated overtly, in this case through prosodic continuity. In contrast to scenario 1, however, prosody gives no hint to the kind of cohesive relation that is intended, leaving its concrete interpretation to context[39]. In (28), for example, the native speaker giving the original (Indonesian) translation in the toolbox database interpreted a causal relation between (28i. and ii.) (*karena* in Indonesian), which is not indicated morphosyntactically (major syntactic boundary at the end of 28i.). A relation between the two clauses, however, was still implied prosodically (continuity intonation at the end of 28c, transcribed as */*).



a) b) c) d) e) f)

FIGURE 28: Continuity intonation with major syntactic boundary on *wapag* (IUc)

(28) Major syntactic boundary with prosodic continuity

a) i. *ap misig eh /*
[ap misig eh
man one HES

b) *Fasig fikir eteyen /*
fasig fikit ete=en
PN direction above=ABL

c) *wapag /*
waha-pag]SYNT
come-3.REM.PST

[39] Note that nominal clause combination in Yali is likely not very specific in its semantic relation either though, at least in many cases and for all that is known so far. Switch-reference and medial clauses, on the other hand, give more specific information (e.g. sequence).

d) iii. *at* *misig*[40] */*
at misig
3SG one

e) ii. *tu* *fikirente /*
tu fikit=en=te
PRX direction=ABL=TOP

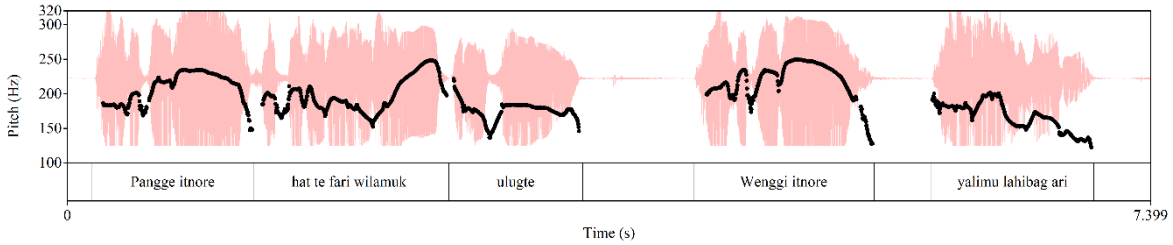
f) *sak* *wak* *lak* *o* *ulug* iii. *ibag *
sak wa-ik lag o ulug ibag]SYNT
pandan carry-DIR go:2SG.IMP PT QUOT say:3.REM.PST
'a man came from Fasig because they asked him to bring pandan from there'

landslide_ayabiye_010

In (29), on the other hand, the original translation given is a simple *and* relation (*dan* in Indonesian), although a causal relation ('because Pangge said you can live in Fari, Wenggi went up to the east') would also have been plausible for the context. Example (29), however, is typical for misalignments of scenario 2 in a different way: it shows a construction of reported speech (29i.), which is not followed by a speech clause (note that it is preceded by an NP denoting the speaker, though, which is not integrated syntactically into a clause at all). Such constructions are frequent for scenario 2 in the data, and in fact do not occur with syntactic clause combination at all. As discussed in section 4.3.1.3, it is therefore unclear at this stage whether alternative constructions for indicating cohesion between reported speech and the following discourse are available at all in the absence of a speech clause. For the example at hand, note additionally the very clear upscaling of IU-final H tones (pitch peaks) compared to IU-internal ones, which occurs in all IUs with continuity intonation (with a final H tone, IUs 29a-b and d), except IU (29c) *ulugte.* IU (29c), however, is also where the syntactically uncombined first clause (29i.) ends, i.e. the misaligned boundary in question. Though it is not clear at this stage whether or in how far such differences in scaling perhaps instantiate phonologically distinct IU-final contours in Yali (cf. section 2.3), it is well possible that they influenced the interpretation of the original translator of the story ('and'). In contrast to (29), the misaligned boundary in (28c) above was the only clearly upscaled final H tone of its sequence[41].

[40] The NP *at misig* 'to the man' can be interpreted as a (dislocated) patient argument to the speech clause (28iii.) (i.e. as the addressee of the speech event). For this reason, it is colour-coded in blue here, marking it as part of this speech clause and counted as (28iii.). It is not a constituent of clause (28ii.), the reported clause.

[41] The pitch drop/beginning of a fall after IU-final peaks that can be seen after all four final peaks in (29a-d) is a very frequent phenomenon in (continuity intonation of) Yali and not understood yet. It is often very minor, but can also get quite substantial, especially in combination with extensive lengthening of IU-final syllables (e.g. 29a and d). It is typically accompanied by creaky voice at the end of the IU-final syllable in question. Especially in its very exaggerated version, it might be a genre-specific or perhaps speaker-specific style, as it occurs most clearly in the two recordings of *suits* in the narrative corpus. *suits* are a traditional type of story in Yali.



a) b) c) d) e)

FIGURE 29: Major syntactic boundary with continuity intonation in IU c

(29) Major syntactic boundary and prosodic continuity with reported speech without speech clause

a) *Pangge itnore /*
[pangge itno=te
PN DET=TOP

b) i. *hat te Fari wilamuk /*
hat te fari wilat-muk
2SG TOP PN stay-2.FUT.IMP

c) *ulugte /*
ulug=te**]**SYNT
QUOT=TOP

d) ii. *Wenggi itnore /*
[wenggi itno=te
PN DET=TOP

e) *yalimu lahibag ari *
yali=mu laha-ibag ari**]**SYNT
east=LOC go.up-3.REM.PST MED

'Pangge (said) you can live in Fari, and Wenggi went up to the east'

suit_14_015

Finally, it remains to be added that misalignments of scenario 2 may be accompanied by clause-final particles as well (e.g. *te* 'TOP' in 29c), but, curiously, at least in the data investigated here not by *arat* nor *yoho.* This is in contrast to scenario 1, for which especially the latter two particles are frequent. Furthermore, also in contrast to scenario 1, no added meaning components or story-telling effects of emotional expressiveness, tension, emphasis, stance, or similar have been detected for scenario 2 in my data.

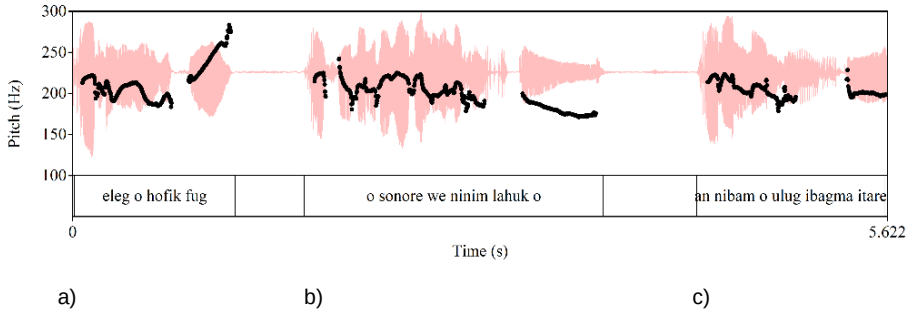
4.4.3 Special cases

Finally, two special cases of boundary misalignments will be singled out here. These are major boundaries within constructions of reported speech, and medial, switch-reference and nominal clauses relating to preceding discourse segments. Both of them are, technically speaking, misalignments of scenario 1, i.e. they are counted as major prosodic without syntactic

boundaries in the data quantification of section 4.3. They are singled out here, however, as they are arguably not, or not fully captured by the description of weaker discourse boundaries given for scenario 1 in 4.4.1. They also (at least in my understanding of the examples) do not entail story-telling effects similar to the effects suggested for other misalignments of scenario 1 above.

Boundaries within constructions of reported speech are a special case because their status as misalignments in this investigation is arguably a result of the operationalisation of major boundaries adopted in 4.3.1.3: major syntactic boundaries within constructions of reported speech were excluded as a principle in this study. The same, however, does not hold for prosodic boundaries, such that major prosodic boundaries within reported speech give misalignments by definition. As such, they should not be regarded as misalignments proper.

An example of such a misalignment by definition is given in (30), where a prosodic boundary (finality intonation) was annotated after (30b), correlating with the end of the third clause (30iii.) of a sequence of four reported clauses. Note that there is no overt syntactic clause combination between (30iii. and iv.) (30iii. is neither a medial, nor a nominal, nor a switch-reference clause), such that a major syntactic boundary aligning with the prosodic boundary could also have been argued for. Note as well that there is no syntactic clause combination between (30ii. and iii.) either, however, such that allowing major syntactic boundaries within reported speech would have resulted in the annotation of a misalignment at the end of (30ii.) instead: (30ii.), in contrast to (30iii.) (the current misalignment) correlates with syntactic continuity (30a).



a) b) c)

FIGURE 30: Major prosodic boundary (30b) within sequence of reported speech

(30) Sequence of reported speech containing a major prosodic boundary

a)	i.	*eleg*	*o*		ii.	*hofikfug*	**/**		
		eleg	o			hofik	fug		
		NEG	PT			later	NEG		
b)	iii.	*o*	*sonore*	*we*	*ninim*		*lahuk*	*o*	****
		o	sono=te	we	n-inim		la-uhuk	o	
		time	tomorrow=TOP	PT	1SG.POSS-together.with		go-1.FUT	PT	

c) iv. *an nibam* *o* *ulug*[42] v. *ibagma* *itare* **/**
an n-ibam o ulug ibag=mu ita=te
1SG 1SG.POSS-village PT QUOT say:3.REM.PST=DS.SEQ DIST=TOP
(…)
'no, not later, we go tomorrow, my village (it is), he said (…)'

suit_13_047

At any rate, whether misaligned or not, boundaries within constructions of reported speech are suspect of boundaries of special status anyway, as reported speech has been shown to cross-linguistically be likely to have its own rules in many other grammatical domains as well (cf. section 4.3.1.3). I will thus, for the moment being, put them aside from my further discussion of major boundaries, leaving them for an investigation in their own right by future research.

The second special case to be discussed here are major prosodic boundaries indicating that medial, switch-reference or nominal clauses relate to a preceding unit or event, rather than to the following clause as usually. An example of such a boundary is given in (31) for a switch-reference clause (31v.) correlating with a major prosodic boundary in (31h). A different subject and sequential relation, in this case, can be usefully understood between clause (31v.) and (31ii. and/or iii.) only, not between clauses (31v. and vi.): 'they went away to the village of the man from the east (so they were not there), then he (our friend, the protagonist at this moment) thought eyu they have left the baby net bag on a tree root for me'. This is because clause (31vi.) is a recapitulation of clause (31v.), giving the same proposition as clause (31vi.) and referring to the same event. Consequently, there is neither a different subject, nor do the two events happen in sequence. Note that clauses (31ii.-iii.) are clauses of reported speech again, a speech event for which was not overtly expressed by a speech clause. Note as well that the quotative particle *ulug* indicating reported speech in this case was realised with the first of the two reported clauses (31ii.), which can probably be considered a marked usage, as the particle usually occurs with the last clauses of reported sequences (cf. section 4.3.1.3).

(31) Switch-reference clause relating to a preceding clause[43]

a) i. *elegmare* *itare* ii. *eyu ulug* ****
[[eleg=mu=te ita=te eyu ulug
NEG=DS.SEQ=TOP DIST=TOP EXCL QUOT

b) iii. *on isap* *angge* *itnore* **/**
on isap angge itno=te
and baby.net.bag CLASS DET=TOP

c) *e iratma itano sup* *nifisibag* ****
e irat=mu ita=no sup ni-fe-se-ibag**]**$_{SYNT}$
tree root=LOC DIST=GIV hang 1SG.BEN-COMPL-OBJ-3.REM.PST

[42] Clause (27iv.) was analysed as a clause with non-verbal predicate here, such that the noun phrase *an nibam* 'my village' is the predicate and a subject constituent was not realised. The decision is debateable, because alternatively this noun phrase could be a goal argument of clause (27iii.), which would then have a marked word order. The analysis of a clausal status is based on the particle *o* at the end of (27iii.), which usually occurs as a clause-final particle only, to my knowledge.

[43] As the example is very long, no pitch visualisation will be given here. IU-final contours are indicated as / for continuity and \ for finality intonation though.

d) iv. *yu* ****
[yu
yes

e) v. *he* *itnore* **/**
he itno=te
woman DET=TOP

f) *Wania* *hahon* *itnore* **/**
wania hag=on itno=te
PN like=AM DET=TOP

g) *ahun* *yalion* *itno* *inimte* **/**
a-hun yali=on itno inim=te
3SG.POSS-husband east=AM DET together.with=TOP

h) *ibam* *fikit* *ibmano* *libagma* ****
iam fikit ibma=no la-ibag=mu**]]**$_{SYNT}$
village direction there=GIV go-3.REM.PST=DS.SEQ

i) vi. *libagma* *itare* **/**
[la-ibag=mu ita=te
go-3.REM.PST=DS.SEQ DIST=TOP

j) vii. *hinare* *itno* *itanoente* **/**
hin-are itno ita=no=en=te
2PL.POSS-friend DET DIST=GIV=ABL=TOP
(…)**]**$_{SYNT}$
'when they were not there (he) thought eyu, they left the baby net bag on the root of a tree for me (lit: 'they have hung it up there for me'). yes, the woman, who is like Wania, had gone with her husband from the east to (his) village. they had gone and our friend…'

suit_13_100

As a result, the (syntactic) structure of (31) can probably best be described as indicated with the [] notation in the morpheme tier: clauses (31i.-iii.) form a larger syntactic unit that ends with a non-combined clause (31iii.). To this unit, the block of clauses (31iv.-v.) is then added though, by prosodically indicating a boundary between (31v. and vi.) (finality intonation in 31h) and syntactically indicating cohesion between (31v. and ii./iii.) as a different subject and sequential relation. The type of misaligned boundary exemplified here, therefore, is not well captured by a description as weaker discourse boundary I suggest, since the syntactic cohesion of the boundary clause (the switch-reference marking in 31v.) does not cross or span the prosodic boundary as a relation between (31v. and vi.), but links (31v.) to the previous unit as a relation between (31v. and ii./iii.). The boundary itself, for this reason, is a strong discourse boundary, and in terms of cohesion similar to aligned major boundaries (neither syntactic nor prosodic marking of cohesion across it).

Note that a similar integration with a preceding unit has also been found for medial clauses with prosodic finality in Nungon (Finisterre-Huon) in Sarvasy (2015). They are listed as one type of what Sarvasy refers to as *non-canonical medial clauses* there, a term that was borrowed for the description of clause chains in Yali in section 3.2 of this thesis as well. A difference between (Sarvasy's description of) Nungon and (my description of) Yali here,

however, is that in Yali, the usage is possible not only for medial clauses, but for nominal and switch-reference clauses as well.

4.5 Interim summary and conclusion

Summing this chapter up, two different larger discourse units of Yali narratives have been described here, a prosodic and a syntactic unit respectively. The prosodic unit was defined primarily in terms of IU-final intonation contours, but a number of other prosodic phenomena were found to be relevant to its perception as well. It is therefore a unit with multiple boundary cues, most of which, however, are non-obligatory. As such, the larger prosodic unit described is sometimes clearer and sometimes less easy to identify. The syntactic unit, on the other hand, was defined in terms of overt morphosyntactic clause combination and its boundary by the absence thereof. It is thus a unit of overall morphosyntactic cohesion, which can be implemented by any or all of three different forms of clause combination in Yali: by medial clauses forming clause chains, by switch-reference clause combination, and/or by nominal clause marking.

Investigating these two larger units in the narrative subcorpus, section 4.3 found that overall, they are roughly comparable in size, ranging both between 1 and 15 IUs in length. Coarsely speaking, their length distributions were also similar, in both cases with shorter units prevailing. There were also some differences in the distributions, however, most notably in that syntactic units were found to be on average slightly longer, due, among others, to the higher number of extreme-length units of 10 and more IUs compared to prosody. Consequently, there are more prosodic than syntactic larger units in the subcorpus. Furthermore, boundaries of prosodic and syntactic larger units (here: *major prosodic and syntactic boundaries*) were found to in a clear majority of 74.68 percent occur together in the data.

Usages of one type of major boundary without the other, finally, were grouped into two logically possible scenarios under the overall heading of *misalignments* in section 4.4. Scenario 1 were major prosodic without syntactic boundaries and was described as conveying special story-telling effects, as for example emphasis, stance, creating tension or fostering emotional involvement. Similar effects could not be discerned for scenario 2, which were major syntactic without prosodic boundaries. Both types of misalignments, however, were described as weaker discourse boundaries, where cohesion between the propositions preceding and following the boundary is still overtly indicated in one of the two domains investigated, either in syntax (scenario 1), or in prosody (scenario 2).

In addition, subsection 4.4.3 singled out boundaries within constructions of reported speech and prosodic boundaries indicating that switch-reference, nominal or medial clauses relate to a preceding unit, arguing for their special status. For the former, it was suggested that special rules might hold within speech reporting, such that boundaries within reported speech should be investigated separately. It was decided to exclude them from the general discussion of larger units for the moment being. For the latter, it was argued that the prosodic boundary in these cases should not be regarded as a weaker discourse boundary despite its correlation with morphosyntactic indication of cohesion, since the cohesive relation indicated in this case does not hold between the propositions preceding and following the boundary, but between the proposition preceding it and a different proposition that occurred still earlier.

Emerging most clearly from the alignment rate of 74.68 percent, it can thus be concluded that the data investigated overall is compatible with the initial working hypothesis of this thesis (section 1.1): at least in terms of frequency, the correlation of prosodic and syntactic grouping is indeed the prototypical usage of major discourse boundaries in Yali.

5. Discussion

From the descriptions of major prosodic and syntactic boundaries in Yali, three points will be singled out here as especially noteworthy regarding a more general discussion of larger discourse units: Firstly, in contrast to aligned usages of prosodic and syntactic boundaries, misaligned usages of major boundaries establish boundaries between two cohesively-linked segments. This, I will argue below, could be a hint at their main function and effect in terms of discourse structure. Secondly, in terms of length (counting IUs), the two types of larger units formed from the two types of boundaries have an overall quite similar distribution in the corpus, which allows for the idea that they might identify the same type of (cognitively relevant) content unit. And thirdly, a high correlation between major prosodic boundaries and syntactic structure does not exist for clause chains, but for a syntactic unit defined in a different way in Yali, which is in contrast to what is reported for (some) other Papuan languages in the literature. The three points will be discussed in turn in the following, starting with the third going backwards.

5.1 Clause chains and other larger syntactic units

As discussed in section 4.2, clause chains as a syntactic unit of cosubordination are in their actual usage in Yali narrative usually rather short (often consisting of just two verb forms), despite being a larger syntactic unit in the sense of a morphosyntactic grouping of clauses. Compared to larger prosodic units in terms of finality intonation, they are thus mostly much shorter, such that no special correlation between the boundaries of the two is apparent. This seems noteworthy because 1) it is in contrast to what is reported for other languages of the region, especially for Nungon (Sarvasy 2017) and Matukar Panau (Mansfield & Barth 2021), where there seems to be such a correlation between clause chains and finality intonation; and 2) the same striking correlation with prosodic finality *does* exist in Yali, but for a different (larger) syntactic structure, defined as a general unit of syntactic cohesion formed by medial clauses, switch-reference clauses and nominal clauses together.

Recalling from the introduction to this thesis that linguistically defined text units in the end are expected to indicate functional text components as cognitively relevant content and/or processing units, a possible interpretation of this difference is that the same type of content unit is indicated by clause chains in Nungon and Matukar Panau, but by a different syntactic construction in Yali (and by prosodic finality in all three languages), or by the correlation of clause chains and prosody in one, and by the correlation of prosody and a different syntactic

structure in the other case. Assuming hierarchical levels of structure, it could thus perhaps be read as an indication that the same linguistic construction (a clause chain of cosubordination) can grammaticalize or conventionalise onto different structural levels in different languages, i.e. on the level of prosodic finality in Nungon, but on a lower level in Yali. Note, however, that this assumption should lead to the positing of two distinct levels of larger syntactic units in Yali, where one is the clause chain (the lower of the two) and the other the larger syntactic unit of general syntactic cohesion that was the main focus of this thesis. As laid out in section 4.2 and demonstrated in section 3.4, at least at the current state of research on Yali morphosyntax, this would result in a definitorial problem concerning nominal clauses, since they cannot be clearly ascribed to either of the two levels so far.

Nevertheless, there is a second interesting parallelism between larger syntactic units (of general syntactic cohesion) in Yali and clause chains in Nungon worth pointing out in this context: as shown in section 4.4.3, one special usage of major prosodic boundaries in correlation with syntactic continuation in Yali is the indication of an integration of a clause (or several) with a preceding larger unit. This was demonstrated in 4.4.3 with an example of a switch-reference clause, the different subject and sequential relation of which does not hold between the marked clause and the next, as it would usually do, but between the marked clause and a clause in the preceding discourse. The example is repeated here as example (1) for easier reference. The switch-reference clause and prosodic boundary discussed are (1v./h).

(1) Switch-reference clause relating to a preceding clause

a)	i.	*elegmare*		*itare*	ii.	*eyu*	*ulug* \
		[[eleg=mu=te		ita=te		eyu	ulug
		NEG=DS.SEQ=TOP		DIST=TOP		EXCL	QUOT
b)	iii.	*on*	*isap*	*angge*	*itnore* /		
		on	isap	angge	itno=te		
		and	baby.net.bag	CLASS	DET=TOP		
c)		*e*	*iratma*	*itano*	*sup*	*nifisibag* \	
		e	irat=mu	ita=no	sup	ni-fe-se-ibag]$_{SYNT}$	
		tree	root=LOC	DIST=GIV	hang	1SG.BEN-COMPL-OBJ-3.REM.PST	
d)	iv.	*yu* \					
		[yu					
		yes					
e)	v.	*he*	*itnore* /				
		he	itno=te				
		woman	DET=TOP				
f)		*Wania*	*hahon*	*itnore* /			
		wania	hag=on	itno=te			
		PN	like=AM	DET=TOP			
g)		*ahun*		*yalion*	*itno*	*inimte* /	
		a-hun		yali=on	itno	inim=te	
		3SG.POSS-husband		east=AM	DET	together.with=TOP	

h) *ibam* *fikit* *ibmano* *libagma* \
iam fikit ibma=no la-ibag=mu]]$_{SYNT}$
village direction there=GIV go-3.REM.PST=DS.SEQ

i) vi. *libagma* *itare* /
[la-ibag=mu ita=te
go-3.REM.PST=DS.SEQ DIST=TOP

j) vii. *hinare* *itno* *itanoente* /
hin-are itno ita=no=en=te
2PL.POSS-friend DET DIST=GIV=ABL=TOP
(…)]$_{SYNT}$
'when they were not there (he) thought eyu, they left the baby net bag on the root of a tree for me (lit: 'they have hung it up there for me'). yes, the woman, who is like Wania, had gone with her husband from the east to (his) village. they had gone and our friend…'

suit_13_100

The same phenomenon, i.e. an integration with the preceding discourse marked by prosodic finality/intonation, is also reported for medial clauses in Nungon (Sarvasy 2015), subsumed with some other usages under the general heading of *non-canonical medial clauses* (see section 3.2). Again, however, while it seems to pertain specifically to medial clauses and clause chains in Nungon, in Yali it is possible for medial clauses, switch-reference clauses and nominal clauses alike.

5.2 Larger structural units and content units

Comparing larger prosodic and syntactic units in the narrative subcorpus in length (counting IUs), chapter 4 found that the two types of units are coarsely speaking quite similar, both with the same range of attested sizes (1-15 IUs), and with an overall similar distribution (shorter units prevailing, very long units being exceptional). Though it should be kept in mind that the distributions are also not identical, especially at the extreme ends of the spectrum (more very short prosodic units and more very long syntactic units), overall, this finding is compatible with the idea that both of the units could serve to identify the same type of content unit, and, in the end, one cognitively relevant unit of processing.

Given the rather broad range of attested unit sizes (1 to 15 IUs), such a processing unit, however, should probably be rather flexible in terms of its make-up and structure. One possible explanation, therefore, could perhaps be that parallel to what Chafe (1994) suggests for the structure of an IU, the larger unit investigated here has an overall cognitive grounding, related e.g. to processing ease, but in terms of content incorporates several subtypes. That is, Chafe (1994) suggests an overall cognitively-based constraint on IUs, which he phrases as a limitation that there may not be more than "one new idea" (Chafe 1994: 108) per IU. This

constraint arises from processes of attention centering, giving the IU as a linguistic structure a cognitive grounding and '(de)limiting' it in terms of its content. Despite this overarching limitation, however, in concrete, IUs for Chafe are still quite a flexible structure in terms of their content, such that they can be classified into three distinct main types of "substantial", "fragmentary" and "regulatory" IUs respectively (Chafe 1994: 63f). Of the three, *substantial* IUs make a content-related contribution to the discourse, while *regulatory* IUs have interactional or text-structuring functions. An example of a regulatory IU from English could consist of expressions like *well,* or *I see,* or the like. *Fragmentary* IUs, finally, are IUs that do not make a full contribution or were abandoned, e.g. utterances like *but then they* that are not pursued further, or similar. Crucially, given this flexibility in content (all three types are instances of the unit IU), the IU as a linguistic structure also gains quite some flexibility of its length, and may comprise anything from just a single syllable up to complex poly-clausal expressions (see section 2.1 for examples of a very short and a syntactically complex long IU from Yali each).

In parallel to these Chafeian IUs, in terms of their content or contribution to the text in question, different subtypes of larger discourse units in Yali could perhaps be assumed as well. Possible subtypes emerging from my data are most obviously of course what could be referred to as *narrative larger units,* i.e. larger units that contribute to the story line of the narration. For narrative texts, unsurprisingly, this content type of larger units prevails. Nevertheless, other types can be identified as well, e.g. what could be referred to as *scene setting larger units* (especially relevant for story beginnings), and what we could perhaps, parallel to Chafe's terminology, label *reglementary larger units,* in the narrative corpus investigated mostly relating to the (interactional) setting of the narration event itself or conveying stance, mental states of the speaker or the like, but also (or additionally) with text structuring functions. The three types of larger units in Yali are demonstrated in examples (2-4) in turn.

(2) Narrative larger units

(…)

a) ii.	*hiyap*	*ibmanoente* **/**	
	hiyap	ibma=no=en=te	
	woman	these=GIV=ERG=TOP	

b) i.	*ap*	*aru*	*kemon*	*kik*	*waha*	*ulug* ii.	*fog*	*suruk*	*ari* ****
	ap	aru	ke=mu=on	ku-ik	waha	ulug	fog	su-tuk	ari]SYN
	man	PRX	Q=LOC=AM	enter-DIR	come:3.SG.IM.PST	QUOT	praise	do-INF	MED

c) iii.	*fog*	*surukmure* **/**	
	[fog	su-tuk=mu=te	
	praise	do-INF=NOM=TOP	

d) iv.	*fog*	*suruk*	*lit*	*te* **/**
	fog	su-tuk	lit	te
	praise	do-INF	SS.SIM	TOP

e) v.	*Wenggi*	*itnore* **/**	
	wenggi	itno=te	
	PN	DET=TOP	

f) *nin* *hup anggo* *ibmanore* **/**
nin hup anggo ibma=no=te
again nightlike this=GIV=TOP

g) *malik* *torongon* *hag atuk* *lapag* ****
malik tot=on=on hag at-tuk lat-pag**]SYNT**
child little=AM=AM like become-INF do-3.REM.PST

h) vi. *ilingge* *ibmanore* **/**
[ilingge ibma=no=re
noon this=GIV=TOP

i) *ap* *suon* *kabini* *nenhen* *atuk* *lapag* ****
ap su=on kabini nenhen at-tuk lat-pag**]SYNT**
man big=AM young.man big become-INF do-3.REM.PST
'(…) the women praised him asking 'where does this man come from?'. When they praised him, while they praised him, Wenggi became a little boy in the night. (And/but/then) at midday he became a grown-up young man'

suit_14_029

Example (2) is a passage of two full larger units, delimited by aligned usages of prosodic and syntactic major boundaries at the end of (2b/ii., non-linear speech clause, in blue) and (2i./vi.) respectively[44]. They are preceded by a construction of reported speech (a reported clause 2i. and a speech clause 2ii.), which forms the end of a previous larger unit that is not displayed fully in the excerpt given. In terms of content, both (full) larger units make a contribution to the unfolding of the story that is narrated, giving us information about Wenggi, who is the main protagonist of this story: the first one (clauses 2iii.-vi.) as Wenggi becoming a little boy in the night, the second one (clause 2vii.) as him becoming a grown-up man in the day. These two larger units, therefore, could be labelled *narrative larger units.*

(3) Scene setting larger units

a) i. *Wenggi* *hahon* **/**
[wenggi hag=on
PN like=AM

b) *Wenggi* *hahon* *Pangge* *hahon* **/**
wenggi hag=on pangge hag=on
PN like=AM PN like=AM

c) *iniyam* *Fari ari* *wilapag* ****
in-iam fari ari wilat-pag**]SYNT**
3PL.POSS-village PN MED stay-3.REM.PST

d) ii. *wereg* *lit* **/**
[wereg lit
EXIST SS.SIM

e) iii. *Wenggien* *angge* **/**
wenggi=en angge
PN=ABL thing

f) *anggom* *labure* **/**
anggom labu=te
pig livestock=TOP

[44] Recall from section 4.4 that major prosodic boundaries are indicated in this thesis through the annotation of IU-final contours as / for continuation and \ for finality at the end of the transcription tier of the respective IU. Major syntactic boundaries, in turn, are identified through the bracketing [ ] in the morpheme tier, segmenting larger syntactic units.

g) *Lek* *fil* *irahuk* *wilapag* ****
lek fil irahuk wilat-pag**]SYNT**
PN direction below stay-3.REM.PST
'about Wenggi, about Wenggi and Pangge, they lived (once upon a time) in Fari. They lived there, and Wenggi's possession, his pig livestock, lived/was held close to the river Lek below'

suit_14_002

Example (3) is a sequence of two (full) larger units, the first of which consists of clause (3i.) and ends in (3c) (finality intonation), the second of clauses (3ii.-iii.), ending in (3g) (finality intonation again). The sequence is taken from the very beginning of the narration that example (2) was an excerpt of as well, and has a story opening function: the first larger unit (3i.) introduces the two main protagonists (Wenggi and Pangge) and overall setting/starting point (the village Fari), the second locates the scene more specifically close to the river Lek. These two larger units could be described as *scene setting units*: They prepare the ground before the narration (in terms of a story line) can truly begin.

(4) Reglementary larger unit

mulai *ehek* ****
[mulai ehek**]SYNT**
start say:3SG.IM.PST
'the story begins'

suit_14_001

Example (4), finally, is an instance of what could (preliminarily) be labelled a *reglementary* larger unit: a possibly procedural statement opening the narration act as such, before opening the story itself in the next larger unit (example 3, in fact, is the sequence directly following example 4). Note that like the other four larger units above, example (4) as well is a linguistic structural unit ending with finality intonation and an independent clause that is not cohesively combined with the next clause to follow.

The three different types of content and/or functions of larger units described, I propose, could be a factor that contributes to the great flexibility of the overall unit in terms of its size: reglementary larger units, like example (4), are typically very short (in 4 only one IU), scene setting larger units like (3) mostly (lower) medium-sized of three to about five or six IUs (three and four respectively in 3), and narrative larger units more flexible/diverse, such that this last type encompasses most of the very long larger units. An example of a very long (narrative) larger unit is given in (5ii.-vi.), repeated from (10) in section 4.2. It is part of a pear story narration (Chafe 1980) and describes a bike accident that results in a basket full of fruits spilling all over the ground. More examples (of the narrative and the reglementary type) will be discussed in section 5.3.

(5) Very long larger unit of 9 IUs

a) i.
we une eleg hilalug laruk ari ****
[we une eleg hila-tug la-tuk ari**]SYNT**
PT voice NEG take:SB-SEQ go-INF MED

b) ii.
hilalug larukmen **/**
[hila-tug la-tuk-men
take:SB-SEQ go-INF-NOM

c) iii.
kalemen **/**
kalem=mu=en
road=LOC=ABL

d)
hulani misig inim **/**
hulani misig inim
girl one with

e)
salkal ehesa ambeg itanoen **/**
salkal ehesa ambeg ita=no=en
meet say:3PL.IM.PST NOM DIST=GIV=ABL

f) vi.
e anggen itno **/**
e anggen itno
tree fruit DET

g) iv.
helep misig kalema wilahaon itno fam **/**
helep misig kalem=mu wilaha=on itno fam
stone one road=LOC stay:3SG.IM.PST=NOM DET with

h)
eh
HES

i) v.
sultuk suruk laharegte **/**
sultuk su-tuk laha-teg=te
bump do-INF do:3SG.IM.PST-SS.SEQ=TOP

j) vi.
hililoko *ambehek ari* ****
hilil-oho ambu-ehek ari**]SYNT**
spill-ADV go.down-3SG.IM.PST MED

'he stole it (lit: took it for himself) (a basket with fruits) and when he went (with it on a bike) he met with a girl on the road such that the fruits, because there was a stone lying on the road and he bumped into it, he spilled them and fell down'

pear_story_Lince_038

Assuming a cognitive grounding at the basis of all three types of larger units discussed, this grounding is probably, similar to Chafe's restriction of only one new idea per IU, most easily found in a limitation on the amount of new, foregrounded, focal or otherwise information-structurally central information that a single larger unit can or should (typically) convey. Such a limitation, most likely, should then be grounded in processing ease and/or attention-related mechanisms.

The most obvious candidate for this limitation emerging from the narrative corpus investigated is a restriction that I will, as a working hypothesis, phrase as *only one central event (or state) per larger unit* in this discussion, where the notion of 'central' is explicitly pre-theoretical at this point and requires detailed and systematic investigation by future research. The description given, therefore, should be read as an explorative first consideration of how such a constraint

could be relevant to the data at all and which paths could be taken in pursuit of a more refined account, rather than as an actual claim of processing and/or linguistic reality.

Keeping this disclaimer in mind, the hypothetical constraint I propose emerges most clearly from examples like (2) above, where two larger units (2iii.-v. and 2vi. respectively) express one instance of what I hypothetically and very coarsely describe as a *central event* each: that Wenggi became a little boy at night in the first unit, and that he became a grown-up man at day in the second case. The two events in question are *central,* I suggest, in their opposition to the first two clauses of the first larger units, i.e. to (2iii. and iv.), which are a recapitulation of the end of the preceding unit (2ii.) ('the women observed that'). For example (2), the distinction between central and non-central information can thus probably be equated to foregrounded versus backgrounded or new versus given information. Whether this is the case for all examples discussed in this section is not clear yet, however, wherefore I will for this initial description stick to the more neutral (made-up) term *central* at this point and leave it to future sharpening of the concept to equate it with or differentiate from the notions of newness and foregrounding.

Returning to the hypothetical constraint as such, the first of the two larger units in (2) showcases what can probably be described as the most prototypical type of larger units in Yali, in terms of its internal make-up: a unit starting with a recapitulation from the previous discourse and proceeding to add one (new, foregrounded, …) central event as one main contribution to the story line or discourse[45]. Highlighting the recurrence of the pattern, as well as for comparison, a second such prototypical larger unit is given in (6ii.-iv.). Like (2iii.-v.), the unit contributes one central (new) proposition to the storyline, in this case a state: Wanya and her son were in mourning. The death of Matias (Wanya's husband), which opens the unit, is a recapitulation of what was expressed at the end of the previous unit (6i.).

(6) Prototypical larger unit of recapitulation and one 'central' state contributed to the storyline

(…)

a)	i.	*Matias*	*hahon*	*war*	*apag*		*ari* ****
		matias	hag=on	wat	at-pag		ari**]**$_{\text{SYNT}}$
		PN	like=AM	die	become-3.REM.PST		MED
b)	ii.	*war*	*apagma*			*itare* **/**	
		[wat	at-pag=mu			ita=te	
		die	become-3.REM.PST-DS.SEQ			DIST=TOP	
c)	iii.	*Wanya*	*hahon*	*itno* **/**			
		wanya	hag=on	itno			
		PN	like=AM	DET			

[45] The very prototypical recapitulation at the beginning of larger units is what was introduced under the term of *tail head linkage* in section 1.1 of this thesis.

d) *amloho* <*xx*>
amloho
son *unintelligible*

e) *Tenus hahon itno inimte* **/**
tenus hag=on itno inim=te
PN like=AM DET with=TOP

f) *iba-iba uruk lit te* **/**
iba-iba u-tuk lit te
cry-REDUP speak-INF SS.SIM TOP

g) iv. *wilapag* ****
wilat-pag**]**SYNT
stay-3.REM.PST

h) v. *wereg lit itare* **/**
[wereg lit ita=te
EXIST SS.SIM DIST=TOP
(…)

'(…) the one like Matias (Wanya's husband) died. After he died the one like Wanya with her son, the one like Tenus, was in mourning (lit: cried and stayed, i.e. cried for a longer time). They stayed mourning (…)'
suit_13_014

Relating this prototypical internal make-up of larger units to the example in (2), it seems conceivable that the preferred way for adding *two* central (foregrounded, new,) events after a recapitulation (and before the next recapitulation) could be to parse them into two different larger units. (2vi.), to express a second such central event, would therefore start a new unit after one central event was added already in (2v.).

Of course, much more research is needed before this first observation of a prototypical unit structure can be worked into an actual account and a real working hypothesis on a constraint or preference can be developed. Exceptions might need to be defined (e.g. for reported speech?), and its applicability to or meaning for the non-narrative types of larger units investigated. Most importantly, however, the constraint itself and the notion of *centrality* serving as a pre-theoretical cover term here need to be sharpened and worked out more fully. To this purpose, it seems, it might be instructive to take a closer look at the longer larger units in the data, i.e. at the perhaps less prototypical realisations: One example of such a unit was (5) above, giving a larger unit of nine IUs. A constraint of only one central event per unit is much less clear for this longer unit, which starts with a recapitulation (5ii., the stealing) like the other larger units discussed, but then proceeds to add not less than three new events to the storyline: 'He' meets a girl on the road, 'he' bumps into a stone, and 'he' spills his fruits on the ground. Still hypothesising a general limitation of only one central event per larger unit, this example could therefore hint at two possible paths to be explored further: Firstly, one explanation could be that the limitation on the amount of 'central' information a larger discourse unit prototypically conveys in Yali is not so much a strict constraint, but rather something like a stylistic preference, which speakers may also choose to violate (note that the stylistic preference could still be grounded in processing ease). Secondly, it might also be conceivable that the relevant

notion of centrality behind the limitation should actually be a *scalable* notion allowing for different degrees of centrality. In this case, it could be that the first version of the hypothetical limitation given above would better be restated into a preference (or rule?) of *one most central event or state per larger unit.* This latter version could also be a description of example (5): the most central event that the sequence leads to or culminates in is probably its last event, the spilling of the fruits, while the other two new events (meeting the girl and bumping into a stone) are events that lead to this outcome or build up the culmination. Still, they could be more 'central' than the very first event of the unit, the stealing, which is just a recapitulation of what was already said before.

5.3 Aligned and misaligned usages of major boundaries

Although section 5.2 showcased only examples of aligned major boundaries in discussing the content structure and cognitive grounding of larger units, it is conceivable from the data that the same subtypes distinguished there and the same (still very hypothetical) limitation on the information structure of units might in principle also apply to units delimited by misaligned usages of boundaries. This would suggest that the two types of boundaries indeed delimit the same type of (cognitive or content) unit.

However, compared to aligned usages, for misaligned boundaries both notions remain more sketchy still, since there are much less cases of misaligned boundary usages to judge from, and since many of them occur in the most dramatic parts of stories where they tend to correlate with or be closely surrounded by constructions of reported speech. Reported speech, however, is not well understood yet for Yali in general (see section 4.3.1.3), and, furthermore, a good candidate for a domain that might have its own information-structural rules in the first place. Reported speech, therefore, is a strong confounding factor to the identification of overall unit-internal structuring principles at this point.

Still, using the terminology introduced in 5.2, units delimited by misaligned boundaries as well can largely be grouped into at least narrative and reglementary larger units, based on their function and/or content. Two examples of this, one for a reglementary, the other for a narrative unit, are given in (7) and (8) respectively (repeated from 27 and 26 in section 4.4). As was the case with the units described in 5.2, narrative units, in the corpus used here, are the most frequent for the misaligned boundaries as well. Misaligned usages of boundaries with scene setting units, on the other hand, are for the moment not attested yet. Whether this is a gap in the data or a systematic feature cannot be determined at this point (recall that misaligned

boundaries often occur at culminating points of stories, which is likely not a good sight for scene setting).

(7) Reglementary larger units separated by a misaligned boundary usage

a) i. *ari* ***seko /***
[ari su-oho
MED do-ADV

b) *sibahon* ****
su-ibag=on
do-3.REM.PST=NOM

c) ii. *suit* *oho* *fug* ****
suit oho fug**]**SYNT
legend too NEG
'it was (really) like this, (so) this is also not a fairy tale'

filling_the_traps_106

Example (7) could be described as two reglementary larger units (7i. and 7ii. respectively), both of which express speaker stance or assert the speaker's believes and comment on the narration itself. Note that similar statements are typical in closing (traditional) narrations in Yali, such that the excerpt given might also have a procedural function, similar to example (4) in the previous section. The two units are separated by a major prosodic, but not by a major syntactic boundary (finality intonation in 7b correlating with a nominal clause).

(8) Narrative larger units separated by a misaligned major boundary usage

a) i. *hiyap* *ibmanoen* *aluatuk* *lapareg /*
[hiyap ibma=no=en aluat-tuk la-pag-teg
woman these=GIV=ERG observe-INF go-3.REM.PST-SS.SEQ

b) *ih*
ih
EXCL

c) ii. *apte* *horog /*
ap=te horog
man=TOP like

d) *siyahon* *alulumni* *hahon* *itnoen /*
siyag=on alulumni hag=on itno=en
bad=AM bad like=AM DET=ERG

e) *malik* *itno* *toron*[46] iii. *peruk* *famente /*
malik itno tot=on pe-tuk famen=te
child DET little=AM think-INF NOM=TOP

f) iv. *ti* *ari* *suruk* *ari* *ulug* v. *aluatfaregte* *yoho* \
ti ari su-tuk ari ulug aluat-pag-reg=te yoho
dance MED do-INF MED QUOT observe-3.REM.PST-SS.SEQ=TOP PT

g) vi. *wam* *wapag* *sambit* *itno* *enegte /*
wam wat-pag sambit itno eneg=te
pig kill-3.REM.PST NOM DET NOM=TOP

[46] (26ii.) was analysed as a clause with a non-verbal (nominal) predicate *malik itno toron,* and a (complex) subject NP *apte horog siyahon alulumni hahon itnoen* here.

h) vii. *ebenam* *apag* ****
ebenam at-pag**]**SYNT
visible become-3.REM.PST
'the women were observing him, ih, and although they thought he was a bad man, he was (just) a little boy, they (now) found out (lit: observed) that he could dance (like an adult man). and when they had a pig party (lit: killed a pig), (indeed) he became normal'

suit_14_052

Example (8), on the other hand, could be described as a sequence of two narrative larger units, both of which contribute to the storyline of the narration. The first one, which is rather long (8i.-v.), describes the thoughts of 'the women', who are a protagonist of the story in question, the second one (8vi.-vii.) the next event ('at the pig party he became normal'). Again, the two units are separated by a major prosodic, but not by a major syntactic boundary (finality intonation correlating with a switch-reference clause in 8f).

Next to classifying into at least narrative and reglementary larger units, concerning the hypothetical limitation of only one (most) central event per larger unit as well, it seems overall conceivable that it applies to the larger units delimited by misaligned boundaries as well. However, in this case, the idea requires abstraction over quite a number of details, most notably, as outlaid above, over constructions of speech reporting. That is, a possible description of (8), for example, is that the second larger unit of the sequence, (8vi.-vii.), adds another 'central' (new, foregrounded,…) event ('at the pig party he became normal') to a sequence that already contains one, similar to what was described for example (2) in the previous section. Similar to (2), it might therefore be a case of two equally 'central' (new, foregrounded, …) events parsed into two larger units as well. However, the example is much less clear than was the case for (2), due to the constructions of reported speech in the first larger unit (8i.-v.), which make it difficult to determine one 'central' or 'most central' event in the first unit that the added event could rank equal with. Similar examples prevail in the data, as demonstrated in (9) (repeated from 28 in section 4.4) with a second case showcasing the reverse situation of a unit adding a construction of reported speech as a second central event where a first larger unit already contained one. The two larger units (9i. and 9ii.-iii. respectively) are separated by a major syntactic boundary in this case, which correlates, however, with prosodic continuation in (9c).

(9) Two larger units with misaligned boundary contributing a central event each?

g) i. *ap* *misig* *eh* ***/***
[ap misig eh
man one HES

h) *Fasig* *fikir* *eteyen* ***/***
fasig fikit ete=en
PN direction above=ABL

i) *wapag* ***/***
waha-pag**]**SYNT
come-3.REM.PST

j) iii. *at misig /*
[at misig
3SG one

k) ii. *tu fikirente /*
tu fikit=en=te
PRX direction=ABL=TOP

l) *sak wak lak o ulug* iii. *ibag *
sak wa-ik lag o ulug ibag]SYNT
pandan carry-DIR go:2SG.IMP PT QUOT say:3.REM.PST
'a man came from Fasig because they asked him to bring pandan from there'

landslide_ayabiye_010

Example (7), however, could be a clearer case of two equally 'central' contributions: most intuitively, this example reads as a double expression of stance, making the two units (7i. and 7ii. respectively) 'equal' in the sense of the same (interactional) contribution to the discourse. As the two units are of the reglementary type, however, their contributions are not as easily described as to 'equally central events', or as two events on the same information-structural level than the narrative contributions in the previous section.

Overall, the idea of a limitation of only one (most) central event per larger unit, or, put the other way round, of a preference for parsing two events of equal centrality (or information status in some sense) into two separate larger units, therefore stays even more hypothetical for the misaligned usages of boundaries at this point than it already was for the aligned cases in the previous section. Nevertheless, it is worth discussing it here, since it might give a hint to the function of such misaligned boundary usages in Yali. The reasoning behind this suggestion is as follows: As described in section 4.4, the most central difference between aligned and misaligned usages of major boundaries is that the latter overtly mark cohesion between the two segments they separate, while the former do not. That is, exempting the two special cases of usages singled out in section 4.4.3 (boundaries within constructions of reported speech and major prosodic boundaries indicating that a clause relates to the previous discourse), at misaligned boundaries, there is always also one domain indicating continuation, either prosody, as in (9c), or morphosyntax, as in (7i.) and (8v.). This domain establishes a cohesive link between the segments before and after the boundary, in the case of morphosyntax according to the semantics of the respective clause combination, in the case of prosody as a general indication of cohesion to be interpreted according to context.

Relating this to the idea of a limitation of only one (most) central event per larger unit, misaligned boundaries could be a way of establishing a cohesive link between two events of equal centrality or information status, or otherwise between to events 'of equal rank'. Crucially, under the assumption of such a limitation, the same would not usually be achieved by constructions with aligned usages of boundaries, nor by cohesively linking the events without a major boundary at all: Aligned major boundaries, on the one hand, at least in terms of IU-

final contours and clause combination, do not indicate cohesion between the two events they separate. Cohesive relations within larger units, on the other hand, should not link two events of the same centrality/information status/rank where there can only be one (most) central event per unit.

Illustrating the last point with an example of a clause combination in (10) (repeated from 37 in section 3.4), the prediction from this suggestion would be that if the two clauses given were realised as one larger unit, one of the two events described should be interpreted as in some sense less central (or focal, or similar) than the other, e.g. as backgrounded or the like. Concerning their 'centrality' to the story line, they would thus have a non-equal status. For the example given, this would most likely mean that the first clause 'Semuel told me this' would be backgrounded to or somehow less central information than the second clause 'I went up', as also suggested by the translation given.

Were they realised with a major prosodic boundary between them, however, they would be interpreted as two equally central or important contributions, or at least this reading would become available. A translation tracking this interpretation more closely could then perhaps be 'Semuel was telling me this. so then I went up…' or the like.

(10) Clause combination with a nominal clause

c)	i.	*Semuelen*	*ari*	*irisi=on*	*famente*
		Semuel=en	ari	irisi=on	famen=te
		PN=ERG	MED	speak:3SG.REM.PST=NOM	NOM=TOP

d)	ii.	*lahik*	*waharikik*	*arire*	*eke*
		laha-ik	waha-tikik	ari=te	eke
		go.up-DIR	come-1SG.PST	MED=TOP	and

'because Semuel had told me this I went up and (…)'

conversation_2_0187

While this prediction of course needs testing, it is, at least, plausible from the descriptions of the examples of misaligned boundaries presented above. Pursuing the investigation of the interaction between major boundaries, their aligned and misaligned usages and interpretations of the information-structural status of events further, therefore, might shed further light on how larger discourse units could relate to cognitively relevant processing units as functional components of texts.

Still, one last point needs to be mentioned before closing this discussion: Example (2) of the previous section arguably achieved a quite similar effect of cohesively relating two events of probably in some sense equal centrality or importance to each other. For easier reference, the example is repeated below as (11). The two 'central' events in question were Wenggi's becoming a little boy at night, and his becoming a grown-up man at day respectively, i.e. clauses (11v. and vi.). As expected from the preceding discussion, the two events are parsed into two separate larger units. However, in this example, the two larger units are separated by

an aligned usage of major boundaries, not by a misalignment as in the examples above. Misaligned boundaries, therefore, are probably not the only option for indicating cohesion between two events of equal 'centrality', such that a very similar effect can be achieved from the combination of other cohesive ties and major boundaries as well. A good candidate for a different tie establishing this relation in (11) is the lexical level, i.e. antonymy between night and day and the little boy and the grown-up man in the two events.

(11) Cohesive tie between two larger units (repeated from 2 in the previous section)

(…)

a) ii.
hiyap *ibmanoente* **/**
hiyap ibma=no=en=te
woman these=GIV=ERG=TOP

b) i.
ap *aru* *kemon* *kik* *waha* *ulug* ii. *fog* *suruk* *ari* ****
ap aru ke=mu=on ku-ik waha ulug fog su-tuk ari]SYN
man PRX Q=LOC=AM enter-DIR come:3.SG.IM.PST QUOT praise do-INF MED

c) iii.
fog *surukmure* **/**
[fog su-tuk=mu=te
praise do-INF=NOM=TOP

d) iv.
fog *suruk* *lit* *te* **/**
fog su-tuk lit te
praise do-INF SS.SIM TOP

e) v.
Wenggi *itnore* **/**
wenggi itno=te
PN DET=TOP

f)
nin *hup anggo* *ibmanore* **/**
nin hup anggo ibma=no=te
again nightlike this=GIV=TOP

g)
malik *torongon* *hag atuk* *lapag* ****
malik tot=on=on hag at-tuk lat-pag]**SYNT**
child little=AM=AM like become-INF do-3.REM.PST

h) vi.
ilingge *ibmanore* **/**
[ilingge ibma=no=re
noon this=GIV=TOP

i)
ap *suon* *kabini* *nenhen* *atuk* *lapag* ****
ap su=on kabini nenhen at-tuk lat-pag]**SYNT**
man big=AM young.man big become-INF do-3.REM.PST

'(…) the women praised him asking 'where does this man come from?'. When they praised him, while they praised him, Wenggi became a little boy in the night. (And/but/then) at midday he became a grown-up young man'

suit_14_029

6. Conclusion

The present thesis explored how prosodic and syntactic structure form larger discourse units in natural narrative discourse of Yali. It investigated the two of them separately, developing a definition of a larger prosodic and a larger syntactic unit in turn, as well as their interaction and relation. It found aligned usages of the two units, in which the boundaries of the two types of units correlate, to be their prototypical usage. Furthermore, it discussed how the structurally-defined units emerging might relate to content structure and cognitively relevant text components. Though the units covered a broad range of functions, from purely narrative to more interactional contributions, it sketched the possibility of a commonality in the realm of information-structural notions. Though on a very pre-theoretical level, the proposed commonality was phrased as a notion of one most 'central' event per larger unit. The possibility was suggested as a starting point for the development of more sharpened hypotheses on the cognitive grounding and reality of larger-level text structures in the future.

In doing so, this thesis presents a case study on establishing text segmentations bottom-up from the linguistic structure itself. Thus exploring the emergence of text structure directly from natural language data itself, it hopes to be an insightful resource also to theoretical discussions of text units both in general, and of larger units more specifically.

By exploring the make-up of its larger units, the thesis furthermore contributes a first account of basic phenomena of prosodic phrasing in Yali, as well as a systematic description of its morphosyntactic clause combination. Given the scarcity of prosodic research on Papuan languages in general and on Dani languages more specifically, next to advancing knowledge on Yali, this description can hopefully also serve to create initial starting hypotheses to more systematic prosodic descriptions of other Papuan languages in the future.

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