

A Grammar of Muyu

Allgemeine Sprachwissenschaft

A Grammar of Muyu

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Abstract

This thesis is a grammar of Muyu, a Papuan language of Western New Guinea in the east of Indonesia. It is spoken by around 2000 people in 22 villages in the Boven Digoel regency and in suburbs of several coastal cities. The language belongs to the Ok language family of the Trans New Guinea phylum and is severely endangered. This work is the first comprehensive grammar on Muyu. It is based on nearly 11 months of fieldwork during which a corpus of audio-visual recordings, transcripts and translations has been compiled. The corpus is the primary data source for all analyses in the thesis.

This study covers a wide range of topics that are described in 12 chapters. Beyond the expected chapters on phonology, verb morphology and clause syntax, the description has a special focus on complex predicates. Typologically, the most interesting features are verbal number and the extensive use of multi-verb constructions (MVCs). The word class of demonstratives is especially rich and covers a wide area of functions. Furthermore, we find many typical TNG features: gender agreement on the verb, verb-final clause syntax, a lack of nominal morphology, switch reference and tail-head linkage.

The appendix of this grammar includes two fully glossed texts and a large word list (Muyu-English) with over 2500 entries. The grammar is accompanied by an openly accessible collection of language material archived in the Endangered Languages Archive (ELAR).

A Grammar of Muyu

A Lowland Ok language of
Western New Guinea

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Für Nicole und Josefine Tzeitel

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Last but not least, I’d like to say: Screw Flanders!

Abbreviations

General

BI	Bahasa Indonesia (i.e. the Indonesian language)
LVC	Light verb construction
MVC	Multi-verb construction
PN	Personal name
THL	Tail-head linkage

Interlinear Glosses

AUX.CONT	Auxiliary continuative
AUX	Auxiliary
ADV	Adverbialiser
CAUS	Causative
CONJ	Conjunction
COM	Comitative
CONTR	Contrastive
COP	Copula
DEM	Demonstrative
DIR	Directive
DS	Different subject

DUR	Durative
EMPH	Emphatic
EP	Epthetic (either vowel or consonant)
EXP	Experiencer
SEQ	Sequential in order
SPEC	Specific
IMP	Imperative
INF	Infinitive
INTJ	Interjection
INV	Invisible
IRR	Irrealis
HES	Hesitation
LNK	Linker
LV	Light verb
MOD	Modal
NEG	Negation
OBL	Oblique
PFV	Perfective
PL.O	Plural object (in verbal number)
POSS	Possessive
PTC	Particle
Q	Question
QUOT	Quotative
RCV	Receiver
RED	Reduplication
SBJV	Subjunctive
SM	Serial marker
SS	Same subject
SG.O	Singular object (in verbal number)
UNSPC	Unspecific

Chapter 1

The language and its speakers

1.1 Introduction

This doctoral thesis is a description of Muyu, an endangered Papuan language in the central lowlands of New Guinea. It is part of a larger effort to document the Muyu language and is based on over 10 months of fieldwork between 2018 and 2022.

The first chapter of this thesis starts with an overview of the local setting (§1.2) and a brief description of the Muyu language and its speakers (§1.3). Next, we introduce the Ok language family (§1.4) and give a summary of previous research (§1.5) before providing general information about the present study (§1.6). The chapter continues with some ethnographic remarks about the Muyu people, their history and lifestyle (§1.7). Finally, we conclude with some necessary notes on the corpus this study draws from and our presentation of examples found throughout the dissertation (§1.8).

1.2 Local setting

1.2.1 Physical and political geography

The Muyu people live in the heart of mainland New Guinea in a swampy area at the foothills of the Star Mountains covered by dense rain forest. Their villages are located along the rivers Kowo (also Kao) and Muy, the latter from which the Muyu people get their name. In modern times, Muyu settle near the roads, which run parallel to the rivers at a higher altitude along

the crests of the foothills. The swampy lowland area at the shores of the rivers is still used agriculturally, since the annual flooding fertilises the soil. The Kowo river represents the western and southern border that separates the Muyu from the Mandobo people. To the east, the Muyu area stretches across the Mui river and into Papua New Guinea (from now on PNG) as far as to the Tedi river. In PNG, both the ethnicity and the language of the Muyu are usually called ‘Yonggom’ or ‘Yongkom’.

The Muyu area contains 22 villages, all of which were formed in modern times by the initiative of missionaries or government officials. Traditionally, they used to live in single houses or hamlets scattered across the area (see Section 1.7). Figure 1.1 is a map of the Muyu speaking villages.¹

Politically, the Muyu area belongs to the Boven Digoel regency (Kabupaten Boven Digoel) in the Indonesian province of South Papua (Provinsi Papua Selatan)². This regency is named after its largest river, the Digul³, that crosses the area from north to south before turning to the west and emptying into the Arafura Sea. The capital of the regency is Tanah Merah, and the capital of the province and major city in South Papua is Merauke. Boven Digoel is confined by the regencies Merauke to the south, Mappi and Asmat to the west, Pegunungan Bintang to the north and the international border with PNG to the east. From north to south, the regency is traversed by the Trans Papua Road that links Merauke to Jayapura. According to the 2020 census (Badan Pusat Statistik 2021), Boven Digoel had a population of 64,285 inhabitants.

The Muyu villages administratively belong to three neighbouring districts: Waropko, Mindiptana and Ninati. The fieldwork for this thesis was undertaken in the neighbouring villages of Upyetetko and Kanggewot (both in the Waropko district), which are located centrally in the Muyu area.⁴ Because of the central location of Upyetetko and Kanggewot, the inhabitants

¹The map was created by Martin Sauerbrey-Almasy, Ludwig Boltzmann Institut für Kriegsfolgen-Forschung (BIK), Graz, Austria.

²The province South Papua was formed during the time this project took place, namely in the administrative reform in July 2022. Before that, it was part of the larger province Papua whose capital was Jayapura.

³Boven Digoel is Dutch for ‘Upper Digul’, hence the Dutch spelling <Digoel>. The region was of special interest to the Dutch colonial administration that ran an infamous penal camp in Tanah Merah.

⁴Further research on various dialects was conducted with speakers from the villages Mindiptana, Mokbiran, Kawangtet, Wanggatkibi, Woropko and Ikcan. However, data from those places were not used in this thesis.



Figure 1.1: Muyu speaking villages between the Kao and Mui river.

call themselves and their dialect *Kawip* (short for *kaduk wip* ‘men of the middle’).

During the project period, the conditions of traffic and communication to the villages were steadily increasing. For example, 50% percent of the road from Tanah Merah to Upyetetko was paved with asphalt in 2019 which increased to 90% in 2022 (my estimations), reducing the travel time from around six hours in 2019 to under four hours in 2022. Furthermore, while the telecommunications network in 2019 allowed only for phone calls and SMS messaging, new infrastructure completed in 2021 gave residents access to the internet via 4G.

1.2.2 Linguistic geography

Boven Digoel is home to languages from two large families considered members of the Trans New Guinea (TNG) phylum: the Ok family and the Greater Awyu family. Figure 1.2 shows a map with Muyu and its neighbours.⁵

To the west and south of Muyu, the Kao river is the natural border and delimits Muyu from two languages that are members of the Dumut group of Greater Awyu: Wambon (north) and Mandobo (south).⁶

The international border to the east constitutes an important barrier, and we did not consider languages bordering immediately to the east on the PNG side in Figure 1.2 (see Christensen 2013:2). Muyu (or rather labeled Yonggom) stretches as far as the Tedi river, which is the border between Muyu and the unrelated Awin language. The lowland Ok language Ninggerum (not on the map) is the northern neighbour on the PNG side. The Mountain Ok languages are situated in the mountainous region to the northeast.

The Star Mountains north of the Muyu area are home to the speakers of the Ok language Ngalum. Notice though that the linguistic situation in the area between Muyu and Ngalum is complex and not well understood yet (see also Section 1.4).

⁵The map was created by Martin Sauerbrey-Almasy, Ludwig Boltzmann Institut für Kriegsfolgen-Forschung (BIK), Graz, Austria.

⁶Further divisions of varieties of Wambon and Mandobo are possible (see de Vries 2020:5) but not considered here. Moreover, the naming situation is complex since the Wambon-speaking community calls their ethnic group Mandobo. One of my acquaintances from Womsim claimed that his language is sometimes called Wambon and sometimes Upper Mandobo (Indo. *Mandobo Atas*).

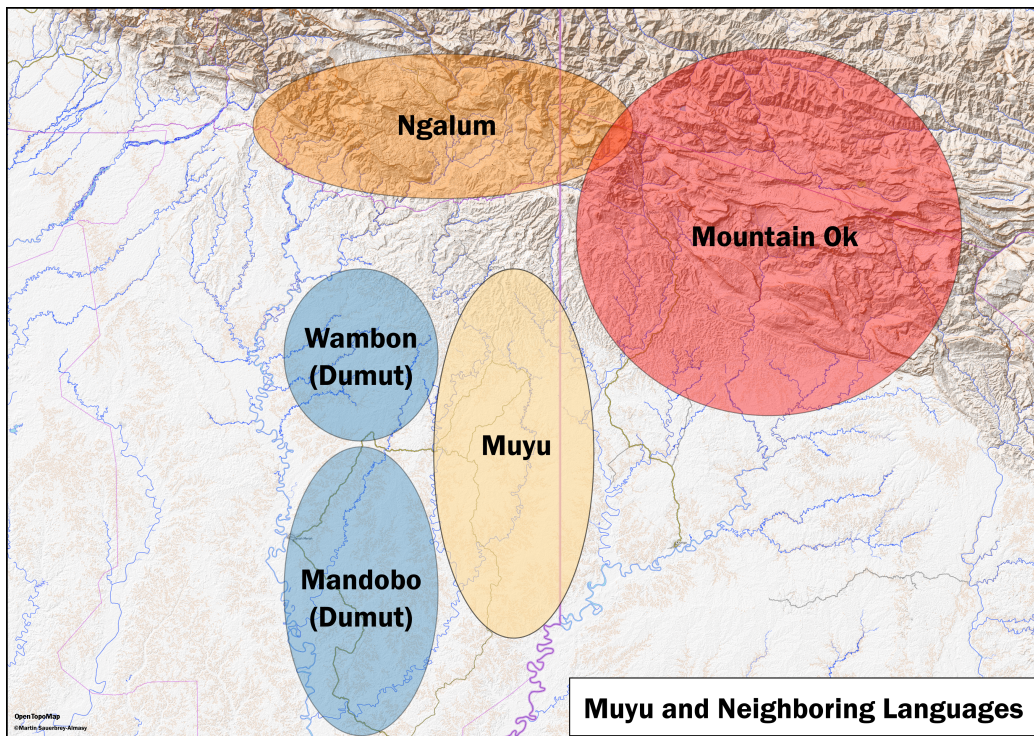


Figure 1.2: Muyu and neighbouring languages.

1.3 The language and its speakers

1.3.1 Language and dialects

Muyu (ISO *kti* for North Muyu, *kts* for South Muyu) is a Papuan language of the Ok family. The language name is identical with the ethnonym; both can be differentiated with a juxtaposed noun: *Muyu otbop* ‘the Muyu language’ and *Muyu kaduk* ‘a Muyu person’. Speakers of Muyu often refer to their language simply as *nup otbop* ‘our language’ or, in Indonesian, *bahasa daerah* ‘local language’. The ethnonym Muyu, derived from the indigenous name of the Muy river, was first used by Catholic missionaries and the Dutch colonial government in the early 20th century. Prior to that, the people nowadays referring to themselves as Muyu did not have a name encompassing all the clans and all the dialects of the language. There is the alternative term Kati, which was originally used by the neighbouring Awyu and Jaqai people. While still used in Drabbe (1954), Kati has lost ground in the past decades. It is heard occasionally from older people, but members of the younger generation identify themselves as Muyu.

Muyu consists of several dialects. Contemporary linguistic catalogues (e.g. Glottolog 4.7) provide two varieties/languages: North Muyu (ISO *kti*) and South Muyu (ISO *kts*). This binary split stems from the work of father Petrus Drabbe (see Section 1.5 below), who described two varieties in the villages Ninati (north) and Metomka (south). However, the situation seems to be more complicated. Our consultants themselves distinguish six dialects:

- (1) **Dialects of Muyu:**
 - Aree
 - Kawiyet/Kawip (this thesis)
 - Okpari
 - Kakaip
 - Kamindip
 - Yonggom (i.e. Drabbe’s Ninati dialect)

This thesis focuses on the dialect Kawiyet/Kawip. Since both these designations are equally common, we will use them interchangeably. The dialects are distributed on a north to south axis along the two rivers. It is important to notice that the dialects of Muyu are of high identificational value for their speakers. As they identify as members of a sub-community (Indo. *sub-suku*) or clan (Indo. *klen*), they are tightly connected to the respective dialect (see

also Section 1.7).

The differences between the dialects are a matter of future research. For now, we can say that there are differences in the lexicon and in phonetics. Collecting data from various dialects, one immediately recognises great lexical variation.⁷ Furthermore, phonetic details such as the realisation of /r/ as either a trill [r], a liquid [l] or a tap [ɾ] seem to be subject to dialectal variation. More thorough investigations, especially in syntax and morphology, are yet to be conducted. In any case, all dialects seem to be mutually comprehensible and are identified as part of the same language.

Speakers recognise sub-dialects (Indo. *sub-dialek*) within the six dialects. For example, the Kawiyet dialect has three sub-dialects Medewan, Metawan and Komoyan.⁸ Interestingly, speakers also identify with sub-dialects. For example, in my time in the village, speakers would try to convince me to spend more recording time on their own sub-dialect compared to another one. Also, as I gradually learned to speak the language, interlocutors would sometimes correct me to use vocabulary from their own sub-dialect.⁹

From a linguistic perspective, the separation of two levels, i.e. dialects and sub-dialects, is complicated and its exact nature remains obscure. I did not try to discern the sub-dialects in this study, since my impression was that sub-dialects mostly differ in the lexicon but not in grammar. This was also confirmed by my language consultants. To sum up, the data in this study is from all three sub-dialects of Kawiyet, and the analysis should apply to them equally well. Consultants generally had no problems understanding the recordings of sub-dialects different from their own. In any case, it is interesting to see that the speech community itself uses linguistic terminology such as dialect and sub-dialect.¹⁰ However, for the sake of simplicity, we will

⁷A good example is the word for ‘language’, which is *otbop* in the southern dialects but *weng* in the northern dialects. Most Muyu I met take great pleasure in explaining the differences of the dialects to outsiders, á la “They say X, we say Y”.

⁸The terms *Medewan*, *Metawan* and *Komoyan* stem from the expression for ‘What is it?’ in the respective sub-dialect. This expression is highly frequent since it is often used as a filler when searching for a word or as a question when something was not well understood.

⁹Since they have differing expressions for greetings, one can easily identify which sub-dialect an interlocutor is using.

¹⁰I observed that Muyu speakers are mostly aware of all six dialects. In contrast, a speaker is typically only aware of sub-dialects in his/her own vicinity. So, for example, a man from Ninati can be expected to know that people in Upyetetko speak the Kawiyet dialect but not know about Medewan, Metawan and Komoyan.

only address dialects throughout this study and will not refer to sub-dialects anymore.

1.3.2 Speakers

The Muyu language is highly endangered and spoken by 2,000 people at most. This section deals with the uncertainty of this estimate.

There are no reliable sources concerning the number of Muyu speakers. The 2020 census (Badan Pusat Statistik 2021) reports 6,610 inhabitants for all three districts with Muyu villages in Boven Digoel.¹¹ Not included are Muyu that live in the larger cities of the coastal area: Merauke, Jayapura, Sorong, and Manokwari. The picture gets even more complicated if we factor in the Yonggom in PNG. For the sake of simplicity, we do not include them in the numbers of this section.

The total number of ethnic Muyu probably does not exceed 10,000 individuals. However, this number is estimated from census data, which is expected to diverge strongly from the number of language users. Not every member of the ethnicity is a speaker of the language, since the language is no longer in active use by the younger generation (<30 years). To give an example of a single village, we estimated the speakers of Muyu in Upyetetko to include around twenty percent of the inhabitants. The situation in the urban areas is even worse.

Despite more than ten months in the field, I have not been able to obtain reliable information about the number of speakers. Estimates from my consultants vary between 200 and 1,000. These estimates lack a common understanding of what constitutes a “speaker”. Most people I met tended to apply a narrow concept, which means that only individuals with a large active knowledge of Muyu were included. Not typically included are younger people who might have a good passive knowledge and can understand older speakers but rarely converse in Muyu themselves. Moreover, I have witnessed degradation of people who try to converse in their native language but mix up dialects and occasionally switch to Indonesian. It seems that the Muyu apply high standards for what speakers should know. My own estimate is rather optimistic with 2,000 (more or less fluent) speakers. Nonetheless, there is

¹¹Districts (*distrik*) are one administrative level below regencies (*kabupaten*). Boven Digoel has 20 districts of which three are Muyu-speaking districts: Mindiptana, Ninati and Waropko.

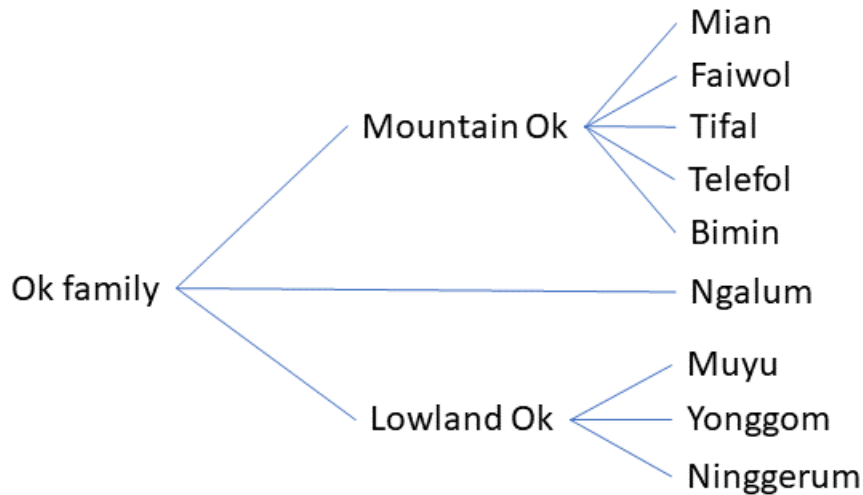


Figure 1.3: The Ok language family, based on Healey (1964).

a huge discrepancy between maximally 10,000 ethnic Muyu and maximally 2,000 speakers. The language is clearly facing a critical situation.

1.4 The Ok languages

Muyu is a member of the Ok language family, a branch of Trans New Guinea (TNG). The name Ok goes back to the widespread word *ok* ‘water, river’ in these languages. The family tree of Ok languages given in Figure 1.3 is based on Healey (1964). The main division is between Mountain Ok and Lowland Ok. The Ngalum language is not classified yet. Healey (1964:38) proposes that it is probably part of a separate branch (cf. Loughnane & Fedden 2011). The Mountain Ok branch consists of Mian, Faiwol, Tifal, Telefol and Bimin. The Lowland Ok languages are Muyu, Yonggom and Ninggerum. Note that in this study, Yonggom and Muyu are actually interpreted as two varieties of the same language (mainly split by the international border between PNG and Indonesia). This view is also shared by Christensen (2013).

Recent proposals speculated about some languages west of the Lowland Ok languages forming a Western Ok branch (see notes in Fedden 2011:5; Fedden 2020:1007-1008). These languages are Marub, Kobkaka, Kwel, Bayono and Awbono. Moreover, Wurm (1982) mentions a language named Iwur (also

the name of a village north of the Muyu area), which he classifies as Lowland Ok and is probably identical to the entry Dintere in Glottolog (Hammarström et al. 2022). Indeed, the area between Muyu and Ngalum and at the foothills to the west appear to be linguistically more diverse than is known to linguists at the moment.¹² However, very little is known about these languages and reliable sources for such a classification are still missing. Therefore, we do not consider them in this study. Similarly, the classification of the Mountain Ok languages is somewhat disputed. For example, the variety spoken by the Urap people is considered a dialect of Tifal by Healey (1964:40), whereas Robbins (2004:37), an anthropologist who spent 26 months of fieldwork with the Urap, maintains it is a separate Mountain Ok language on par with Tifal, Telefol etc. Thus, the classification of Ok languages within the family is still open for debate, at least in its details.

The Ok language family is probably not a direct branch of TNG. Loughnane & Fedden (2011) show genealogical links between the Ok languages and Oksapmin, a language spoken east of Bimin. They propose the larger grouping Greater Ok. Furthermore, a genealogical link between Greater Awyu and Greater Ok has been proposed (Voorhoeve 2005), but van den Heuvel & Fedden (2014) rejected this classification and explained similarities between the individual languages by language contact.¹³

1.5 Previous research

1.5.1 On Muyu

Muyu is an underdocumented language. Besides wordlists and survey data, there are two grammar studies of moderate scope. This section gives a brief outline of the linguistic research. For additional ethnographical sources, see Section 1.7.

Descriptive research on Kati (i.e. Muyu) started around 1940 with the Dutch missionary Petrus Drabbe who worked on two dialects in the villages

¹²In my own search for further Muyu dialects, I came across two varieties in the remote village Ikcan. These varieties are named Komonarepket and Nemaya by the speakers and they consider them to be separate languages, not related to Muyu south of it or Ngalum north of it. I collected and transcribed around one hour of monological texts from these varieties. So, future research might reveal their relation to the better known Ok languages.

¹³See, however, Glottolog 4.7 (Hammarström et al. 2022) where Greater Awyu and Ok-Oksapmin are classified as Awyu-Ok.

Ninati (north) and Metomka (south) both located in the west, i.e. nowadays Indonesia.¹⁴ In terms of the dialects listed in Section 1.3, the Ninati variety is identified with Yonggom, but the Metomka variety remains obscure since the village does not exist anymore. For each of these varieties, Drabbe compiled a dictionary with Dutch glosses and translated religious texts to support the work of the Catholic mission. These materials comprise parts of the gospels, a Catholic catechism, a collection of bible stories and a prayer book. While he translated all these texts to Muyu, he did not record any original Muyu texts. Unfortunately, all this material remained unpublished and is now archived in The Royal Netherlands Institute of Southeast Asian and Caribbean Studies (KITLV) in Leiden. Eventually, the work of father Drabbe resulted in a sketch grammar (Drabbe 1954), which is his only published material of Muyu and an invaluable source for Muyu morphology.¹⁵ However, due to the lack of example sentences and no original texts, Drabbe’s research did not shed much light on syntax and other topics.

Christensen (2013) wrote a sketch grammar of the Yonggom dialect (which he spells Yongkom¹⁶) spoken in the villages along the Tedi river on the PNG side of the border.¹⁷ Although Christensen recognised that the larger part of speakers are on the Indonesian side of the border, he apparently did not notice the previous work from Drabbe. Christensen’s (2013) study is of moderate size. It offers information on all levels of description (from phonology to discourse) and also contains an appendix with fully glossed sample texts.

The analysis offered in this thesis differs in many ways from Drabbe (1954) and Christensen (2013), which is partly due to dialectal variation and partly to different theoretical stances. In several parts of the grammar,

¹⁴Metomka no longer exists today, but Ninati is prosperous and was visited by the author of this study in 2022.

¹⁵And a good starting point for contrastive studies, since the dialects vary in many details.

¹⁶Christensen (2013:1) states that he uses the spelling <Yongkom> since it is preferred by his speakers. For the same reason, I hold on to <Yonggom> in this study, since this is the preferred spelling by the inhabitants of Ninati.

¹⁷It seems that the speakers in PNG refer to the whole people and language as Yonggom and a variety thereof as Muyu; exactly the opposite from the situation in Indonesia. Furthermore, the data of villages and dialects that Christensen obtained for the Indonesian side does not quite match with what I found there. The international border has impeded travelling between the areas through the last decades. I expect the ignorance to go both ways, therefore, I refrain from making any statements about the language and its speakers on the PNG side.

a comparison of alternative interpretations seemed interesting. Such cases were made explicit with references to the respective pages in the previously published accounts. Throughout the major part of this study, however, I rely on my own fieldwork and corpus data.

1.5.2 On Ok languages

Research on Ok languages has been slowly regaining momentum since the early 2000s, after a first wave of interest led by linguists and missionaries in the 1960s and 1970s was discontinued. This section gives a brief outline of the research.

Besides wordlists from government officials dating back to the beginning of the 20th century, the earliest research on Ok languages were the studies of father Petrus Drabbe on the Ninati and Metomka dialects of Muyu conducted in the 1940s (see above). However, from the perspective of the language family, the most influential work was the dissertation of Healey (1964) who published a comparative study and first proposed the subbranches of Mountain Ok and Lowland Ok. The language that was most comprehensively described in this period is Telefol, for which Philis and Alan Healey studied phonology (Healey 1964b), noun phrases (Healey 1965a), clauses (Healey 1965b) and clause chaining (Healey 1966). Additionally, they published a Telefol dictionary (Healey & Healey 1977).

Other Ok languages that were studied in this period comprise Tifal, Faiwol and Mian. For Tifal, Steinkraus (1963, 1969) present material about phonology, while Healey & Steinkraus (1972) and Boush (1975) examine Tifal grammar. Faiwol is described in Mecklenburg & Mecklenburg (1969, 1977) and Mecklenburg (1974). Finally, Mian was studied by the SIL missionaries Jean Smith and Pamela Weston whose work resulted in a sketch grammar (Smith & Weston 1974a, 1974b) and two articles on sentence structure (Smith 1977) and on interrogatives (Weston 1977), respectively.

The first wave of linguistic research on Ok languages was discontinued in the 1980s. A second phase of interest has been slowly emerging since around the beginning of the new millennium. Weber (1997) published a sketch grammar of Bimin and Weber (2004) phonological material of Bimin. The work on Yonggom by Christensen mentioned in the previous section also falls in this era. More importantly though, this time has witnessed two full-blown grammars: First, Fedden's (2011) comprehensive grammar of Mian. This immensely rich work makes Mian the best known Ok language to date.

Therefore, this thesis about Muyu will mostly make reference to Mian when in need for comparison with other Ok languages. The second full-blown grammar recently published is Loughnane’s (2009) account of Oksapmin, which is not classified as a proper Ok language but as a Greater Ok language. The present study aims at continuing this important work and adds another piece to the research puzzle for this language family.

Finally, we would like to mention another trend that is slowly emerging. On the Indonesian side of the island, universities nowadays offer programs in linguistics. One result of this is that young indigenous people are trained to document their own languages, usually in the form of a master thesis (Indo. *skripsi*). To the best of my knowledge, there are three theses on Ok languages so far: Sanjoko (2015) about pronouns in Ngalum, Kimko (2014) about pronouns in Muyu and Manap (2021) about verb agreement in Muyu. All these theses are written in Indonesian.

1.6 This study

1.6.1 Fieldwork and consultants

This thesis is based on extensive fieldwork that was conducted in three trips to South Papua in 2018, 2019 and 2022.¹⁸ In total, I spent 45 weeks in the field (see Table 1.1). The bulk of the work was done in Merauke with occasional trips to the villages (five weeks in total). Although Merauke is outside the traditional Muyu area, there is a considerable minority of Muyu living in the suburbs Kelapa Lima and Mopah Lama with whom I could work.

Year	Months	Duration (weeks)
2018	July-August	8
2019	July-November	16
2022	June-November	21
Total		45

Table 1.1: Temporal summary of the three field trips.

Between these locations, the work was divided as listed below. This list

¹⁸The field trips in 2019 and 2022 were funded by ELDP, project *Documentation of Muyu, a lowland Ok language of Western New Guinea*, grant IGS0367.

also includes remote fieldwork that was conducted mostly in the years 2020 and 2021 when travelling was not possible. The various types of data listed here are described in Section 1.6.2.

1. Villages:

- Most recordings
- Elicitation of vocabulary and constructions
- Some transcriptions of the recordings

2. Merauke:

- Some recordings
- Most transcriptions of the recordings
- Translation of the transcripts
- Grammatical analysis of the transcripts
- Elicitation related to grammatical topics

3. Remote fieldwork (online):

- Elicitation of vocabulary and constructions
- Elicitation related to grammatical topics

The main consultant of this project was Yakobus “Jack” Wonam. His education and occupation made him a quite knowledgeable teacher of his native language. He studied English in Jayapura and spent a semester abroad at the University of the Sunshine Coast, Australia. At the beginning of this project, he worked as an English teacher in a high school (SMK) in Merauke, but later got a position as the headmaster of a small school in the countryside. Jack started the documentation of the Muyu language in 2003 with the compilation of a dictionary in Toolbox¹⁹, which could be used in this project, see Section 1.6.2. Additionally, Jack contributed transcripts, translations, elicited sentences and judgments on invented sentences, and general knowledge about the ancestors and the traditional life in the jungle.

¹⁹Toolbox is a software for data management and analysis that was developed and published by SIL. It is available at <https://software.sil.org/toolbox/> (accessed 31 January 2023)

Further consultants were the following: Patrisius Enip contributed transcripts and translations. Fransiskus Apaenop contributed transcripts, translations and assisted in recording. Lukas Autet contributed elicited sentences and judgments on invented sentences, as well as a plethora of knowledge about his culture and lifestyle. Karel Bom, Bonifasius K, Jeremias Onggo and Kaitanus Kamoyop contributed transcripts and translations. Paulus Fatlolon helped organise many work sessions and kept track of the consultant's schedules. Galus Kolop offered his services as a driver to various field sites.

Finally, we should mention that all the consultants are above the age of 30. Although they are fluent speakers of Muyu, they rely on Indonesian in their daily life and speak their native language only occasionally. All consultants are male.

1.6.2 Data and methods

This section deals with the data that was used in this study and the methods it was gathered with. The data consists of three main elements: a large corpus of recorded texts, a dictionary with example sentences and data gathered via elicitation. Each type is discussed in turn.

The corpus contains narratives and conversations from 45 individual Muyu speakers. The majority of them are men, namely 39.²⁰ The whole corpus is stored in the ELAR archive and publically available.²¹ As this thesis is written, the corpus compilation is still in progress. A summary of yet available data is given in Table 1.2. Important are those recordings that are fully transcribed and translated. This is the case for 9 hrs 39 min, of which about two thirds are also annotated and used for analysis in this study.

The genres of the texts in the corpus are variegated: myths and folk tales, biographies and memories, procedural texts, descriptions and texts based on picture/video stimuli. The bulk of recordings contain monological speech, while conversations sum up to only 4 hrs 35 min.

²⁰Female speakers that could be recorded were particularly difficult to find. The reason is not quite clear yet. Muyu women seem to be more reluctant of being recorded than men. Most women I asked claimed that their knowledge of the language is not good enough. Some of them were probably too shy to work with a male linguist. Furthermore, women in the villages have a high workload. There is simply not much time left between cooking, laundry, taking care of children and the garden work.

²¹The bundles in the archive contain video, audio and ELAN files. The latter include transcripts, translations and grammatical glosses. Available at: <https://www.elararchive.org/dk0601/>

Type	Duration
Recordings	23 hrs 16 min
Transcripts	12 hrs 07 min
Translations	9 hrs 39 min

Table 1.2: Composition of the corpus (in December 2022).

The corpus is mostly composed of free speech. However, it also contains recordings that are based on stimuli. For this, I used the pear story video (Chafe 1980) and three picture stories.²² Additionally, there are recordings from a reading task executed by four individual speakers. In this task, a sample of words was taken from the dictionary (see below) and the speakers had to read them out loud. The sample was compiled according to phonological criteria.

Besides the corpus, an important data source for this study was the (yet unpublished) Muyu dictionary. It was started in 2003 by Jack Wonam in Toolbox. By the time the fieldwork in this project started, the dictionary contained already more than 3,000 entries, for which it offers translations to Indonesian as well as information about phonology and word class.²³ Additionally, almost all entries include one or more example sentences with Indonesian translations. Throughout the project, this dictionary was complemented with further entries, and I provided English translations for most of the entries. At the moment, it has grown up to 3,307 entries.

The third source of data is elicited material which is kept in the author's digital field notebooks. This material contains acceptability judgments on invented sentences and phrases and (if unacceptable) improved variants thereof, sentences translated from an English or Indonesian prompt, and transcripts of offered explanations. Elicited material was mostly obtained in meetings with the consultants. However, when traveling was impossible in 2020 and

²²The picture stories were obtained through spontaneous online searches. Unfortunately, their sources are no longer verifiable. They can be summarised as follows: (1.) a story about two goats who try to cross a bridge in two opposite directions simultaneously, get into a fight and fall into the river, (2.) a story about a girl picking an apple that unfortunately has a worm in it, (3.) a story about a boy feeding a dog against the will of his father.

²³Based on his studies with English dictionaries, Jack also had a good idea about which forms have multiple meanings (i.e. polysemous words) and which forms are separate words (i.e. homonyms). His intuition for these issues in the Muyu lexicon proved surprisingly robust throughout the project.

2021, Jack and I continued to work via online messenger and mostly obtained this type of data.

1.7 Some ethnographic remarks

A comprehensive ethnographic account can be found in the book-length study of Schoorl (1957/1993) and related research articles (Schoorl 1970, 1988).²⁴ This section gives only a brief outline of history (§1.7.1), social organisation (§1.7.2) and modern life (§1.7.3) in the area today.

1.7.1 History

The first catholic missionaries arrived in 1933. The Dutch missionary Petrus Hoeboer went upstream on the river MUY and landed in Ninati where he founded a mission post. This event is still remembered and often recounted today. A school in Mindiptana is named after Hoeboer.²⁵ The Catholic mission was followed by the colonial administration in 1935, and a school was opened that served as a main vehicle to spread the Christian faith. Thus, a process was started that slowly transformed the settlement pattern in the area. Prior to western influence, the MUYU originally lived on the inherited land of their patrilineage. Habitats were scattered across the forest with a maximum of two to three houses in one place (Schoorl 1993:17). The mission later attempted to concentrate the population in villages, but this change was only accepted reluctantly.

In 1969, Indonesia took over control of West Papua from the departing Dutch colonial administration and justified their occupation by the infamous “Act of free choice”, a forged referendum that was subsequently acknowledged by the United Nations. This occupation resulted in a Papuan movement for independence (following the model of neighbouring PNG) and partially in armed resistance. In 1984, this conflict reached the MUYU area. Most inhabitants were forced off their territory and moved to the cities or migrated to PNG. Glazebrook (2008:70) reports 9,500 displaced MUYU peo-

²⁴Although the articles were published much later, Schoorl’s fieldwork was done in 1954. Schoorl was the head of the administration in the MUYU area in 1955-1956.

²⁵During my 2022 fieldtrip, I attended a festival to celebrate the 89th anniversary of the arrival of Petrus Hoeboer. Inhabitants of Ninati are extensively debating about the exact spot where the boat landed.

ple in 1984-85, of which 7,500 crossed the border to PNG. Muyu were able to come back to their villages soon after the exodus, although many preferred to stay in the cities or in PNG. Muyu communities are found nowadays in all of the larger coastal cities of West Papua, most importantly Merauke, Jayapura, Manokwari and Sorong.

1.7.2 Social organisation

Schoorl (1957/1993) highlights the level of individualism among the Muyu. By this, he means that the individual is highly independent from the group in regard to the way of living, to mobility and travel, to take revenge for received harm but also in regard to land tenure. Although the territories are related to the lineages (with sacred spots and myths), the right to land is held by the individual (Schoorl 1970:36).

At the core of social organisation is the nuclear family comprising a man, his wife and their children. Each nuclear family belongs to a patrilineage, i.e. a larger social unit that is organised via kinship relations. The membership in a lineage is inherited from the father. Women marry into the lineage of their husband and marriage within these lineages is strictly prohibited. Furthermore, the lineages are important for trade relations and formerly in warfare. Although the lineages are not organised hierarchically, certain individuals (*kayabak* 'big man') can become influential through wealth and material support of others. Other kinds of authorities are unknown. Even today, the village head, an administrative requirement by the Indonesian state, has little authority over his village.

As mentioned above, marriage is arranged so that the woman marries into another lineage. Apart from the taboo against intra-lineage marriage, there seem to be no strict rules about marriage. The ideal marriage candidate for a Muyu man is his mother's brother's daughter. Women are relatively free to reject proposals, which have to be made to her parents. The institution of the bride price is very important and was traditionally paid with cowrie shells (*ot*) and garden products. Possible marriage candidates are not only other Muyu. Inter-marriage between Muyu and Mandobo people west of the Kao river are common.

An important kin relation is the avunculate, i.e. between a male and his maternal uncle. As was mentioned above, the daughter of this uncle is considered the ideal marriage candidate. Furthermore, the uncle is expected to give special care for his nephew (in the form of food and/or money) and

to take him into his house if the boy's parents pass away.²⁶ The importance of the avunculate is not confined to the Muyu. For a broader areal context, the reader is referred to de Vries (2020:161-162).

The nuclear family and the patrilineage are discernible social units whose members are clearly identifiable. Besides that, patrilineages (and their members) belong to larger social units, for which we have somewhat diverging information. Therefore, we will briefly compare the information in Schoorl (1957/1993) with the findings from my own fieldwork. My consultants made a clear distinction between three levels of social organisation: *marga*, *klen* and *suku* (note that the terms are in Indonesian). The first of them, *marga*, is the lineage as described above, while the *suku* encompasses all Muyu contrasting with other people (like Mandobo or Asmat). The level in question is the *klen*. It supposedly comprises a set of *marga* and is tied to certain areas. So, for example, all the lineages from a certain area would belong to a certain *klen*. My consultants identified six *klen* and they are identified with the six dialects listed above: Aree, Kawiyet/Kawip, Okpari, Kakaip, Kamindip, Yonggom. Therefore, the dialects of Muyu seem to coincide with membership to a *klen*.²⁷ However, the situation is probably more complex.

Schoorl (1957/1993) also recognises classifications above the lineage level but does not find a definitive system. In fact, he gets different groupings depending on whom he would ask. The two lists printed in his book only partially overlap with the dialect names seen above, namely by containing Kakaip, Kamindip (only in one list) and Yonggom.²⁸ Schoorl finds that every settlement seems to have its own classification and supposes that some of these terms indicate more the direction in which a certain group lives than real social units. Consequently, he ignores this category in his study. However, the list of my own fieldwork given above was repeated quite constantly across different consultants, even those living outside the native area

²⁶Even if this means to forcefully separate the boy from his familiar surroundings. During my field trips, I met several adults who remembered moving from Mandobo villages to their uncle's Muyu village or, in one case, from a Muyu village to the city.

²⁷Besides the relation to the dialects, my consultants would not know of any relevance of these *klen* in the social organisation of Muyu. They are neither tied to marriage patterns nor are they associated with territory like the lineages.

²⁸The full lists are: (1.) Kakaib, Kabom, Wambon, Kataöte, Ninggerum and Yonggom elicited in Yibi and (2.) Kamindip, Kakaib, Yonggom, Aöte, Morop, Ninggerum elicited in Mindiptana. Suspiciously, both include Ninggerum, which is also the name of another Ok language entirely within PNG, and Wambon which is also the name of a Greater Awyu language west of the Kao river.

in Merauke. To conclude, although a social grouping above the level of lineage is probably possible, it does not have much impact on Muyu life and is understood too little yet to make claims about its exact nature.

1.7.3 Modern life

Doing justice to the complexity of modern life is by no means possible here in such a brief outline. However, it seemed necessary to give some comments because many things changed tremendously since Schoorl collected data for his ethnographic account in the 1950s. The following reflections only put the spotlight on some aspects that seemed important to us. We first start the description with the situation in the villages before proceeding to the community in the suburbs of Merauke.

Modern infrastructure is slowly expanding into the rural areas. The improving quality of the roads and the internet access in Upytetko were already mentioned in Section 1.2.1 above. The incoming media offer an attractive pastime in the village, but they contribute further to the replacement of the local language with Indonesian since even the youngest spend their time on the internet.²⁹

Even today people in the villages live from their gardens which are inherited from the ancestors and cultivated by all members of a nuclear family. The staple foods are sago, banana, sweet potato and various kinds of vegetables. Sago preparation is a laborious task and demands hours of hard work for several people. However, many families nowadays also plant cash crops and sell their products in the city. The most important cash crop in Upytetko at the moment are peanuts. Rubber is also important, and one family started to breed chicken in larger quantities. A few families have cars and offer driving services to the market in Tanah Merah. Rice that is imported via Tanah Merah is gaining ground in the villager's diet but is still regarded as foreign food and not appropriate for a real Muyu. Fish and meat is only eaten occasionally.

Economically, the villagers do not only depend on subsistence and cash crops. Many families send their men to work in Tanah Merah, coming home on the weekends only. Also, relatives living in the coastal cities regularly send money to the village.

²⁹The village in 2022 was quieter than before the arrival of 4G; nowadays, it is common to find toddlers spending hours watching TikTok on their parent's smartphone.

Most villages have elementary schools (although teachers are often underrepresented) and school attendance is mandatory for all children. After elementary school, students can continue education in Mindiptana or Tanah Merah. Many families send their children to live with relatives or in dormitories to attend a school in these places. To even further continue education, the most popular universities are in Merauke and Jayapura.

To illustrate modern life in the cities, we briefly consider the case of Merauke, the province capital. While the city center is mostly inhabited by immigrants from other parts of Indonesia, the suburbs of Merauke are inhabited by native Papuan people and are usually divided by ethnicity. Muyu neighbourhoods are found in the quarters Kelapa Lima and Mopah Lama. Within these neighbourhoods, relatives often live close to each other. Dwellers of these urban areas do not cultivate gardens but are occupied with jobs in the city, which results in a broad range of occupations. It seems that the most attractive jobs are in public service.

The Muyu in the city have adopted many aspects of the mainstream Indonesian culture. Their diet is based on rice instead of sago and they spend their leisure time on similar activities. Most importantly in the context of this study, they have switched almost entirely to the Indonesian language, even within their own communities. Whereas speakers of Muyu are only found among the oldest people in the cities (>60 years), people around 30 do not even have a passive understanding of the language.

1.8 Notes on the corpus and examples

The analyses presented in this study are based on three types of data that are described more thoroughly in Section 1.6.2 above. Whenever possible, we tried to give examples with naturalistic data from the assembled corpus. Elicited data and data from the dictionary are used when naturalistic data was either not available or too messy to illustrate the point at hand. The source of each example is indexed right-aligned in square brackets.³⁰

Examples with interlinear glosses are composed as seen in (2). The first line is an orthographic representation of the original Muyu text and adds morpheme breaks to complex items (e.g. the final verb). The second line glosses each morpheme with lexical or grammatical meaning. Glosses with

³⁰Example sources are given only for fully glossed examples. Paradigms or wordlists were assembled from various sources and cannot be indexed uniformly.

the addition of ‘(BI)’ (like *tenaga* ‘energy(BI)’ in (2)) indicate that the morpheme is a loan from Indonesian rather than an original Muyu element. The third line gives an English translation. The right-aligned index refers to the recording in the archived corpus. Each recording has a unique ID that is composed of the prefix ‘muyu’ and a number, e.g. *muyu029*. The number right of the colon is the index of the utterance. The respective transcript can be found in the ELAN file that is archived along with this recording. For example, *muyu029:070* refers to utterance 70 in the transcript of *muyu029*.

- (2) *Kip tenaga mo monal-ip-ten=gi.*
 2PL energy(BI) just ruin-2/3PL-PFV=EMPH
 ‘You just wasted your energy!’ [muyu029:070]

For many examples, we added a context that should help the reader to understand the meaning of the utterance. This can be seen in the third line of (3). Contexts are given in square brackets between the glosses and the translation. They describe either the previous discourse or the speech situation in which the presented example was uttered.

- (3) *Om=ko yi aip ka-y-e kem-ok balin.*
 sago=PTC 3PL there.is give-PL.RCV-SM do-SBJV NEG
 [Hiding sago from the children:]
 ‘They never gave the sago to them.’ [muyu032:014]

The other data sources are simply indexed with [Dictionary], [Fieldnotes] or [elicited]. Since they are not published, there is no index to a respective file. The difference between [Fieldnotes] and [elicited] is meaningful. Both types contain data that was recorded during work with our language consultants, and we could say that both stem from some kind of elicitation (e.g. translation tasks, finding variants etc.). An example is labeled [Fieldnotes], when it was collected independent of the analysis at hand. In contrast, examples labeled [elicited] were elicited specifically for the analysis at hand. For example, when analysing demonstratives we would look for examples in the fieldnotes first (labeling them [Fieldnotes]). Next, we would elicit variations of the found examples to explicitly study the semantics of a certain element (labeling them [elicited]). Naturally, an example that was [elicited] for one specific topic can appear as [Fieldnotes] in another section of the grammar covering a different topic.

Chapter 2

Phonetics and Phonology

2.1 The phoneme inventory

This section describes the phoneme inventory and the realisation of the individual phonemes. Muyu has nine consonant phonemes /b, t, k, m, n, ŋ, l, w, j/, treated in Section 2.1.1 and five vowel phonemes /a, e, i, o, u/, treated in Section 2.1.2.

2.1.1 Consonants

The first part of this section establishes the consonant system of Muyu with the help of minimal word pairs. In the subsequent subsections, each group of consonants (plosives, nasals, liquids, approximants) are examined in closer detail.

The consonant phonemes are shown in Table 2.1.

	bilabial	alveolar	palatal	velar
plosive	/b/	/t/		/k/
nasal	/m/	/n/		/ŋ/
liquid		/l/		
approximant	/w/		/j/	

Table 2.1: Consonant phonemes.

Muyu has a rather small consonant inventory of nine phonemes, i.e. three plosives, three nasals, one liquid and two approximants. These consonants are

distributed over four places of articulation, hence we find bilabial, alveolar, palatal and velar consonants. Most noticeable is the complete absence of fricatives.¹ The most important phonemic opposition is between plosives and nasals, which contrast in three places of articulation (bilabial, alveolar, velar). Voicing (i.e. voiced vs. unvoiced) is not phonemic in Muyu but a result of the phonological environment of the respective sound. Allophones of /b/ are [p,b], allophones of /t/ are [t,d] and allophones of /k/ are [k,g]. Besides that, we find three allophones [r,l,r̥] of the alveolar liquid /l/. The liquid allophones are subject to a variation among individual speakers and may also be related to dialects. Quantity does not play a role in Muyu consonant phonology, i.e. there are no minimal pairs that make use of a contrast such as /m/ - /mː/.

Minimal pairs for word initial oppositions are given in (1)-(5). The listing is meant to be maximally distinctive. However, for some phoneme pairs there is no opposition in word initial position, e.g. /t - l/, /n - l/ or /w - l/.

- (1) bilabial /b - m - w/ (word initial)

bung ‘kind of tree’
mung ‘gall’

binggi ‘to pee’
winggi ‘to sing’

mom ‘uncle’
wom ‘inside’

- (2) alveolar /t - n - l/ (word initial)

tonggop ‘kind of tree’
nonggop ‘cassowary feather’

/t - l/ no word-initial contrast

¹Although there are no fricatives in the original Muyu system, we do find many fricatives in the recordings due to (a.) loans from Indonesian (*televisi, pastor*) and (b.) personal names of Christian origin (*Fransiskus, Yohanis*). Furthermore, Muyu speakers are mostly bilingual and therefore familiar with fricatives from Indonesian, although they recognise their absence from the Muyu lexicon.

/n - l/ no word-initial contrast

- (3) velar vs. alveolar /k - n/ (word initial)²

kin 'grave'

nin 'snake'

- (4) plosives /b - t - k/ (word initial)

beng 'sign'

teng 'itchy'

tawa 'devil'

kawa 'kind of bird'

bun 'outside'

kun 'heavy'

- (5) nasals /m - n - ŋ/ (word initial)

mit 'ready'

nit 'decade'

/m - ŋ/ no word-initial contrast

/n - ŋ/ no word-initial contrast

Minimal pairs for word internal oppositions are given in (6)-(10). Again, for some pairs, there is not word internal opposition, e.g. /k - ŋ/.

- (6) bilabial /b - m - w/ (word internal)

kabak 'ax'

kamak 'ginger'

²The velar consonant /k/ does not have a contrasting velar consonant in word initial position, since the only other velar consonant /ŋ/ does not occur word initially.

kabat 'sago midrib'
kawat 'kind of tree'

amini 'to weave'
awini 'to aim'

- (7) alveolar /d - n - l/ (word internal)

kodo 'monitor lizard'
kono 'bone'

kodop 'old'
kolop 'kind of bamboo'

onok 'eagle'
olok 'longing'

- (8) plosives /b - d - k/ (word internal)

tabon 'almost'
tadon 'kind of fish'

kobi 'on'
koki 'to fall'

bakai 'to cut seedlings'
badai 'to pluck feathers'

- (9) nasals /m - n - ŋ/ (word internal)

temi 'to see'
teni 'to melt'

/m - ŋ/ no word-internal contrast
 /n - ŋ/ no word-internal contrast

- (10) approximants/liquids /w - l - j/ (word internal)

awep ‘raw’*alep* ‘slime’*kawang* ‘raw’*kayang* ‘scream’*alun* ‘praise’*ayun* ‘bamboo’

As was mentioned above, the feature voiced vs. unvoiced is not phonemic in Muyu. There are exceptions: For example, there is a minimal pair in our data that proposes /k/ vs. /g/: *niki* ‘six’ - *nigi* ‘hold (pl.obj.)’. However, since this is the only pair with such a contrast, we do not assume two separate phonemes in the phonological system of Muyu speakers. We will discuss this issue and also the possibility of a /k/ - /g/ contrast further below.

The relevant oppositions are already established with minimal pairs giving word initial and word internal contrasts. For reasons of space, word final contrasts are not shown in this section, with one exception: /ŋ/ only occurs in the syllable coda and therefore is best illustrated via word final oppositions as in (11).

- (11) nasals /m - n - ŋ/ (word final)

bom ‘place’*bon* ‘magic spell’*kam* ‘shield’*kang* ‘blade, sharp’*aden* ‘mosquito’*adeng* ‘smoke’

2.1.1.1 Plosives

/b/

The phoneme of the bilabial plosive has two allophones [p] and [b] which are realised in different contexts.

→ [p] / ___ #

[p] is a voiceless unaspirated bilabial plosive. It occurs syllable-finally only.

badop ‘a little bit’

bopti ‘slow’

→ [b] / # ___

→ [b] / V___V

→ [b] / C___V

[b] is a voiced bilabial plosive. It occurs syllable-initially only. Word-internally, a syllable onset is always [b], irrespective of the quality of the preceding phoneme, i.e. it does not assimilate to preceding voiceless consonants.

badop ‘a little bit’

kabak ‘ax’

otbop ‘language’

tumbop ‘wet’

konbop ‘female corpse’

yongbon ‘garden’

/t/

The phoneme of the alveolar plosive has two allophones [t] and [d] which are realised in different contexts.

→ [t] / # ___

→ [t] / ___ #

→ [t] / [m ɲ] ___

[t] is a voiceless unaspirated alveolar plosive. It occurs syllable-initially and syllable-finally. Word-internally, [t] occurs after [m] and [ɲ] in the preceding syllable.

tabap ‘difficult’

akat ‘tree bark’
bengtop ‘branch’
wumtum ‘naked’

→ [d] / V__V
 → [d] / [n] __V

[d] is a voiced alveolar plosive. It occurs syllable-initially but only in inter-vocalic position. Furthermore, [d] occurs after [n] in the preceding syllable.

ada ‘feast’
kindum ‘clashing sound’

There are, however, some exceptions from the rule that [d] does not occur word-initially. The following minimal pairs are found, *inter alia*:

tim ‘louse’
dim ‘kind of fish’

tat ‘sole of foot’
dat ‘kind of frog’

tip ‘good, enough’
dip ‘kind of bird’

In all these examples, the initial consonant is contrastive. However, initial [d] in such pairs can be explained without the need to assume a phoneme /d/ in opposition to /t/. Note that the lexemes with initial [d] above all denote a kind of animal. Names that denote kinds of animals virtually never stand alone but mostly follow a classifying noun as in *on anekok* ‘bird of paradise (lit. bird anekok)’, *on dimin* ‘kind of bat (lit. bird dimin)’, *ton dim* ‘kind of fish (lit. fish dim)’. Therefore, we argue that the classifying noun and the name of the kind are actually part of one prosodic word. The allegedly word-initial [d] is actually word-internal and applies to the regular phonological rules for /t/ → [d] indicated above.

/k/

The phoneme of the velar plosive has two allophones [k] and [g] which are realised in different contexts.

- [k] / # ___
- [k] / ___ #
- [k] / V__V
- [k] / [m n] __V

[k] is a voiceless velar plosive. It occurs syllable-initially and syllable-finally. Word-internally, [k] can occur after all vowels and consonants except [ŋ].

kemen ‘betelnut’
ambuk ‘mushroom’
akok ‘firewood’
benkom ‘dirt’
temkodon ‘firm, tight’

- [g] / [ŋ] ___
- [g] / V__V (rare)

[g] is a voiced velar plosive. It occurs syllable-initially after a velar nasal [ŋ] and in a few instances also in intervocalic position.

manggan ‘daughter’
kumugap ‘moist’
alalugop ‘song’

As can be seen from the phonological rules given above, [k] and [g] are both found in the environment V__V. This is a serious challenge for the assumption that both sounds are part of the same phoneme /k/. However, there are three arguments that support the assumption of a single phoneme. Firstly, the phonological environments with a preceding nasal exhibit clear contrastive distribution. [k] occurs before [m] and [n], whereas [g] occurs before [ŋ]. Therefore, even if we assume that there are two phonemes, /k/ and /g/, we would still need an allophone [g] for /k/. Secondly, there is only a single minimal pair for which a contrast [k] vs. [g] is distinctive (*niki* ‘six’ - *nigi* ‘hold (pl.obj.)’). Thirdly, [g] is rather restricted and does not occur word-initially or syllable-finally. Furthermore, the occurrences of [VgV] are generally very limited. Altogether, there are 18 lexemes with this configuration, against approximately 200 lexemes with [VkV]. It is likely that these 18 occurrences of [VgV] can be explained without the need to

assume a phoneme /g/.³ To sum up, [g] is most likely an allophone of /k/ in most instances. Sporadic evidence of lexemes with a [VgV] sequence are not enough to distinguish two phonemes for the velar plosive.

In sum, the allomorphy of the three plosive phonemes shows some differences. For example, while /t/ and /k/ realise their voiceless allophones [t] and [k] word-initially, /b/ prefers voiced [b] in almost all contexts and is realised as [p] only word-finally. Another difference is that /t/ and /k/ are sensitive to the place of articulation of a preceding nasal, but their realisations do not pattern with the same nasals. While [t] follows [m] and [ŋ], [k] stands after [m] and [n]. Conversely [d] comes after [n], while [g] follows [ŋ]. Concerning the bilabial phoneme, only [b] is found after all three nasals.

2.1.1.2 Nasals

/m/
→ [m]

/m/ is a bilabial nasal. It occurs syllable-initially and syllable-finally.

mim ‘one’
kim ‘road’
amtam ‘dry’

The orthographic symbol <m> does not always represent the phoneme /m/. It can also represent an [m] that is the result of a phonological process of prenasalisation (see Section 2.3.2).

/n/
→ [n]

/n/ is an alveolar nasal. It occurs syllable-initially and syllable-finally.

nimin ‘hot’
tana ‘one’
benkom ‘dirt’

³For example, two items, *ogo* ‘DEM’ and *ege* ‘DEM.here’ have probably incorporated the particle =*ko* that undergoes lenisation in intervocalic contexts. Five items are verbs with a root consonant /g/ that is probably lexicalised from an earlier verb suffix -*k*. Some further items could be loans from neighbouring languages, etc.

/ŋ/
→ [ŋ]

/ŋ/ is a velar nasal. It occurs syllable-finally only.

nong ‘rope, string’
enggon ‘friend’
bengtop ‘branch’

For a few exceptions of syllable-initial /ŋ/, see Section 2.2.2.

2.1.1.3 Liquids

/l/

There is only a single phoneme for all liquids, which includes three allophones [l], [r] and [ɾ]. Unlike plosive allophones (see above), the allophony of the liquids is not bound to a context. Rather, it is a case of inter-speaker variation, i.e. some speakers prefer [l] while others use [r] and still others [ɾ]. There is also intra-speaker variation, with a few speakers using more than one realisation of this phoneme. However, the factors triggering this variation (e.g. fast speech vs. careful speech, sociolinguistic factors like age, gender, origin etc.) are not known yet at the present state of research. Orthographically, we decided to represent this phoneme always as <l>.

→ [l]

[l] is a voiced alveolar lateral approximant.

→ [r]

[r] is a voiced alveolar trill.

→ [ɾ]

[ɾ] is a voiced alveolar tap.

All of these allophones occur only word-internally in intervocalic position.

belon ‘small’
talep ‘big’
olali ‘to speak’

2.1.1.4 Approximants

/j/

→ [j]

/j/ is a voiced palatal approximant. This phoneme is the only palatal consonant in the inventory. It occurs syllable-initially only.

amyali ‘morning’

ye ‘he’

yokmom ‘afraid’

/w/

The approximant /w/ is realised as [w] or as [ʋ]. The difference is rather subtle and the factors triggering the variation are not known at the present state of research.

→ [w]

/w/ is a bilabial approximant.

→ [ʋ]

[ʋ] is a labiodental approximant.

Both variants occur syllable-initially only. However, /w/ never occurs after the homorganic nasal /m/.

adimawang ‘moss’

kowot ‘wall’

yewenup ‘gentle’

2.1.2 Vowels

Muyu comprises 5 vowel phonemes /a, e, i, o, u/. The distinction is based on vowel quality, whereas quantity plays only a minor role for /a/ vs. /a:/. There are no oppositions based on roundedness only. The phonemes are given in Table 2.2.

The following minimal pairs distinguish all five vowels in word-initial position:

i	u
e	o
a, (a:)	

Table 2.2: Vowel phonemes.

- (12) /a - e - u/:
ap ‘tree’
ep ‘puddle’
up ‘wind’
- (13) /a - i/:
adik ‘trap’
idik ‘fraction’
- (14) /a - o/:
am ‘rain’
om ‘sago’
- (15) /a - u/:
anin ‘landslide’
unin ‘type of plant’
- (16) /e - i - o - u/:
et ‘eight’
it ‘theft’
ot ‘money’
ut ‘wrinkled’
- (17) /o - u/:
on ‘bird’
un ‘kind of cuscus’

The following minimal pairs distinguish all five vowels in word-internal position:

- (18) /a - e/:
kawet ‘sago dish’
kewet ‘young person’
- (19) /a - i - o - u/:
bat ‘hunting’

- bit* ‘hill’
bot ‘stone’
but ‘shrimp’
- (20) /a - o/:
man ‘person’
mon ‘new clearing (forest)’
- (21) /e - i/:
teni ‘melt’
tini ‘change sth.’
- (22) /e - o/:
kembon ‘quiet’
kombon ‘seemingly’
- (23) /e - o - u/:
alep ‘mucus’
alop ‘two’
alup ‘vegetables’
- (24) /i - u/:
walik ‘kind of tree’
waluk ‘spell’

Vowel quantity plays a minor role in the Muyu phoneme inventory. The only long vowel attested so far is /a:/. There are a few minimal pairs like the following:

- (25) /a - a:/:
bat ‘piece’
baat ‘brother in law’
- anggi* ‘sleep’
aanggi ‘cut (pl.obj.)’

2.1.2.1 Description of the vowels

Muyu has five vowel phonemes: /a, e, i, o, u/. For their phonetic realisation see Section 2.1.2.2. The following examples show monosyllabic words that illustrate each vowel in syllable-initial, syllable-medial and syllable-final po-

sition.

/a/ is an open unrounded vowel.

ap ‘tree’

bat ‘hunting’

ta ‘and’

/e/ is a mid front unrounded vowel.

ep ‘puddle’

ben ‘arm’

ye ‘he, his’

/i/ is a close front unrounded vowel.

it ‘theft’

bim ‘earthquake’

yi ‘they, their’

/o/ is a mid back rounded vowel.

ot ‘money’

bon ‘place’

mo ‘only’

/u/ is a close back rounded vowel.

up ‘wind’

buk ‘soft’

yu ‘she, her’

2.1.2.2 Phonetic realisation of vowels

The phonetic realisation of the five vowels was investigated with the help of a reading task. Acoustic data were collected from four speakers. Each speaker was seated indoors in front of a laptop and was asked to read individual words from a power point presentation (one word per slide). The main investigator sat beside the speaker and clicked through the presentation. The recordings were made with a head-mounted microphone and a TASCAM audio recorder. Formant analysis was carried out with PRAAT (Boersma & Weenink 2023). I selected lexical items with two open syllables (i.e. /CV.CV/) of which the

first syllable was the target. For each vowel, two phonological contexts were selected (/t/ and /b/). In total, we collected five vowels in two contexts from four speakers, resulting in 40 data points. Detailed results of this procedure are listed in Appendix A. The phonetic realisation is given in the formant plot in Figure 2.1.

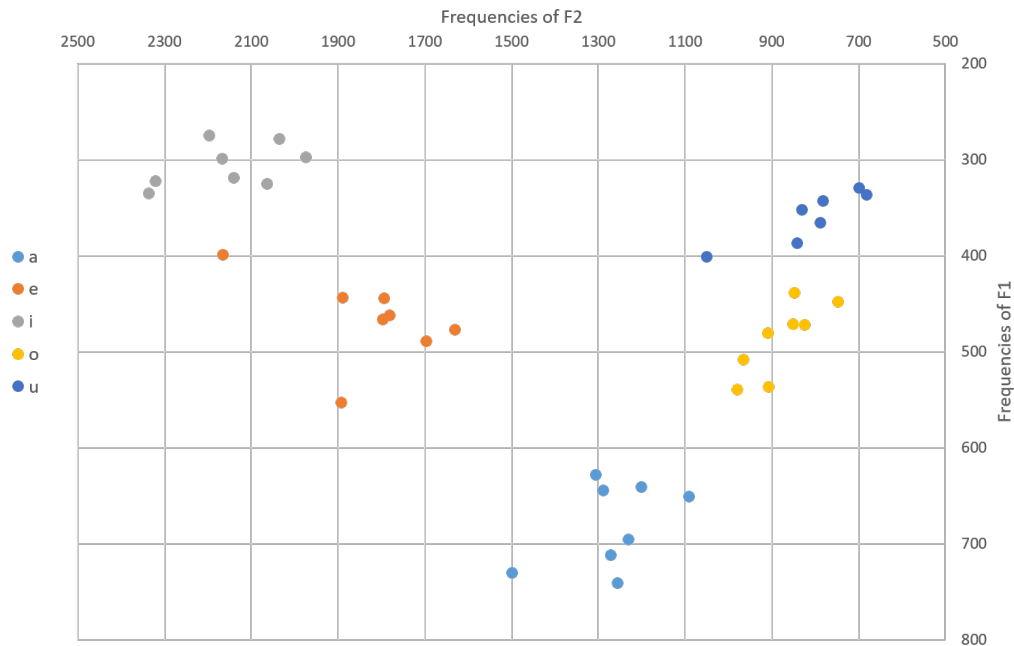


Figure 2.1: Formant plot of the five vowels.

As can be seen from Figure 2.1, all five vowels are delimited clearly, without any overlaps (neither inter-speaker nor intra-speaker). The close vowels are asymmetrical with the articulation of [i] a little higher than [u]. In contrast, the mid vowels [e] and [o] are roughly on the same level. The open vowel [a] is horizontally closer to the back vowels than to the front vowels. Central vowels like [ə] have not been found.

2.1.2.3 Harmonising vowels

A few verb roots have a root vowel that harmonises with the vowel of a suffix. Since there are no bare verb roots in Muyu (i.e. there is always at least one suffix to a verb root), we cannot assume a ‘default quality’ for these vowels.

Harmonising verb roots are e.g. *wVn* ‘go’, *mVn* ‘come’, *kawVn* ‘climb’ and *towVn* ‘pass’. In (26), some forms of the verb root *wVn* ‘go’ are given. The other verb roots behave analogously.

- (26) some forms of the vowel harmonising root *wVn* ‘go’:
wen-en ‘he goes’
wun-un ‘she goes’
win-ip ‘they/you (pl) go’
wan-an-up [go-IRR-1PL] ‘we will go’
- (27) some forms of the non-harmonising root *tan* ‘die’:
tan-on ‘he died’
tan-un ‘she died’
tan-ip ‘they/you (pl) died’
tan-an-up ‘we will die’

The various subject suffixes attached to the root in (26) determine the quality of the preceding root vowel. In contrast, the root vowel of a non-harmonising verb root as in (27) never changes. Note that the determining vowel does not have to be the vowel of the subject suffix. As can be seen from the last form given in (26), *wan-an-up* ‘we will go’, the root vowel always harmonises to the closest suffix (in this case irrealis *-an*).

2.1.2.4 Vowel variation in two auxiliary verbs

The verb roots described in the previous section harmonise their vowel without exceptions. In contrast, there are two auxiliaries that are found either with a harmonising vowel or with a fixed vowel in the corpus. These are the roots *kel/kVl* ‘become’ and *kem/kVm* ‘do’. Formal variation as in the following examples is attested in our corpus:

- (28) some forms of the root *kel/kVl* ‘become’:
kel-up ‘we become’
kul-up ‘we become’
kel-ip ‘they/you (pl) become’
kil-ip ‘they/you (pl) become’
- (29) some forms of the root *kem/kVm* ‘do’:
kem-up ‘we do’

kum-up ‘we do’
kem-ip ‘they/you (pl) do’
kim-ip ‘they/you (pl) do’

The reason for this variation is not clear yet. It is possibly an idiolectal variation with some speakers preferring to harmonise the vowel and others fixing it to /e/. Sociolinguistic factors could also play a role but have not been investigated yet.

2.2 Phonotactics

2.2.1 Syllable structure

A Muyu syllable consists minimally of a vowel as the nucleus. Additionally, we find a consonant onset and a consonant coda in many syllables.

$$\sigma \rightarrow (C)V(C)$$

The nucleus is the only obligatory element of a syllable, while onset and coda are optional. Therefore, we find the syllable structures V, CV, VC and CVC. There are no consonant clusters within the syllable.

Some monosyllabic words are given in (30). Monosyllabic words are not preferred and are less frequent than disyllabic or trisyllabic words.

- (30)
- | | | |
|------|-------|-----------------|
| V: | [i] | ‘older brother’ |
| VC: | [ɛp] | ‘puddle’ |
| | [it] | ‘theft’ |
| CV: | [nɛ] | ‘I’ |
| | [yɛ] | ‘he’ |
| CVC: | [kɛp] | ‘you (masc.)’ |
| | [but] | ‘shrimp’ |

Disyllabic words have the preferred word structure and form the largest group in the Muyu lexicon. Most of the possible syllable structure combinations are attested:

- (31) V.VC: [a.ɛn] ‘left’

V.CV:	[i.nɛ]	‘tomorrow’
	[a.da]	‘feast’
V.CVC:	[a.dən]	‘sun’
	[ɔ.gan]	‘foreigner’
VC.CV:	[am.bi]	‘male (animal)’
	[aŋ.gɔ]	‘thumb’
VC.CVC:	[am.ban]	‘wife’
	[um.kan]	‘blood’
CV.CV:	[ka.ba]	‘estuary’
	[ki.li]	‘new’
CV.CVC:	[bɛ.lən]	‘small’
	[wɛ.lɛn]	‘sick’
CVC.CVC:	[mɔŋ.gɔp]	‘nephew’
	[jaŋ.gan]	‘torch’

Trisyllabic words are not as numerous as disyllabic words. However, they still outnumber monosyllabic words. Some possible syllable combinations are given in the following examples:

(32)	V.CV.CV:	[ɔ.ma.ni]	‘banana’
	V.CV.CVC:	[i.na.mɛn]	‘truth’
	V.CVC.CVC:	[ɔ.wɔŋ.gɔm]	‘noise’
	VC.CV.CVC:	[am.bi.kin]	‘land’
	CV.CV.CV:	[ka.mɛ.na]	‘strong’
	CV.CV.CVC:	[kɔ.dɔ.lɔk]	‘head’
		[ta.ba.dap]	‘thin’
	CV.CVC.CVC:	[bi.lam.bip]	‘village, area’
	CVC.CV.CVC:	[kɔk.ma.ja]	‘bitter’
	CVC.CV.CVC:	[kam.ti.map]	‘mold’
	CVC.CVC.CV:	[tiŋ.gam.bɔ]	‘hip’
	CVC.CVC.CVC:	[nung.gut.bin]	‘kind of bird’

Finally, Muyu comprises some quadrisyllabic words. Identifying such words is difficult, since many of them could represent compounds of which the elements have not been identified yet. Two examples shall suffice here:

(33)	V.CV.CV.CVC:	[a.di.ma.wang]	‘moss’
	CVC.CV.CV.CVC:	[nɔŋ.gɔ.nɔ.kap]	‘bicycle, motorcycle’

2.2.2 Phonotactics of consonants

Consonant allophones can be grouped according to their distribution in certain syllable positions. The only consonantal phoneme which is barred entirely from syllable onsets is /ŋ/. All other consonants have at least one allophone in the onset. The phoneme /p/ does not allow its unvoiced allophone [p] in the onset, whereas [t] and [k] can occur in the onset. The syllable coda can take either an unvoiced plosive, i.e. [p], [t] or [k], or any of the three nasals. Table 2.3 gives an overview of the consonant distribution in syllable positions.

	[p]	[b]	[t]	[d]	[k]	[g]	[m]	[n]	[ŋ]	[l,r,r]	[w]	[j]
onset	-	+	+	+	+	+	+	+	-	+	+	+
coda	+	-	+	-	+	-	+	+	+	-	-	-

Table 2.3: Consonant allophone distribution in a syllable.

As was mentioned in Section 2.2.1, consonant clusters within a syllable are not permitted. What is possible, however, are consonant sequences across syllable boundaries, i.e. a coda is adjacent to an onset. Possible combinations for consonants are given in Table 2.4. Combinations of identical consonants (e.g. [m] + [m]) are impossible since there are no geminate consonants. The most restricted onsets are [d] which can only follow [n] and [g] which can only follow [ŋ]. However, these two consonants are allophones of /t/ and /k/ respectively and their other allophones cover most of the remaining combinations. The allophones of /l/ are neither found as onsets nor as codas next to another consonant, since they are only present in the intervocalic position. The most widely used onset is the approximant [j] which can follow every available coda consonant. In contrast, the approximant [w] is not compatible with homorganic codas. This condition is never met for [j] which is the only palatal consonant. The nasals [m] and [n] are also freely available for every coda consonant except for identical consonants. All in all, the Muyu phonotactic systems allows for a wide range of possible consonant combinations as long as they are separated by a syllable boundary.

Here are some examples to illustrate each consonant combination:

- (34) with [b] as onset:
 [t] + [b]: [ɔt.bɔp] ‘language’
 [k]+[b]: [tɛk.bat] ‘bowstring’

coda (right) / onset (down)	p	t	k	m	n	ng
b	-	+	+	+	+	+
t	+	-	+	+	-	+
d	-	-	-	-	+	-
k	+	+	-	+	+	-
g	-	-	-	-	-	+
m	+	+	+	-	+	+
n	+	+	+	+	-	+
w	-	+	+	-	+	+
j	+	+	+	+	+	+

Table 2.4: Consonant combinations across syllable boundaries.

- [m]+[b]: [am.bi] ‘male’
 [n]+[b]: [kən.bəp] ‘female corpse’
 [ŋ]+[b]: [yɔŋ.bən] ‘garden’
- (35) with [t] as onset:
 [p]+[t]: [bəp.ti] ‘slow’
 [k]+[t]: [tuk.tup] ‘fruit flies’
 [m]+[t]: [wum.tum] ‘naked’
 [ŋ]+[t]: [bɛŋ.təp] ‘branch’
- (36) with [d] as onset:
 [n]+[d]: [bɛn.dəm] ‘elbow’
- (37) with [k] as onset:
 [p]+[k]: [ɛp.kat] ‘clothes’
 [t]+[k]: [adət.ki] ‘son in law’
 [m]+[k]: [um.kan] ‘blood’
 [n]+[k]: [bɛn.kəm] ‘dirt’
- (38) with [g] as onset:
 [ŋ]+[g]: [ang.gɔ] ‘thumb’
- (39) with [m] as onset:
 [p]+[m]: [tɛp.mə.ni] ‘to insert’
 [t]+[m]: [kɛt.ma] ‘side’
 [k]+[m]: [yək.məm] ‘afraid’

- [n]+[m]: [tun.mə] ‘always’
 [ŋ]+[m]: [ɔn.ɔŋ.mi] ‘to make’
- (40) with [n] as onset:
 [p]+[n]: [ɔp.nən] ‘evening’
 [t]+[n]: [bət.nɛŋ] ‘potato’
 [k]+[n]: [kuk.ni] ‘white’
 [m]+[n]: [tumni] ‘become moist’
 [ŋ]+[n]: [ku.lung.ni] ‘quiet’
- (41) with [w] as onset:
 [t]+[w]: [but.wap] ‘clearing’
 [k]+[w]: [tɛk.wa.li] ‘brave’
 [n]+[w]: [mən.wa.li] ‘to damage’
 [ŋ]+[w]: [am.bang.wən] ‘friend’
- (42) with [j] as onset:
 [p]+[j]: [ta.nip.ja] ‘day before yesterday’
 [t]+[j]: [ka.lat.jap] ‘scar in face’
 [k]+[j]: [tek.jəm] ‘kind of shrimp’
 [m]+[j]: [am.ja.li] ‘morning’
 [n]+[j]: [an.jan] ‘younger sister’
 [ŋ]+[j]: [mɛ.nɛŋ.ya.ɔp] ‘greedy’

There are a few exceptions from the rule that /ŋ/ cannot stand in the syllable onset. The following list is exhaustive:

- (43) *ambanga* ‘grandparents’ → [am.ba.ŋa]
bedenongai ‘oppose’ → [bɛ.dɛ.nɔ.ŋai]
kongat ‘kind of fruit’ → [kɔ.ŋat]
kulungot ‘growling of dogs (onom.)’ → [ku.lu.ŋot]
mongadep ‘greedy’ → [mɔ.ŋa.dɛp]
nengutkon ‘kind of bird’ → [nɛ.ŋut.kɔn]
ungeng ‘sound of crickets (onom.)’ → [u.ŋɛŋ]

At first glance, these lexemes show that /ŋ/ can occur in the onset position. However, most of these syllable structures can be explained without the need to revise the phonotactics of /ŋ/. First, we have two lexicalisations. *Ambanga* ‘grandparents’ is clearly a lexicalisation of *ambang* ‘grandfather’ and kinship plural *-a*. Similarly, *mongadep* ‘greedy’ has lexicalised from a no longer identifiable root **mong* with the postposition *adep* ‘like’. Secondly,

two of the lexemes are onomatopoeic and thus cannot be expected to follow the phonotactic restrictions of the Muyu phonology. This leaves us with three possible candidates: *bedenongai* ‘oppose’, *kongat* ‘kind of fruit’ and *nengutkon* ‘kind of bird’. Two of them refer to kinds and could be borrowings from surrounding languages. In any case, these isolated instances are not enough evidence to justify /ŋ/ in the syllable onset.

2.2.3 Phonotactics of vowels

There is no phonotactic restriction on vowels and all five vowels /a, e, i, o, u/ are found in the syllable nucleus either with coda or onset or both. Likewise, there are no restrictions on consonant-vowel combinations, i.e. all vowels are found after all consonants (e.g. /t/ + /a/, /t/ + /e/, /t/ + /i/, ...). This holds also true when looking at the level of allophones (e.g. [t]+[a] and [d]+[a]), with the exception of [p] which is an allophone of /b/ and can occur only syllable-finally, i.e. not followed by any vowel.

As was the case for consonant sequences (see Section §2.2.2), sequences of vowels occur only across syllable boundaries. This is the same as to say that there are no diphthongs in Muyu. Vowel-vowel sequences are restricted depending on the first vowel. Two vowels with equal vowel quality are never found in a sequence. /a/ is the only vowel that can be combined with all other vowels as indicated in the following examples:

- (44)
- | | | |
|----------|---------------|-------------------|
| [a]+[ɛ]: | [a.ma.ɛn] | ‘another time’ |
| [a]+[i]: | [a.ip] | ‘very’ |
| [a]+[ɔ]: | [ka.ɔp#ka.ɔp] | ‘fake, pretended’ |
| [a]+[u]: | [ka.wa.up] | ‘poor man’ |

Each of the following vowel-vowel sequences are attested only in a minor number of lexemes:

- (45)
- | | | |
|----------|--------------|----------------------------------|
| [ɛ]+[a]: | [nɛ.a] | ‘or’ |
| [ɛ]+[i]: | [bɛ.it] | ‘date’ |
| [i]+[a]: | [wi.a.mung] | ‘late at night’ |
| [i]+[ɔ]: | [ki.ɔp] | ‘imitation’ |
| [i]+[u]: | [ki.up] | ‘Muyu name for the Digoel river’ |
| [u]+[a]: | [a.nɔ#ku.ap] | ‘kind of bow’ |
| [u]+[ɔ]: | [ɔk#bu.ɔk] | ‘water in a puddle’ |

Not attested are combinations with /o/ as the first vowel as well as [ɛ.ɔ], [ɛ.u], [i.ɛ], and [u.ɛ]. These findings allow for the generalisation that vowel-vowel sequences tend to be maximally contrastive. Vowels that are articulated in similar tongue positions are generally avoided.

A special case is /i/ which is often found in the syllable coda following /a/. Most prominently, this is found on verbs with infinitive *-i* when the verb has a vocalic root ending in /a/:

- (46) *bada-i* ‘pull out (pl.obj.)’ → [ba.daj]
nekwa-i ‘prepare’ → [nɛk.waj]
wina-i ‘collect’ → [wi.naj]

The final [j] in all verb endings in (46) is a realisation of the vowel /i/ and is not to be interpreted as an example of the consonant phoneme /j/ in the coda. This becomes clear by comparing vocalic roots with regular verbs. Vocalic roots are irregular verbs, while regular verbs always end in a consonant. Consequently, infinitive *-i* becomes the nucleus of an open syllable:

- (47) *angg-i* ‘sleep’ → [aŋ.gi]
kobom-i ‘knock’ → [kɔ.bɔ.mi]
yal-i ‘put (pl.obj.)’ → [ja.li]

To sum up, /i/ is the only vowel that can stand in the syllable coda.

2.3 Morphophonology

2.3.1 Lenition

The voiceless plosives /p/, /t/ and /k/ lenite at morpheme boundaries (symbolised with ‘+’) if two conditions are met: (1.) the consonant is in intervocalic position and (2.) the plosive is not word-initial.

- (48) /p/ → [w] / V__+V
/t/ → [l] / V__+V
/t/ → [d] / V+__V
/k/ → [ŋ] / V__+V
/k/ → [ŋ] / V+__V

Note that lenition in Muyu strictly distinguishes word boundaries from mor-

pHEME boundaries. A word-initial consonant does not undergo lenition. In contrast, an enclitic that meets the conditions in (48) does undergo lenition, since the boundary between the enclitic and its host is not a word boundary. (For examples of both see below.)

In (48) above, there are two phonological rules in relation to /k/ and /t/, one for each side of a morpheme boundary. This ensures lenition for final consonants in words like *kaduk* ‘man’ as well as initial consonants in enclitics like =*ko*. In contrast, there is no corresponding rule for /p/ since this plosive occurs only as voiced [b] word-initially.

Examples for each consonant are given in turn. The following examples show lenition of /p/ to [w]:

- | | | |
|------|--------------------------------|-----------------------------|
| (49) | /tip/ ‘good’ + /an/ COP | [ti.wan] ‘It’s good.’ |
| | /alop/ ‘two’ + /odo/ DEM | [a.lɔ.wɔ.dɔ] ‘those two’ |
| | /ambip/ ‘house’ + /alop/ ‘two’ | [am.bi.wa.lɔp] ‘two houses’ |

The next three examples show lenition of /t/ to [l]:

- | | | |
|------|----------------------------------|---------------------------------------|
| (50) | /ot/ ‘money’ + /aip/ ‘there is’ | [ɔ.lap] ‘there is money’ ⁴ |
| | /bit/ ‘hill’ + /alop/ ‘two’ | [bi.la.lɔp] ‘two hills’ |
| | /tut/ ‘forest’ + /ambip/ ‘house’ | [tu.lam.bip] ‘forest house’ |

Finally, the following examples show lenition of /k/ to [ɣ]:

- | | | |
|------|---------------------------------|-------------------------------|
| (51) | /kodolok/ ‘head’ + /odo/ DEM | [kɔ.dɔ.lɔ.ɣɔ.dɔ] ‘that head’ |
| | /kaduk/ ‘man’ + /iptem/ ‘smell’ | [ka.du.ɣip.tɛm] ‘human smell’ |
| | /ok/ ‘water’ + /adep/ ‘like’ | [ɔ.ɣa.dɛp] ‘like water’ |

As mentioned above, plosives do not lenite when they are in word-initial position. This restriction is not relevant for /p/ which only occurs as its voiced allophone [b] word-initially. For /t/ and /k/, however, this rule does apply, as can be seen clearly with possessive pronouns:

- | | | |
|------|-----------------------------------|-----------------------------------|
| (52) | /yu/ 3SG.F + /taman/ ‘y. brother’ | [ju.ta.man] ‘her younger brother’ |
| | /ye/ 3SG.M + /kon/ ‘woman’ | [jɛ.kɔn] ‘his wife’ |

The possessive pronouns *yu* 3SG.F and *ye* 3SG.M in (52) create an intervocalic context for the unvoiced plosives /t/ and /k/. However, since these are word-initial consonants, lenition does not apply. In contrast, enclitics can

⁴For the elision of /i/ in /aip/ see Section 2.3.3.

also have initial /t/ or /k/, e.g. =*tem* ‘in’ or =*ko* ‘PTC’. If they cliticise to a vowel-final host, lenition applies:

- (53) /jowo/ ‘sago bag’ + /tem/ ‘in’ [jɔ.wɔ.dɛm] ‘in the sago bag’
but: /ok/ ‘water’ + /tem/ ‘in’ [ɔk.tɛm] ‘in the water’
 /ne/ 1SG + /ko/ PTC [nɛ.ɣɔ] ‘I’
but: /kip/ 2PL + /ko/ PTC [kip.kɔ] ‘you (pl)’

Note that lenition of /t/ differs depending on the position of the morpheme boundary. /t/ right of a morpheme boundary lenites to [l], whereas /t/ left of a morpheme boundary lenites to [d].

Word-internally, there is a single verb suffix in Muyu that can undergo lenition: the perfective marker *-ten*. If this suffix is preceded by a vowel, /t/ lenites to [d]. This conforms to the general rule of /t/ lenition given above. The initial consonant is only in some verb inflections in intervocalic position. The subject suffixes *-a* ‘1SG’, *-o* ‘3SG.M’ or *-u* ‘3SG.F’ lead to intervocalic lenition:

- (54) *angg-a-den* ‘I slept’ [aŋ.ga.dɛn]
angg-o-den ‘He slept’ [aŋ.gɔ.dɛn]
angg-u-den ‘She slept’ [aŋ.gu.dɛn]

However, the subject suffixes *-ep* ‘2SG’, *-up* ‘1PL’ or *-ip* ‘2/3PL’ do not lead to an intervocalic position of /t/ and therefore prevent lenition:

- (55) *angg-ep-ten* ‘You slept’ [aŋ.gɛp.tɛn]
angg-up-ten ‘We slept’ [aŋ.gup.tɛn]
angg-ip-ten ‘They/you (pl) slept’ [aŋ.gip.tɛn]

2.3.2 Prenasalisation

The phonological process of prenasalisation applies only to /b/ in intervocalic position if it is preceded by a morpheme boundary. In this process, the [m] occurs in the preceding syllable coda.

- (56) /b/ → [m.b] / V+__V

As was the case with lenition, the rule does not apply to word-initial /b/. Hence, there are only two lexical elements to which this rule can apply: (1.) the enclitic oblique marker =*bet*, and (2.) the negation marker *balin*.

- (57) /wupki/ ‘brother’ + /bet/ OBL [wup.kim.bɛt]
 /eya/ ‘here’ + /bet/ OBL [ɛ.yam.bɛt]
- (58) /bopti/ ‘slow’ + /balin/ NEG [bɔp.tim.ba.lin] ‘don’t be slow’
 /kumunggi/ ‘talk’ + /balin/ NEG [ku.muŋ.gim.ba.lin] ‘don’t talk’

The examples in (57) and (58) show that prenasalisation only applies to enclitics. Word-internally, we find many combinations of /b/ directly preceded by a vowel without intermediate nasal:

- (59) [ka.ba] ‘estuary’
 [ki.bik] ‘today’
 [tɛ.bi] ‘wake up’

Examples as those in (59) show that prenasalisation is quite restricted in Muyu phonology.

2.3.3 Elision of vowels

Vowel elision occurs to avoid hiatus when two vowels of two separate morphemes become adjacent. One of the two vowels is elided and the remaining vowel enters syllabification. This process is mostly found in fast speech. In careful speech, however, speakers often pronounce both adjacent vowels.⁵

- (60) /ade/ ‘father-in-law’ + /adep/ ‘like’ [a.dɛ.dɛp] ‘like (my) father-in-law’
 /ena/ ‘mother’ + /emba/ ‘father’ [ɛ.nam.ba] ‘parents’
 /tana/ ‘child’ + /odo/ DEM [ta.na.dɔ] ‘that child’
 /atma/ ‘side’ + /ege/ DEM.here [at.ma.ʏɛ] ‘this side’

In all the cases above, the elided vowel is the second vowel. Although the second vowel is more often elided than the first vowel, this is not necessarily the case, as the following example shows:

- (61) /ne/ 1SG + /aip/ ‘there is’ [na.ip] ‘to me (BEN)’

At the present state of knowledge, we do not see any rules that determine which of the two vowels will be elided. Further research is needed.

⁵Therefore, vowel elision differs from other phonological processes like lenition and prenasalisation which occur both in fast and in careful speech.

Another case of vowel elision applies to the existential marker /aip/. In fast speech it is often pronounced as [ap] or [ip] (the latter also with glide insertion, see Section 2.3.5). However, in careful speech, we always find a clearly disyllabic [a.ip].

The most frequently encountered lexical item that undergoes vowel elision is the copula /an/:

(62) *om kok mo=n*
 sago dry only=COP
 ‘It was only dry sago.’

(63) *medep ye aninggo=n*
 what 3SG.M name=COP
 ‘What does it mean?’

When a copula is adjacent to a vowel-final element, it is always the vowel of the copula that is elided.

2.3.4 Elision of consonants

When two homorganic consonants cluster at both sides of a morpheme boundary, one of them is elided.

(64) /kibik/ ‘today’ + /ko/ PTC [ki.bi.kə]
 /kudok/ ‘good’ + /kudok/ ‘good’ [ku.də.ku.dək]
 /but/ ‘shrimp’ + /ton/ ‘fish’ [bu.tən]
 /mim/ ‘one’ + /mo/ ‘only’ [mi.mə]
 /ton/ ‘fish’ + /nowan/ ‘nothing’ [tə.nə.wan]
 /talep/ ‘big’ + /balin/ NEG [ta.lɛ.ba.lin]

The consonant being elided is the first consonant, as can be seen from the final example in (64). The resulting syllable is [ba] rather than [pa]. If the second consonant was elided, we would expect lenition to take place, hence we would get *[wa]. Since this is not the case, we must conclude that the first consonant is elided.

However, if the clustering consonants are articulated in different places, no elision takes place:

(65) /kaduk/ ‘man’ + /tana/ ‘child’ [ka.duk.ta.na]
 /adimbon/ ‘bridge’ + /mim/ ‘one’ [a.dim.bən.mim]

2.3.5 Glide insertion

Glide insertion is another process to avoid vowel hiatus (besides vowel elision, see Section 2.3.3). However, this phenomenon is quite rare and only found occasionally in the corpus. Consider the following examples, where a glide [j] is inserted before the copula:

- (66) *ayi=[j]an=o*
 lizard=COP=QUOT
 ‘It’s a lizard! (he said).’
- (67) *anengg-i=mo=[j]an*
 eat:PL-INF=always=COP
 ‘They usually eat it.’

More frequently we find the vowel of the copula elided, resulting in a syllable structure like [a.ji.no] for (66). Given the present state of knowledge, no factors can be named that motivate glide insertion instead of vowel elision. Further research is needed.

The only context in which glide insertion is robustly preferred over vowel elision is related to quotative marking. When the quotative clitic =*o* is attached to an open syllable, a glide [j] is inserted:

- (68) *Ena, nup otbop=bet olal-e=[j]o.*
 mother 1PL language=OBL talk-2SG.IMP=QUOT
 ‘Mom, talk in our language!’

2.3.6 Reduplication

Full reduplication is found in Muyu only sporadically. Some examples are given in (69). However, reduplication is not very frequent and probably a calque from Indonesian.⁶ The function of reduplication is not fully clear yet and it probably depends on the reduplicated lexeme.

- (69) /tana~tana/ ‘children’ < /tana/ ‘child’
 /nimbin~nimbin/ ‘women’ < /nimbin/ ‘women’(!)

⁶The hypothesis that reduplication is a calque from Indonesian is corroborated by the fact that Mian appears not to have reduplication (Fedden 2011). Mian is located at the PNG side of the island and therefore, we do not expect any influence from Indonesian.

/kudok~kudok/ ‘very good(?)’	<	/kudok/ ‘good’
/anikat~anikat/ ‘sick(?)’	<	/anikat/ ‘illness’
/nowan~nowan/ ‘nothing(?)’	<	/nowan/ ‘nothing’

One function of reduplication is nominal plural (see Section 3.2.9) and intensification of adjectives (see Section 3.4.3). As for the phonological pattern, we find only full reduplication (rather than partial reduplication). The resulting forms undergo regular phonological processes, e.g. we find elision of /k/ in /kudok~kudok/ as shown in Section 2.3.4.

2.4 Some remarks on prosody

This section gives a first outline of some prosodic features of Muyu. It is by no means complete since a thorough study of Muyu prosody is still outstanding.

In the context of the Ok language family, it is most noticeable that Muyu lacks lexical tone. Most mountain Ok languages are reported to have some kind of lexical tone system (Healey 1964:61). Fedden (2011:Ch. 2) describes the Mian word tone system using an autosegmental approach as having five distinct tonal melodies (L, H, LH, LHL, HL) for which words are lexically specified. Such a system is clearly missing in Muyu. Less straightforward is the question of whether or not Muyu has lexical stress, as we will see next.

2.4.1 (Lack of) lexical stress

Evidence for lexical stress in Muyu varies. Both Drabbe (1954) and Christensen (2013) report the existence of non-phonemic accent/stress on the lexeme level for their respective dialect. According to Drabbe, an “accent” (which is not further specified) is on the last syllable of each word, and a “minor accent” (i.e. secondary stress) on the first syllable of a trisyllabic word. In contrast, Christensen reports the lexical stress (realised as “both increase in loudness and pitch” (p. 4)) always to be on the first syllable. Although he does not explicitly mention secondary stress, his example words comprise symbols for primary and secondary stress:

- (70) Christensen’s (2013:5) lexical stress in Yonggom:
 [‘ka.bak] ‘axe’
 [‘u.ni.tap] ‘bent’
 [‘ki.a.mu.nɛ] ‘like-that’

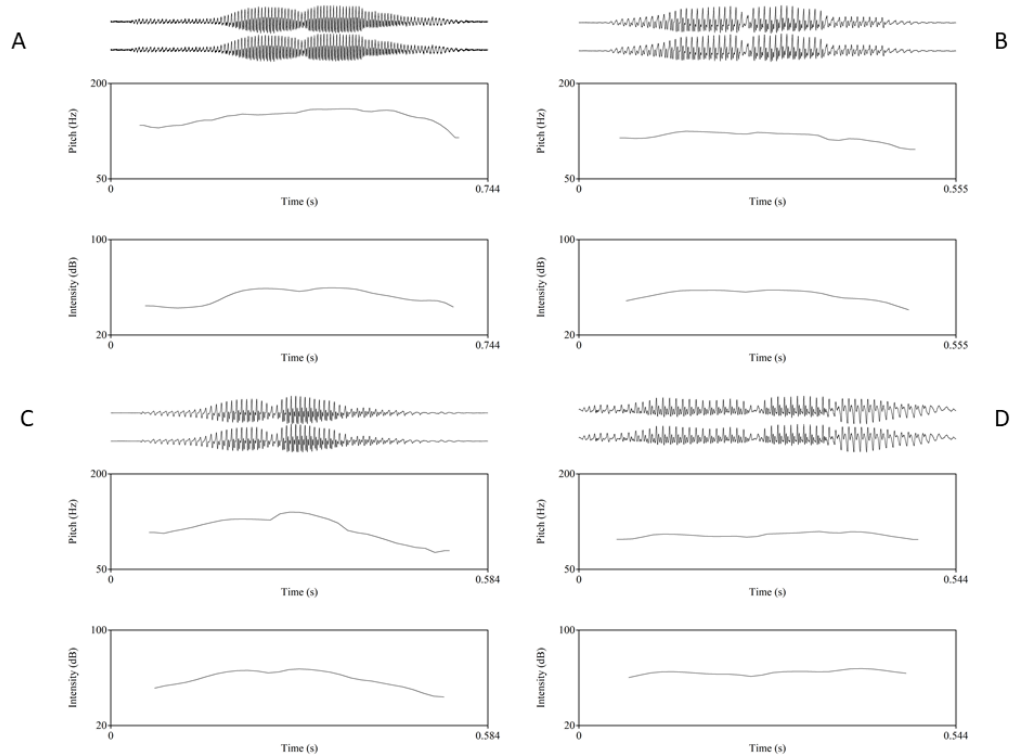


Figure 2.2: Four different realisations of the word *yulun* in a reading task. Uttered from different speakers A, B, C and D. Each panel shows the sound waves (top), the pitch contour in Hz (middle) and the intensity in dB (bottom).

['bi.aŋ.ˌga.nɛ.wɛn] 'you removed'
 ['ka.na.ˌwa.na.wan.di.ˌwɛn] 'they surrounded'

As can be seen from the distribution of secondary stress symbols in (70), Christensen analyses Yonggom words to have metrical stress with a disyllabic foot and trochaic meter. Drabbe's and Christensen's findings are not compatible with each other (accent on the first syllable vs. stress on the last syllable). One possible explanation could point to the different dialects. Probably the Ninati and Metomka dialects (Drabbe) have a different system for lexical stress than Yonggom (Christensen). However, our findings for the Kawip dialect point in another direction.

It seems that speakers of Kawip do not assign lexical stress at all. Although we did not investigate the topic systematically, there are two kinds of (very preliminary) evidence for a lack of lexical stress. Firstly, when confronted with two contrastively stressed tokens of one and the same word, e.g. /'yu.lun/ vs. /yu.'lun/, our consultants do not judge one realisation as 'better' than the other.⁷ If lexical stress was specified for each word type, we would expect clear judgements and occasional corrections of wrongly assigned stress. Secondly, a cursory acoustic comparison of several lexical items in our reading task (see Section 2.1.2.2) did not lead to any conclusion. As an example, consider Figure 2.2, illustrating pitch and intensity of four different realisations of the word *yulun* 'kind of fish'. Each realisation is from a different speaker (A, B, C and D). The four panels show the sound waves (top), the pitch contour (middle) and the intensity (bottom) for each realisation. In three of four realisations, the pitch contour is flat (A, B and D), i.e. the pitch rate is at the same level at each syllable. The realisation of C shows a higher pitch rate on the second syllable and a steeper fall at the end of the word than in the other three realisations. In contrast, the intensity is flat across all four realisations. With the exception of C, the acoustic measures of pitch rate and intensity do not indicate that one of the two syllables is more prominent. The divergent realisation of C is maybe influenced by an intonation contour that aligns at the utterance level.⁸ Therefore, we did not find any acoustic correlates yet that could justify more prominence of one syllable over the other. Unless there are more subtle cues to syllable prominence, we conclude that the Kawip dialect of Muyu does not have lexical stress.

2.4.2 Stress attracting morphemes

Although Muyu probably has no regular lexical stress patterns, there are verb suffixes that affect a clearly audible accent: *-d* 'DUR' and *-n* 'SS'. These two morphemes attract stress on the vowel directly preceding them.

Consider Figure 2.3 that gives the pitch contours of two realisations of similar verb forms. The left panel shows *wenó-d-un* [go-DUR-3SG.F] 'she is/was going' which contains the stress attracting morpheme *-d*. The right

⁷Of course, this is a very superficial methodology. The principal investigator would realise these tokens manipulating parameters of stress that he knows from European languages.

⁸Unfortunately, the words were uttered in isolation rather than in a carrier sentence.

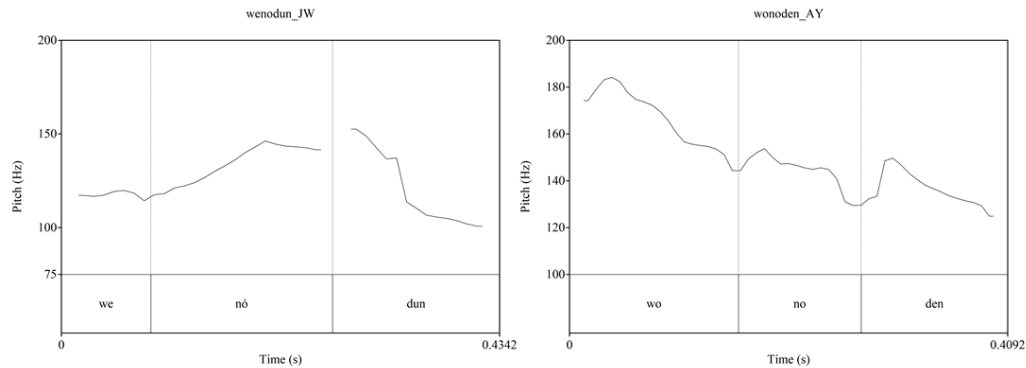


Figure 2.3: Pitch contours of the verb form *weno-d-un* [go-DUR-3SG.F] ‘she is/was going’ (left) and *won-o-den* [go-3SG.M-PFV] ‘he went’. Despite their segmental similarity, their intonation differs widely.

panel, in contrast, shows *won-o-den* [go-3SG.M-PFV] ‘he went’. Despite their segmental similarity, they are intonated quite differently. The left word has a pitch peak on the second syllable /no/ before a falling boundary tone L%; the second syllable is clearly accentuated. In the right panel, an initial high pitch is steadily falling to the end of the utterance. The second syllable, also /no/, is not accentuated. We conclude that accentuation of stress attracting morphemes is realised via pitch accent. The other stress attracting morpheme, *-n* ‘SS’, works analogously.

As was seen from the example in Figure 2.3, the segmental structure of such pairs can be quite similar. In fact, there are some word forms that form minimal pairs that are only differentiated via accent (indicated with an accent symbol over the vowel):

- (71) *bomá-n-up*
walk-SS-1PL
‘we walked and we ...’

- (72) *bom-an-up*
walk-IRR-1PL
‘we will walk’

2.4.3 Some tendencies in intonation

Muyu intonation is not yet understood well. Although many utterances in our corpus contain rather flat pitch contours, there are also pitch contours that reach a single peak and fall off to the end of the intonation unit. Such pitch peaks can be represented as H in autosegmental models of intonation (Donohue 1997, Gussenhoven 2004, Ladd 2008). However, we did not study the pitch peaks and their distribution systematically yet.

Less of a mystery are boundary tones. There is a clear difference between low boundary tones indicating finality and high boundary tones indicating non-finality and polar questions. In the following discussion, the falling pitch at a boundary will be symbolised as L%, while rising pitch at a boundary as H%. Boundary tones attach to the right side of an intonation unit:

- Declarative final clauses: L%
- Polar questions ending in =e: H%
- General non-finality: H%

General non-finality means that the speaker is about to continue his/her turn. The intonation unit ends in a high boundary tone to indicate non-finality. Such an intonation is often found with medial clauses in clause chaining, subordinated clauses, segments of multi-verb constructions and generally with intonational breaks within clauses.

Declarative final clauses

Declarative clauses with a final verb end in a low boundary tone (L%). Figure 2.4 shows the pitch contour of a typical declarative clause. Pitch gradually decreases throughout the clause and the lowest point is reached at the last syllable of /kelupten/.

Polar questions

Polar questions employing the illocutionary force clitic =e end in a high boundary tone (H%). Figure 2.5 shows that the boundary tone lies entirely on the final clitic. Before that, the pitch gradually decreases like in a declarative clause.

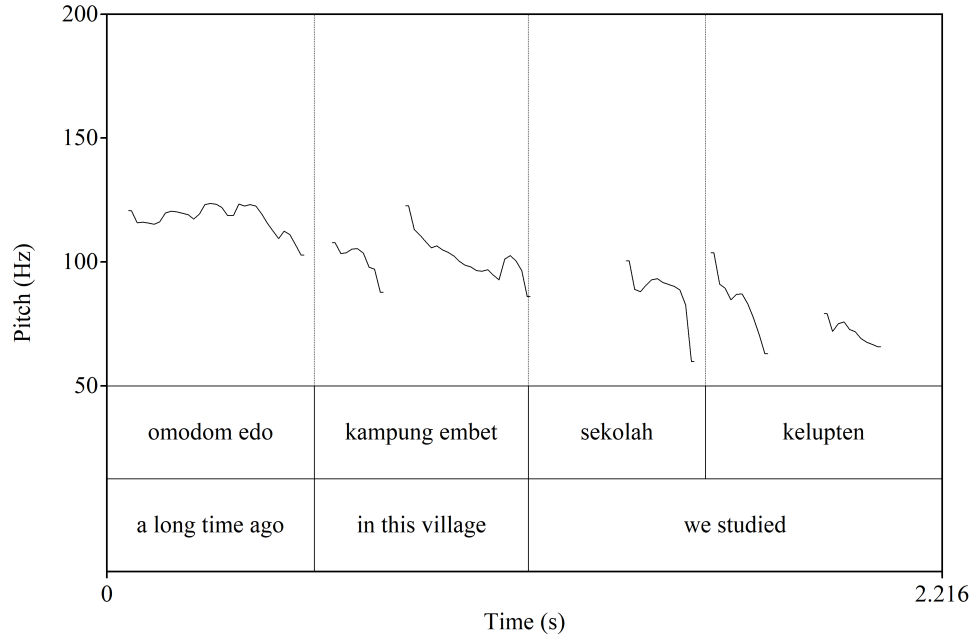


Figure 2.4: Declarative clause intonation.

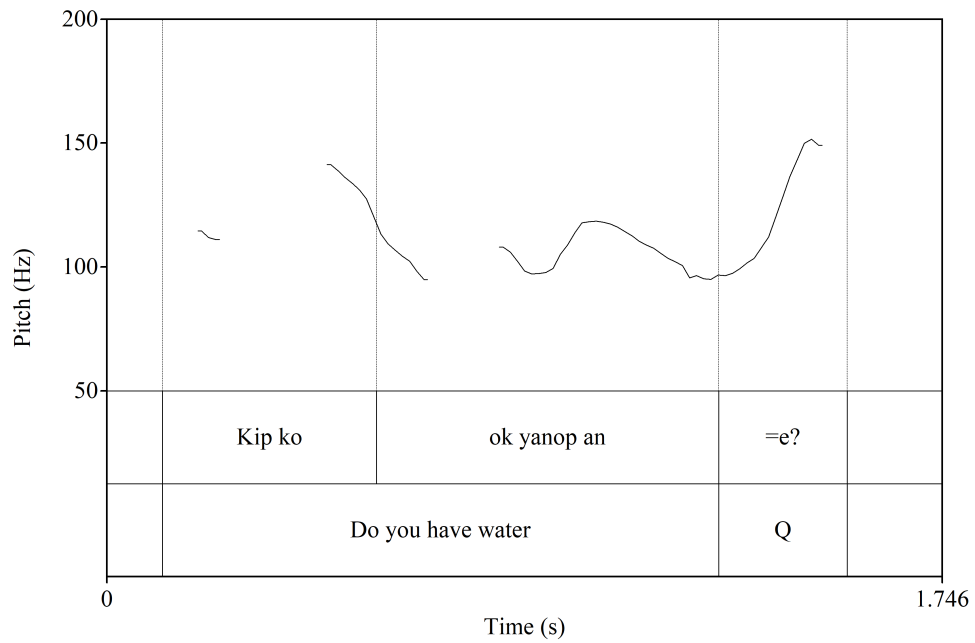


Figure 2.5: Polar question (=e) intonation.

Non-final intonation

As was seen above, declarative final clauses clearly end in a low boundary tone. Indeed, L% is employed to indicate finality. In contrast, non-finality is indicated intonationally with either rising pitch or a steady high pitch before an intonational break. Figure 2.6 shows a sequence of three pitch contours. The first contour is on a medial verb *weno-n-up* (go-SS-1PL) ‘We went and then we ...’ with a H% boundary tone. The second contour is on a verb with serial marker *-e* and rises steeply before the break (hence also H%). Only the third contour ends in L% aligned with a final verb.

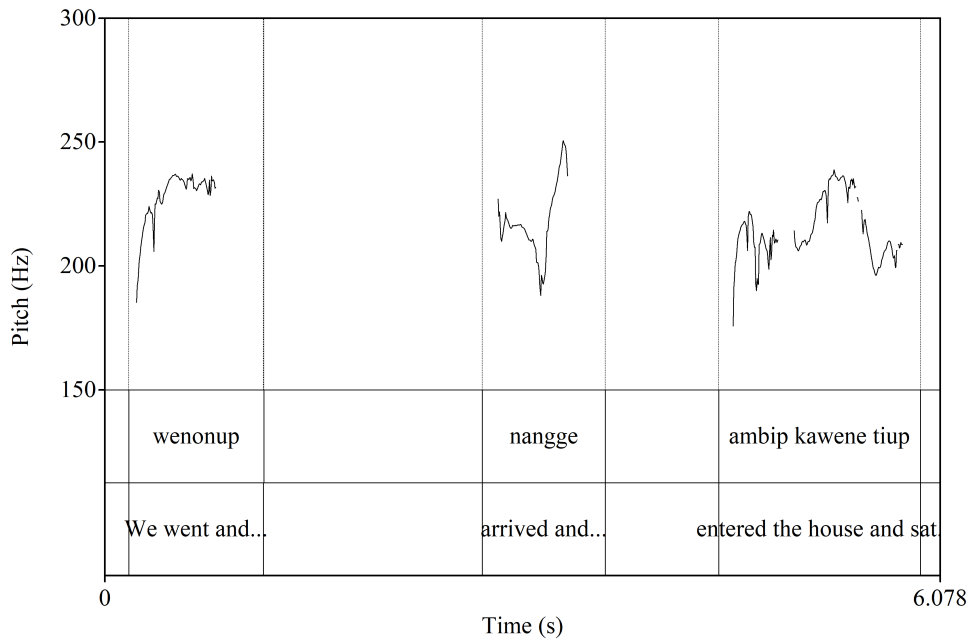


Figure 2.6: Non-final intonation.

This non-final intonation pattern is quite common in Muyu. Syntactically, clause chains and complex predicates (e.g. multi-verb constructions) often lead to long syntactic units that stretch over several pitch contours. Each non-final contour ends high (H%), whereas the final contour ends low (L%).

2.5 Orthography

This section gives an outline of the orthographic conventions used in this study. The vowels are simply <a, e, o, u, i> which correspond perfectly to the five phonemes /a, e, o, u, i/. In contrast, consonants are represented phonetically, e.g. [k] is <k> and [g] is <g> although both are allophones of the same phoneme /k/. The symbols for the sounds are based on the Latin alphabet as it is used to write in Indonesian. The reason for this is that most Muyu speakers are literate and were educated in Indonesian. The symbols and their corresponding sounds are given in Table 2.5.

[p] = <p>	[n] = <n>
[b] = 	[ŋ] = <ng>
[t] = <t>	[g], [y] = <g>
[d] = <d>	[l], [r], [ɾ] = <l>
[k] = <k>	[w] = <w>
[m] = <m>	[j] = <y>

Table 2.5: Orthographic representations of the sounds.

The morphophonological processes are mostly not represented by the orthography. For examples, *tip an* is pronounced [ti.wan] but this is not represented orthographically. Additionally, elided vowels within words are fully written in the orthography, e.g. *aip* is often pronounced as [ap] in fast speech. In contrast, when a word-initial sound is elided, the vowel is written in parentheses, e.g. *(a)dep*, *(e)ge*. The reason for this is to facilitate reading of the transcriptions. Finally, the lenition of initial consonants in suffixes and enclitics is written phonetically, e.g. *-ten* and *-den*, *=ko* and *=go*.

A rising boundary tone H% is represented by a comma in the transcripts, whereas a full stop indicates a low boundary tone L%.

Chapter 3

Word classes I: Noun, Verb, Adjective

3.1 Introduction

This chapter deals with the three open word classes noun, verb and adjective. We will discuss the most important morphological and syntactic features of each class and explain relevant sub-classes insofar as they differ from other sub-classes of the same word class. For example, kin terms are nouns that slightly differ in syntax from common nouns. All other word classes are discussed in Chapter 4 and 5.

Muyu clearly distinguishes three open word classes. Defining features of individual word classes are discussed in the sections devoted to these classes. For a rough outline, the following points are important:

- Verbs are morphologically complex and the only word class with inflection.
- Nouns are heads of noun phrases and inherently encode gender.
- Adjectives are the only word class that can appear in the modifier slot of a noun phrase.

The following sections discuss each word class in turn, beginning with nouns in Section 3.2, verbs in Section 3.3, and finally ending with adjectives in Section 3.4.

3.2 Nouns

Nouns are lexemes that:

1. do not inflect and have no complex morphology (in contrast to verbs)¹
2. function as heads of NPs (in contrast to verbs and adjectives)
3. cannot serve as modifiers in the NP (in contrast to adjectives)
4. cannot serve as a derivational base for adverbs with the suffix *-mo* (in contrast to adjectives)
5. cannot be modified with the intensifier *kai* ‘very’ (in contrast to adjectives)

Typically, nouns denote persons, objects (natural and cultural), locations, times or abstract notions.

Nouns inherently belong to one of two genders: masculine or feminine. Gender assignment is based on sex for human animates and higher animals but is less transparent for inanimates. Gender overtly surfaces only on pronouns and via indexing on verbs, i.e. the subject suffix on all verbs and the object prefix on a very small subset of verbs. In contrast, NP internal targets for gender agreement (e.g. adjectives, articles, demonstratives) are not available in Muyu. As a consequence, gender is rather insignificant in Muyu compared to other Ok languages.

Besides establishing reference, some nouns can be used as classifiers. For example, the word *on* ‘bird’ can either refer to a bird directly when standing alone or precede a name of a certain kind of bird: *on kidim* ‘crowned pigeon (*Goura cristata*)’ and *on anekok* ‘bird of paradise’. The classifying function of nouns is associated to natural kinds such as birds, trees, lizards, frogs, snakes and bananas.

Nouns can be derived from other nouns or from verbs. A productive derivational strategy is compounding. Most compounds are of the N-N type and simply juxtapose two nouns without changing their segmental form. Muyu N-N compounds are generally right-headed with the exception of additive co-compounds (see Section 3.2.7). Indonesian loans also enter Muyu

¹The only exception to this is a plural suffix *-a* that is restricted to kinship terms (see Section 3.2.2).

compounds freely. Deverbal nouns are simply verbs in their infinitive form. Nouns are typically not derived from adjectives or adverbs morphologically. Finally, Muyu allows for noun reduplication. However, reduplication is restricted to full reduplication and is hardly found in the corpus.

In the remainder of this section we will discuss the features of nouns in detail starting with gender (§3.2.1). Then we proceed by outlining several subclasses of nouns: kin terms (§3.2.2), spatial relation nouns (§3.2.3) and temporal nouns (3.2.4), before turning to the classifying function of nouns denoting natural kinds (3.2.5). The section closes with subsections about derivational strategies such as compounding (§3.2.6) and additive co-compounds (§3.2.7), noun appositions (§??), verbal nouns (§3.2.8) and noun reduplication (§3.2.9).

3.2.1 Gender

Muyu has a binary gender distinction between masculine and feminine. Two-part gender systems are rather common in Papuan languages, although reportedly of less importance in TNG (Svärd 2019). Mountain Ok languages also have gender, with Mian relying on four grammatical gender classes.² In contrast, gender is a less prominent feature in Muyu due to the limited number of agreement targets. As we will see presently, the gender value of inanimate nouns is particularly hard to study.

Nouns referring to humans are divided according to sex, with masculine nouns referring to male individuals (1) and feminine nouns referring to female individuals (2). Furthermore, some nouns are epicene, i.e. they can refer either to male or feminine individuals. Some instances are given in (3).

- (1) **Some masculine nouns:**
- | | |
|----------------|--------------------------|
| <i>ambang</i> | ‘grandfather’ |
| <i>emba</i> | ‘father’ |
| <i>kaduk</i> | ‘man, person’ |
| <i>kambali</i> | ‘big man, respected man’ |
| <i>kayabak</i> | ‘old man, sir’ |
| <i>minggi</i> | ‘son’ |
| ... | |

²Besides masculine and feminine, Mian has two neuter genders for inanimate referents (Fedden 2011). Additionally, Mian has a more semantically based nominal classification system (Fedden 2011:Ch. 5, Fedden & Corbett 2017).

(2) **Some feminine nouns:**

<i>amban</i>	‘wife’
<i>ena</i>	‘mother’
<i>kon</i>	‘woman’
<i>manggan</i>	‘daughter’
<i>wonong</i>	‘woman’
<i>woya</i>	‘grandmother’

...

(3) **Some epicene nouns (= masc. or fem.):**

<i>alom</i>	‘friend’
<i>anggotmi</i>	‘friend, associate’
<i>amkono</i>	‘adult’
<i>kadi</i>	‘person native to Papua’
<i>kalet</i>	‘orphan’
<i>kambat</i>	‘foreigner’
<i>kewet</i>	‘young person’
<i>taman</i>	‘younger sibling’
<i>ogan</i>	‘person foreign to Papua’
<i>tana</i>	‘child’
<i>towot</i>	‘guest’
<i>wonop</i>	‘firstborn child’

...

Nouns referring to animals are divergent. Animals with high importance in Muyu culture or animals with salient sexual dimorphism also base their grammatical gender on the sex of the individual referent:

(4) **Epicene nouns for animals (= masc. or fem.):**

<i>anekok</i>	‘bird of paradise’
<i>anon</i>	‘dog’
<i>awon</i>	‘pig’
<i>niyap</i>	‘cassowary’

All other animals seem to have a fixed grammatical gender with some species assigned masculine and others feminine gender.

Inanimates naturally have to rely on grammatical gender since they lack natural gender. Both Drabbe (1954:155) and Christensen (2013:8) agree that all nouns have gender and therefore inanimates also fall under one of the two

gender classes. However, as we will show in the following two paragraphs, there are great practical difficulties for a linguist to find out which gender value is assigned to a particular inanimate noun.

Muyu has three targets for gender indexing: pronouns, subject suffixes and object prefixes. The pronominal paradigm distinguishes feminine and masculine in 2SG (*kep* ‘you (m)’ - *kup* ‘you (f)’) and 3SG (*ye* ‘he’ - *yu* ‘she’). In contrast, verbal subject suffixes contrast gender in 3SG only (*-on/-en* ‘-3SG.M’ - *-un* ‘3SG.F’). Similarly, object prefixes also display only the gender distinction in 3SG (*an(e)-* ‘3SG.M.O-’ - *wen(e)-* ‘3SG.F.O-’). Word classes other than pronouns and verbs, as for example demonstratives or adjectives, do not inflect for gender. As a consequence, there is no NP-internal concord of gender.³

There are three practical obstacles for the analysis of gender due to the limited targets of gender indexing. Firstly, pronouns virtually always refer to human referents and only in some cases to animals. Inanimates, in contrast, are never referents of pronouns; thus their gender cannot be studied via pronominal substitution. Secondly, object prefixes only apply to a closed class of verbs all of which require its object to have a human referent.⁴ Hence, they are not employable as a gender diagnostic for nouns referring to inanimates. Thirdly, although subject suffixes apply to all verbs, the overwhelming majority of subjects in our corpus are human referents or higher animals rather than inanimates. Furthermore, when an inanimate noun is the head of a subject noun phrase, the verb suffix often resorts to a default *-on* which is formally equal to the 3SG.M.⁵ In conclusion, the gender value of a majority of non-animate nouns remains obscure if we rely solely on the corpus of our own fieldwork.

Due to this lack of data, the following outline combines data from Christensen (2013), Drabbe (1954) and our own corpus. Note that such an approach postulates that gender is stable across dialects and in time.⁶ Nouns

³This makes Muyu fundamentally different from Mian, in which gender (as well as number) is indexed on the NP-internal article (Fedden 2011:109-113).

⁴The class of object prefixing verbs comprises items with the meaning ‘hit’, ‘kill’, ‘expel’ and ‘rob’. For details, see Section 7.3.3.

⁵Evidence that *-on* with non-animate subjects is a default instead of 3SG.M comes from the fact that number is ignored as well. For details, the reader is referred to Section 9.3.1.1.

⁶Many authors highlight the relative stability of gender (Nichols 2003:299-301, Dahl 2004:199, Wichmann & Holman 2009:54-55). However, this usually applies to gender as a whole category in the language rather than the gender values of single lexical items. For

that are unambiguously feminine in our own corpus are the following:

- (5) **Feminine nouns (own corpus):**
- | | |
|-------------------|------------------------------|
| <i>adon</i> | ‘sun’ |
| <i>ado bam</i> | ‘kind of frog’ |
| <i>ambip</i> | ‘house’ |
| <i>ambom kono</i> | ‘car (lit. turtle shell)’ |
| <i>ayi</i> | ‘lizard’ |
| <i>but</i> | ‘shrimp’ |
| <i>kak</i> | ‘scorpion’ |
| <i>kono</i> | ‘boat’ |
| <i>kowong</i> | ‘spider’ |
| <i>niyap</i> | ‘cassowary’ |
| <i>on</i> | ‘bird’ |
| <i>on kuduyap</i> | ‘airplane’ |
| <i>ano</i> | ‘nagging, complaint, hatred’ |
| <i>towok</i> | ‘crab’ |
| <i>tumbim</i> | ‘caterpillar’ |
| <i>wot</i> | ‘moon’ |
| <i>yum</i> | ‘banana’ |

In contrast, we will not list nouns that are masculine since we cannot rule out cases in which the default subject index interferes.

Christensen (2013) does not give the original forms but lists only English translations:

Female things include sun, moon, stars, rain, ground, sky, clouds, houses, canoes, trucks, planes, ships, water (the same Yongkom word also means river, creek, etc.), fish, cassowaries, spiders, and certain animals. The bow is female, while the arrow is male. The sago tree is female while processed sago is male.

Male things include plants, most trees, food (except breadfruit), lizards, hornbills, insects, body parts, man-made things (except items large enough for a human being to be inside, or on top of), concepts, and most natural phenomena (such as lightning, thunder, smoke, shadow, ashes, and feces, but not rain, cloud, sky, etc.). (8)

the view that loss of gender is induced by language contact, see Igartua 2019.

Drabbe (1954:155-156) does not list nouns according to their gender value. He only mentions two polysemous nouns that have opposing gender values depending on the respective meaning: *ok* ‘river’ is feminine - *ok* ‘water’ is masculine, *ninggambo* ‘(human) tooth’ is masculine - *ninggambo* ‘(animal) tooth’ is feminine. Additionally, he mentions that body parts are masculine except for exclusively female body parts. Although these short remarks are the only information the grammar sketch of Drabbe gives, there is extensive information in his unpublished material. This material includes dictionaries of the Metomka dialect and Ninati dialect respectively. These dictionaries include gender information for each noun. It is not fully transparent how Drabbe retrieved this information, but he most likely elicited them from his consultants by asking for *katuk aninggo* ‘man’s name’ or *wonong aninggo* ‘woman’s name’ as briefly mentioned in Drabbe (1954:155-156).

Wordlists from the unpublished dictionaries of Petrus Drabbe are too extensive to be listed here (they include several hundred items). For the purpose of this study, we went through the Metomka dictionary and grouped nouns into semantic groups. The results are shown in Table 3.1.⁷ As can be seen from this table, there are some groups that are uniquely assigned to one gender while others are assigned to both feminine and masculine. Uniquely feminine are: turtles, bananas, frogs, bamboo, spiders, grass and weed, soil, mushrooms, celestial phenomena and cassowary. Uniquely masculine are only lizards and stones. All other groups are of mixed gender. It is not possible to study gender assignment for these groups in more detail since Drabbe mostly gave translations of the type ‘kind of X’. To further investigate if gender assignment depends on specific features of the referent, we would need to relate the vocabulary to concrete species.

The findings from Drabbe’s dictionary conform with the information from Christensen (2013) and our own corpus, with the only exception that lizards are feminine in our corpus but masculine in the other two sources. Therefore, we consider Drabbe as a reliable source for gender information in Muyu.

	Semantic Group	Examples
Fem	Turtles	<i>ambom</i> ‘turtle (gen.)’, <i>dekoo</i> ‘kind of turtle’
	Bananas	<i>joem</i> ‘banana (gen.)’, <i>aoek</i> ‘kind of banana’
	Some birds	<i>koetim</i> ‘crowned pidgeon’, <i>awonkoek</i> ‘kind of bird’,

⁷The table shows exemplary lexemes from Drabbe’s dictionary in the original orthography. It differs from the orthography used in this study since it is based on Dutch. Most notably /j/ is represented as <j>(instead of <y>) and /u/ is represented as <oe>.

	Frogs	<i>jaran</i> ‘kind of frog’, <i>mbam</i> ‘kind of frog’
	Bamboo	<i>korop</i> ‘k. of bamboo’, <i>mbirimaat</i> ‘k. of bamboo’
	Body parts (fem.)	<i>jamoem</i> ‘vagina’, <i>ekimi</i> ‘female pubic hair’
	Some rodents	<i>makoemoe</i> ‘k. of cuscus’, <i>tipoak</i> ‘k. of cuscus’
	Diseases, disasters	<i>koet</i> ‘scabies’, <i>mbim</i> ‘earthquake’
	Spiders	<i>kowong</i> ‘spider (gen.)’, <i>amoe</i> ‘cobweb’
	Grass and weed	<i>ketek</i> ‘grass’, <i>mboeok-ketek</i> ‘weed’
	Soil	<i>okat</i> ‘soil, earth’, <i>andin</i> ‘landfill’
	Some fish	<i>on</i> ‘fish (gen.)’, <i>aangi</i> ‘kind of fish’
	Some places (<i>bon</i>)	<i>jetpon</i> ‘grove’, <i>tep-pon</i> ‘flat terrain’
	Most grasshoppers	<i>et</i> ‘grasshopper (gen.)’, <i>kapoeim</i> ‘k.o. grasshp.’
	Mushrooms	<i>epoek</i> ‘mushroom’, <i>jerong</i> ‘kind of mushroom’
	Celestial	<i>aton</i> ‘sun’, <i>jimbi</i> ‘star’, <i>mitik</i> ‘night’, <i>woot</i> ‘moon’
	Most trees	<i>ap</i> ‘tree (gen.)’, <i>maram</i> ‘kind of tree’
	Some artifacts	<i>amoem</i> ‘raft’, <i>janop</i> ‘penis shell’, <i>tinim</i> ‘bow’
	Some snakes	<i>anjitok</i> ‘kind of snake’, <i>koenim</i> ‘kind of snake’
	Cassowary	<i>ndiap</i> ‘cassowary’
Masc	Some birds	<i>ertijok</i> ‘kind of bird’, <i>karanji</i> ‘kind of bird’
	Most body parts	<i>konjop</i> ‘eye’, <i>embon</i> ‘intestines’
	Some rodents	<i>ombik</i> ‘cuscus (gen.)’, <i>itemeng</i> ‘k. of cuscus’
	Some fish	<i>biiwin</i> ‘kind of fish’, <i>watan</i> ‘kind of fish’
	Lizards	<i>aji</i> ‘lizard (gen.)’, <i>kambon</i> ‘kind of lizard’
	Some places (<i>bon</i>)	<i>amkon-bon</i> ‘hill, mountain’, <i>aranget-bon</i> ‘slope’
	One grasshopper	<i>koemban</i> ‘kind of grasshopper’
	Some trees	<i>a-tondo</i> ‘kind of tree’, <i>endem</i> ‘kind of tree’
	Stones	<i>mbot</i> ‘stone’, <i>manggang</i> ‘kind of stone’
	Breadfruit trees	<i>mboejo</i> ‘breadfruit tree’, <i>kikondo</i> ‘k. o. breadfruit’
	Some artifacts	<i>epkat</i> ‘cloth’, <i>ando</i> ‘arrow’, <i>amang</i> ‘ladder’
	Some snakes	<i>ari</i> ‘kind of snake’, <i>wonggam</i> ‘kind of snake’

Table 3.1: Gender assignment for semantic groups formed with unpublished data from Petrus Drabbe. Orthography of the lexemes as in the original. Group names in bold face indicate that they are uniquely assigned to one gender.

To conclude, gender is of less importance in Muyu than in other Ok languages. This is due to the limited number of targets for gender indexing. Human nouns are categorised according to natural gender, although there is a relatively high amount of epicene nouns. A categorisation based on

natural gender also applies to some higher animals. In contrast, nouns for lower animals and inanimates seem to have a lexically specified grammatical gender, which is either masculine or feminine. Comparing grammatical gender assignment across semantic groups does not reveal a high degree of systematicity. It seems that gender of most animals and inanimates is assigned arbitrarily, although more detailed research might reveal that there are features within the semantic groups that guide gender assignment.

3.2.2 Kin terms

Kin terms are a special subgroup of nouns in Muyu and can be defined on three levels of description. Semantically, kin terms refer to relationships between human individuals based on EGO's perspective. These relationships are either genealogical or affinal. Morphologically, kin terms are compatible with a plural suffix *-a*, which will be labeled 'kinship plural' in the discussion below. Syntactically, kin terms differ from common nouns in their behaviour in possessive constructions. The remainder of this introductory section gives an outline of morphological, syntactic and pragmatic peculiarities, while the system of kin relations itself is discussed in detail in the following subsections 3.2.2.1 and 3.2.2.2.

Muyu kin terms come in two sets, which will be labelled Set A and Set B here. Some examples are given in Table 3.2.

Abbr.	Meaning	Set A	Set B
M	mother	<i>ena</i>	<i>adan</i>
F	father	<i>emba</i>	<i>adi</i>
B (o)	older brother	<i>ambo</i>	<i>ii</i>
Z (o)	older sister	<i>oni</i>	<i>anyan</i>

Table 3.2: Some examples of Set A and Set B kin terms.

As can be seen, the terms of the distinct sets are formally not related, hence we treat them as suppletive forms. Which set will be used, depends on the speech situation. For clarification, we will use the term 'anchor' (Dahl & Koptjevskaja-Tamm 2001) to refer to the person that represents the kinship EGO in the given utterance, e.g. in *My father is sick* the anchor is 1SG while in *Her child needs attention* the anchor is 3SG.F.⁸ The two sets in Muyu kin

⁸The anchor does not have to be explicit. In *Where are you, Daddy?* the anchor is

terms are distinguished by the anchor: Set A is used if the anchor is first or second person, whereas Set B is used if the anchor is third person. In other words, if I talk about my own relatives or the addressee's relatives, I use Set A. However, if I talk about someone else's relatives, I use Set B.⁹ The forms of the two sets are suppletive and show no formal resemblance. Furthermore, Set A is more extensive than Set B since the latter does not extend to more distant relations (see Section 3.2.2.1).

We also need to mention that for genetic relations of animals, usually Set B terms are used. So, it is *adon mana ye adan* 'the mother of a puppy' rather than **adon mana ye ena*.

Kin terms can be used either as terms of address or as referential terms. Each type of use must be considered separately in terms of two possible set choices. For example, the term-of-address use is always directed towards an addressee and has 1SG as anchor, as in *Good morning, Mommy!* Hence, this use necessarily triggers Set A kin terms. In contrast, referential use can anchor any person, as in *Where is your/my/her/our/their Mommy?* Depending on the anchor in the relevant speech situation, a referentially used kin term is either from Set A or Set B.

Kin terms differ morphologically from non-kin nouns. They are the only subgroup of nouns that can take a plural suffix *-a*. For example, *ambang* 'grandfather' becomes *ambanga* 'ancestors', while *mom* 'maternal uncle' becomes *moma* 'maternal uncles'. It is not entirely clear whether or not *-a* has also some associative plural readings (as in e.g. my uncle and his people). More data is needed here.

Kin terms differ syntactically from non-kin nouns. In possessive constructions, nominal possessors are linked optionally with *ye/yu/yi* to the succeeding noun (i.e. the possessed). However, if the possessor is a kin term, the linking element is obligatory¹⁰:

- | | | |
|-----|--------------------------------|----------------------------|
| (6) | <i>ena</i> <i>*(ye) tinggi</i> | ‘mother’s arm’ |
| | <i>awon (ye) tinggi</i> | ‘the pig’s leg (lit. arm)’ |

1SG as the speaker is clearly speaking of her/his own father.

⁹Note that the use of Set B is also necessary when the person representing the anchor is present in the speech situation but is not the addressee. For example: I can ask a child on the street ‘Who is your mom?’ using *ena* (Set A). The child could answer ‘My mom is over there’ using *ena* (Set A) too. However, if some passerby answers instead of the child, he can say ‘His mom is over there’ using *adan* (Set B).

¹⁰In the following examples, a star preceding a bracket means that the bracketed element is obligatory.

- (7) *woya* *(*yu*) *konokap* 'grandmother's leg'
tana (*ye*) *konokap* 'the child's leg'
- (8) *oni* *(*yu*) *awon* 'sister's pig'
emba *(*ye*) *kursi* 'father's chair'
ne emba *(*ye*) *aninggo* 'my father's name'

As can be seen from the examples above, kin terms in the possessor slot always require a linker, whereas non-kin nouns like *awon* 'pig' in (6) can have it (*awon ye tinggi*) or not (*awon tinggi*). Also note that these syntactic variants do not differ in meaning. In (7), we see that the relevant criterion is kinship rather than the semantic feature HUMAN. Although both possessors refer to human referents, the kin term *woya* 'grandmother' requires a linker, whereas *tana* 'child' does not (*tana* is an improper kin noun, see below). Finally, example (8) adds evidence that this feature of kin possessors is independent of the possessed noun. *Awon* 'pig', *kursi* 'chair (BI)', *konokap* 'bone' and *tinggi* 'arm' and even abstract entities like *aninggo* 'name' all behave the same in this regard.

Finally, we would like to highlight the boundaries of kinship terms. There are many nouns denoting human referents that are NOT kinship terms. Examples for such nouns are *kaduk* 'person, man', *kayabak* 'big man', *kawap* 'adult man', *kewet* 'young person', *kon* 'woman', *ogan* 'person foreign to Papua' and all formations with the suffix *-man* 'person of'. One special case is *tana* 'child'. Indeed, *tana* is used as the kin term for EGO's son/daughter and EGO's brother's son/daughter in Set A. However, *tana* does not conform to our criterion of obligatorily marked possession as outlined above. *Tana* seems to be somewhere in between kin term and common noun. For explanation, we refer to the distinction of proper and improper kin terms (Dahl & Koptjevskaja-Tamm 2001). In proper kin terms the kin use is essential, whereas improper kin terms are nouns with a non-kin use that is as salient as the kin use. This seems to be the case for *tana*, which can refer to children in general. Therefore, even in its kin use, *tana* behaves syntactically like a common noun.

To sum up, we find that kin terms represent a distinct subgroup of nouns. They differ morphologically (kinship plural) and syntactically (obligatorily marked possession) from common nouns and include two different sets that distinguish the anchor in the speech situation. The following subsections discuss the Muyu kinship system in more detail.

3.2.2.1 Relative kin

This section focuses on kin terms that are based on genealogical relationships, whereas kin terms that designate relationships based on marriage are dealt with in Section 3.2.2.2.

The kinship system of Muyu represents the well-known Omaha system.¹¹ Prominent features of this system are that (1.) paternal uncles are merged with the father while maternal aunts are merged with the mother, (2.) cousins are divided into cross-cousins and parallel cousins¹² and (3.) the children of the maternal uncle are ascending one generation to become mother and uncle. The system will become clear by a close examination of the Muyu kin terms below.

For the sake of clarity, we will represent the rather complex relations in three separate diagrams. Figure 3.1 shows kin terms in the immediate vicinity of EGO's parents, Figure 3.2 includes both parallel and cross-cousins and, finally, Figure 3.3 is concerned with children of EGO and her/his siblings. Note that the diagrams only give terms of Set A since the two sets designate the same relations. For an overview of all terms and a comparison of Set A and Set B terms, the reader is referred to Table 3.3 which is given at the end of this section. This table also includes the abbreviations used in the diagrams. The following paragraphs comment on each of the diagrams.

Figure 3.1 shows the horizontal kin relations, i.e. in EGO's generation, and two ascending generations. Horizontally, we find an age distinction among the siblings of EGO. Younger brothers and sisters are lumped as *taman*, while older siblings are distinguished into *oni* 'older sister' and *ambo* 'older brother'. These are the only terms that distinguish age in the Muyu system. The ascending generation shows a specific characteristic of the Omaha system mentioned above. The mother and all her sisters are *ena*, i.e. all maternal aunts are EGO's mothers. Likewise, the father and all his brothers are *emba*, i.e. all paternal uncles are EGO's fathers. Parental siblings are only distinguished terminologically, if the sibling is of different sex than the

¹¹The term Omaha system refers to one of the six major kinship systems first described by Lewis Henry Morgan in his 1871 book *Systems of Consanguinity and Affinity of the Human Family*. The six systems he described are: Eskimo, Hawaiian, Iroquois, Crow, Omaha and Sudanese.

¹²A parallel cousin is the descendent of mother's sister or father's brother, i.e. based on a same sex relation in the previous generation. A cross-cousin is the descendent of mother's brother or father's sister, i.e. based on a different sex relation in the previous generation.

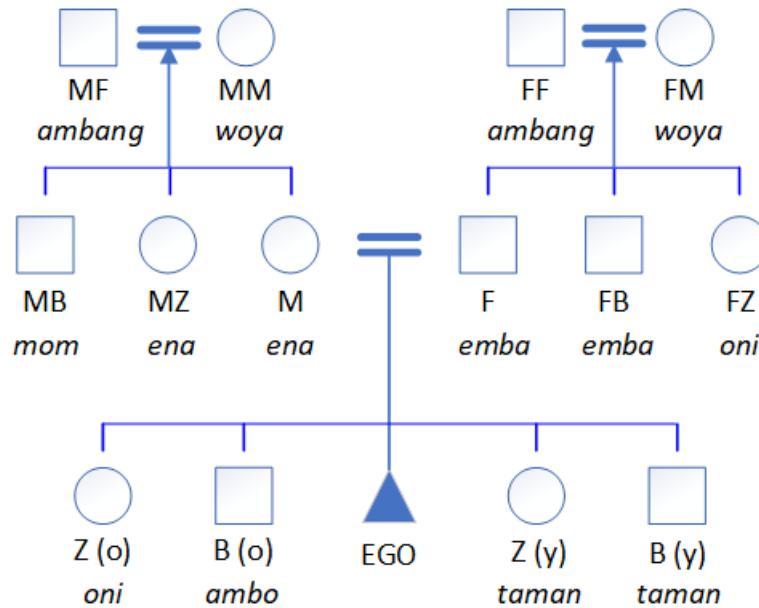


Figure 3.1: Muyu kin terms across generations.

respective parent. Mother’s brother is *mom*, while father’s sister is *oni*, i.e. an older sister. *Mom* is of crucial importance since Muyu kinship relations put special emphasis on the avunculate (see below). Ascending further one generation, we find that Muyu does not distinguish between maternal grandparents and paternal grandparents. Both grandmothers are *woya* while both grandfathers are *ambang*.

Figure 3.2 shows parental siblings and their offspring. Since same-sex sibling of EGO’s parents are lumped with these parents (see above), their children are treated as EGO’s siblings too. Maternal aunt’s daughters are *oni/taman* and maternal aunt’s sons are *ambo/taman* (all including the age distinction). The exact same designations are found for the children of the paternal uncle. All these “cousins” are so-called parallel cousins and the pattern of lumping own siblings with parallel cousins is an important characteristic of the Omaha system. In contrast, cross-cousins are from an uncle or aunt with the opposite sex of the related parent. Maternal uncle’s daughters are *ena* and his sons are *mom* too. In other words, EGO’s maternal uncle’s children are raised into the previous generation and designated as ‘mother’ and ‘uncle’. On the other side, EGO’s father’s sister’s children are lowered

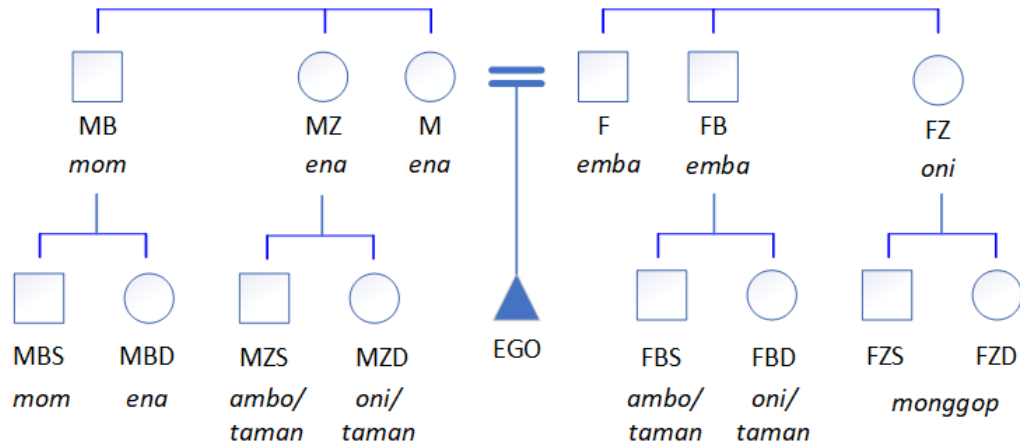


Figure 3.2: Muyu kin terms for parallel cousins and cross-cousins.

one generation. Both paternal aunt's daughters and paternal aunt's sons are lumped as *monggop*, a term that is basically found in the descending generation (see below).

Figure 3.3 focuses on the generation below EGO. Here we find less differentiation than in the horizontal and ascending kin terms. Both EGO's children and EGO's brother's children are designated *tana* and there is no distinction of gender.¹³ Similarly, all children of EGO's sister are *monggop*. As we see from a comparison of the horizontal and the descending generation, the important distinction between the age of EGO's siblings becomes insignificant for their children.

As was mentioned in the introductory section above, kin terms not only have a referential use but also occur as forms of address. In this use, we mostly find *ena* 'mother' and *emba* 'father' to address persons older and/or more respected than EGO, as well as the honorific form *kayabak* 'big man', which is not a kin noun. For persons of same age, Muyu speakers use *oni* 'older sister' for girls/women and *ambo* 'older brother' for boys/men. Finally, persons much younger than EGO will be mostly addressed with *tana*. All these terms can be used as forms of address for persons who are not actual kin of the speaker.¹⁴

¹³Of course, it is not impossible to distinguish the sex of one's children. For further differentiation, a speaker can use adnominal modifiers like *kon* 'woman' and *kaduk* 'man'. However, these are not kin terms and beyond the scope of this section.

¹⁴As an illustration, we shortly outline the situation of the principal investigator, who

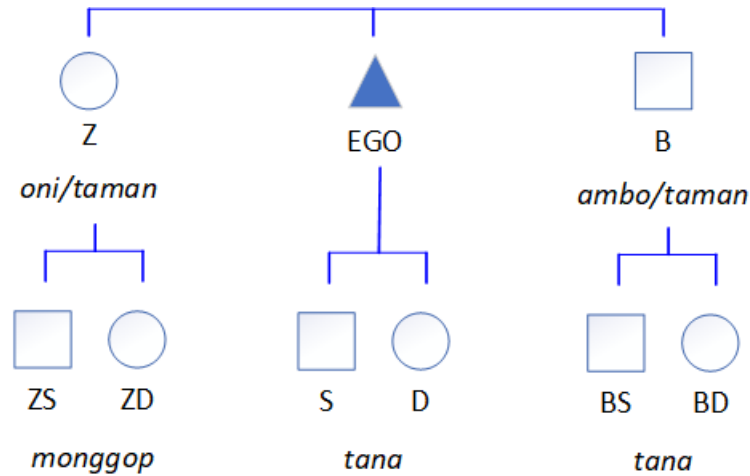


Figure 3.3: Muyu kin terms for EGO's and her/his sibling's children.

Finally, Table 3.3 gives all kin terms for relative kin in both sets. Note that, although the relationships are essentially the same in both sets, there are some additional distinctions found in Set B. First, the *taman* that lumps younger siblings of both sexes in Set A is differentiated into *nenggan* 'younger sister' and *ninggi* 'younger brother' in Set B. Second, one's children are *tana* in Set A but further divided as *manggan* 'daughter' and *minggi* 'son' in Set B. As was mentioned in Section 3.2.2, specialised Set B expressions do not extend to more distant relations. In such cases, Set A and Set B are identical, i.e. Set A expressions can be used with third person anchors as well. This is the case for *ambang*, *mom*, *monggop*, *monop* and *woya*.

Abbr.	Meaning	Set A	Set B
M	mother	<i>ena</i>	<i>adan</i>
MB	mother's brother	<i>mom</i>	(<i>mom</i>)
MZ	mother's sister	<i>ena</i>	<i>adan</i>
MF	mother's father	<i>ambang</i>	(<i>ambang</i>)
MM	mother's mother	<i>woya</i>	(<i>woya</i>)

first arrived in the Muyu speaking villages in his late twenties. The elder men of the village would usually address him as *Tana Alex*, while generally *Emba Alex* prevailed. Teenagers and similarly aged males and females often addressed him as *Ambo Alex*. Sometimes he would hear an occasional *Kayabak*, although it was unclear whether it was meant to be ironic or serious.

F	father	<i>emba</i>	adi
FB	father's brother	<i>emba</i>	<i>adi</i>
FZ	father's sister	<i>oni</i>	<i>anyan</i>
FF	father's father	<i>ambang</i>	(<i>ambang</i>)
FM	father's mother	<i>woya</i>	(<i>woya</i>)
Z (o)	older sister	<i>oni</i>	<i>anyan</i>
Z (y)	younger sister	<i>taman</i>	<i>nenggan</i>
B (o)	older brother	<i>ambo</i>	<i>ii</i>
B (y)	younger brother	<i>taman</i>	<i>ninggi</i>
MZS (o)	mother's sister's son (older)	<i>ambo</i>	<i>ii</i>
MZS (y)	mother's sister's son (younger)	<i>taman</i>	<i>ninggi</i>
MZD (o)	mother's sister's daughter (older)	<i>oni</i>	<i>anyan</i>
MZD (y)	mother's sister's son (younger)	<i>taman</i>	<i>ninggi</i>
MBS	mother's brother's son	<i>mom</i>	(<i>mom</i>)
MBD	mother's brother's daughter	<i>ena</i>	<i>adan</i>
FZS	father's sister's son	<i>monggop</i>	(<i>monggop</i>)
FZD	father's sister's daughter	<i>monggop</i>	(<i>monggop</i>)
FBS (o)	father's brother's son (older)	<i>ambo</i>	<i>ii</i>
FBS (y)	father's brother's son (younger)	<i>taman</i>	<i>ninggi</i>
FBD (o)	father's brother's daughter (older)	<i>oni</i>	<i>anyan</i>
FBD (y)	father's brother's daughter (younger)	<i>taman</i>	<i>nenggan</i>
D	daughter	<i>tana</i>	<i>manggan</i>
DD	daughter's daughter	<i>monop</i>	(<i>monop</i>)
DS	daughter's son	<i>monop</i>	(<i>monop</i>)
S	son	<i>tana</i>	<i>minggi</i>
SD	son's daughter	<i>monop</i>	(<i>monop</i>)
SS	son's son	<i>monop</i>	(<i>monop</i>)

Table 3.3: Kin terms for relative kin in Muyu.

3.2.2.2 Affinal kin

Affinal kin terms designate persons that are related to EGO through marriage. These relations occur on all generational levels, and the terms seem to be partially in accordance with relative kin terms. Similar to relative kin, we find Set A and Set B terms. For reasons of space, we do not give diagrams of these relations. Table 3.4 shows an overview of all affinal kin terms. The

remainder of this subsection discusses the terms and their relations.

Abbr.	Meaning	Set A	Set B
MBW	Mother's brother's wife	<i>woya</i>	<i>(woya)</i>
MZH	Mother's sisters's husband	<i>baat</i>	<i>(baat)</i>
FBW	Father's brother's wife	<i>ena</i>	<i>adan</i>
FZH	Father's sister's husband	<i>baat</i>	<i>(baat)</i>
Z(o)H	Older sister's husband	<i>baat</i>	<i>(baat)</i>
Z(y)H	Younger sister's husband	<i>baat</i>	<i>(baat)</i>
B(o)W	Older brother's wife	<i>baat</i>	<i>(baat)</i>
B(y)W	Younger brother's wife	<i>baat</i>	<i>(baat)</i>
W	Wife	<i>amban</i>	
WM	Wife's mother	<i>ade</i>	<i>adotki</i>
WF	Wife's father	<i>ade</i>	<i>adotki</i>
WB	Wife's brother	<i>baat</i>	<i>(baat)</i>
WZ	Wife's sister	<i>baat</i>	<i>(baat)</i>
WZH	Wife's sister's husband	<i>konwon</i>	<i>(konwon)</i>
H	Husband	<i>ambi</i>	
HM	Husband's mother	<i>ade</i>	<i>adotki</i>
HF	Husband's father	<i>ade</i>	<i>adotki</i>
HZ	Husband's sister	<i>baat</i>	<i>(baat)</i>
HB	Husband's brother	<i>baat</i>	<i>(baat)</i>
DH	Daughter's husband	<i>ade</i>	<i>adotki</i>
SW	Son's wife	<i>ade</i>	<i>adotki</i>

Table 3.4: Kin terms for affinal kin in Muyu.

The generation ascending from EGO starts with the truism that father's wife is EGO's mother and mother's husband is EGO's father.¹⁵ The situation is more complicated, however, for classificatory parents. While the paternal uncle's wife is indeed *ena* 'mother', the maternal aunt (who is also *ena*) is married to a man who becomes EGO's *baat*. So two classificatory mothers have husbands with different designations.¹⁶ Furthermore, *baat* is also the designation for the paternal aunt's husband. Hence, *baat* does not specify the

¹⁵This would be true even without actual blood bonds. For example, if EGO's mother dies and her/his father marries again, the new wife of father will also be classified *ena* 'mother'.

¹⁶The reason for this lies probably in the clan structures and marriage patterns. The paternal uncle is in the same clan as EGO and therefore his wife joins the same clan. In

sex of the referent but denotes uncle's wife and aunt's husband both alike. Finally, the maternal uncle - EGO's *mom* - is married to a woman who becomes EGO's *woya*, a term that is also used to designate EGO's grandmother. Once more we see that kin related to *mom* is raised one generation (his children are *ena* and *mom*, see Section 3.2.2.1). This highlights the importance of the avunculate in Muyu society.¹⁷

In the horizontal generation, the central relationship is the spouse. We start with a male EGO whose wife is his *amban*. The parents-in-law of a male EGO are both *ade* 'father/mother-in-law'. All siblings of the wife are EGO's *baat*. Hence, there is no gender distinction for in-laws of the same generation. A special term is used for the husband of male EGO's sister-in-law. If EGO's wife has a married sister, her husband is EGO's *konwon*. Turning now to a female EGO, we find a very similar picture. EGO's husband is her *ambi*, while her parents-in-law are both *ade*. Her husband's brothers and sisters are all *baat* to her. To sum up, Muyu has only a generational distinction for affinal kin: All in-laws in the previous generation are *ade*, while all in-laws of the same generation are *baat*. Distinctive Set B expressions are only found for *ade* but not for *baat*.

The in-laws married to EGO's siblings represent the mirror image of the wife's/husband's siblings. Since they are all in-laws of the same generation, they are all *baat*.

Finally, we come to the generation descending from EGO. Both son-in-law (husband of EGO's daughter) and daughter-in-law (wife of EGO's son) are called *ade*. This lumping of both sexes in the child generation's in-laws correlates to the use of *tana* for relative kin of both sexes. In conclusion, we see that *ade* is a reciprocal relation and works in both directions: a woman, for example, calls her son-in-law *ade* and the son-in-law conversely calls his mother-in-law *ade*. Hence, the relevant distinction between *baat* and *ade* is: same generation vs. different generation.

contrast, the maternal aunt is not in EGO's clan, hence her husband does not join EGO's clan either and they have a more distant relationship to EGO because of that (for details on marriage patterns, see Schoorl (1993)).

¹⁷The relationship between mother's brother and sister's son (aka avunculate) is of high cultural importance for the Muyu. For example, if both parents die, the mother's brother is expected to raise the child. He is also expected to give advice and assistance to his sister's son; in modern times this is often also in the form of money.

3.2.3 Spatial relation nouns

Muyu has a subgroup of nouns that encode spatial relations. Such nouns often occur adnominally, thereby adding spatial information to the noun phrase they attach to. The following list of items known so far may not be exhaustive:

- (9) *bun* ‘outside’
kebet ‘side’
kidip ‘nose, in front of’
yondem ‘behind, after’
tolok ‘upper part, on, above’

Here are some examples for their adnominal use:

- (10) *meja tolok* ‘on the table’
jeruk kebet ma ‘the other side of the orange’
nup yondem ‘behind us’

These nouns must be carefully distinguished from postpositions (see Section 4.5) which are a more common means to denote spatial relations. Spatial relation nouns have at least three features that distinguish them from postpositions: (a.) they can stand alone as the head of a phrase as in example (11) below; (b.) they can be possessed, e.g. *kaduk ye yondem* ‘behind the man’; (c.) they can be the first part of a compound noun, e.g. *bun kaduk* ‘foreigner (lit. outside man)’.

Unlike other nouns, nouns of spatial relation are mostly found in phrases that function as adjuncts and almost never as core arguments. Hence they form a syntactically defined subgroup of nouns.

- (11) *Ne edo yondem=bet win-in.*
 1SG DEM.this after=OBL go-1SG
 [My peers went earlier:]

‘I went after (them).’

[Fieldnotes]

- (12) *Yi=go ap kap kim talep kebet alumo-d-ip.*
 3PL=PTC tree seedling road big side plant-DUR-2/3PL
 ‘They are planting several trees next to main street.’

[Dictionary]

- (13) *Alo-d-en=go, wen-e Nunum kobi kawin-in, kidip*
 stand-DUR-3SG.M=PTC go-SM PN on climb-1SG front.of
kombo-d-en ege.
 put:SG.O-DUR-3SG.M DEM.here
 ‘While (the pig) was standing, I went to climb on a Nunum tree,
 that was located in front (of the pig).’ [muyu004:053]
- (14) *Awon=ko kuk tem balin bun al-ip.*
 pig=PTC cage in NEG outside live-2/3PL
 ‘The pigs live outside the cage.’ (lit. not in cage, outside live)
 [Dictionary]

The last two of these examples illustrate the difference between postpositions and spatial relation nouns. In (13), the postposition has a complement *Nunum kobi* ‘on a Numun tree’, whereas *kidip* stands alone with the ‘pig’ as the reference point left implicit. Similarly, (14) has a full postpositional phrase *kuk tem* ‘in the cage’, while the noun *bun*, that relates to the same ‘cage’, is uncomplemented.

3.2.4 Temporal nouns

This section deals with lexical items conveying temporal meanings that are analysed as nouns. The distinction between nouns and adverbs in this semantic domain is not always straightforward. For temporal adverbs, see Section 4.2.2.

Temporal nouns constitute a subclass of nouns that is defined by their ability to be modified by the adverb *kibik* ‘today, now’. This adverb precedes the temporal noun and fixes the deictic centre to the speech time. This kind of modification is not compatible with other nouns. Compare the following examples:

- (15) *kibik amyali* ‘this morning’
kibik amunggun ‘this afternoon’
kibik wot ‘this month’
 **kibik tana* Intended: ‘today’s children’
 **kibik yongbon* Intended: ‘today’s gardens’

As shown in the examples above, pre-head modification with *kibik* ‘today, now’ is not compatible with non-temporal nouns like *tana* ‘child’ or *yongbon*

‘garden’. However, such nouns actually can be modified by *kibik* ‘today, now’ but only in post-head position, i.e. in the modifier slot of the noun phrase:

- (16) *tana kibik* ‘the young generation’ (lit. today’s children)
nup yongbon kibik ‘our gardens today’

This syntactic difference between temporal nouns and general nouns is especially striking for the word *amit* ‘day’, which - against expectations - appears to be a non-temporal noun: *amit kibik* ‘today’ rather than **kibik amit*.

To sum up, the subclass of temporal nouns is defined by the compatibility with pre-head modification using *kibik* ‘today, now’.

The following list includes all temporal nouns of Muyu denoting certain stretches of time and times of the day:

- (17) *wot* ‘month’
wep ‘year’
amyali / amkali / amkiwali ‘morning’
amunggun ‘early afternoon’ (around 12 - 15 PM)
opnon ‘late afternoon’ (around 15-18 PM)
amnom ‘night’ (around 18 PM until sunrise)

The nouns for times of the day are a heterogeneous group and call for explanation. While the three variants for ‘morning’ and *amunggun* ‘early afternoon’ are genuine nouns, the origins of *opnon* ‘late afternoon/early evening’ and probably also of *amnom* ‘night’ lie in other word classes. *Opnon* is a frozen form of the verb *opni* ‘become evening’ and the inflectional morpheme *-on* ‘-3SG.M’. The noun and the verb co-exist in the Muyu lexicon and the verb still can inflect for verbal categories as irrealis or perfective.¹⁸

¹⁸Our impression is that the verb *opni* ‘become evening’ occurs slightly more often than the noun *opnon* ‘late afternoon/early evening’ in the corpus. The reason for this is that the verb often constitutes a separate clause as in the following examples:

- (i) *ta om ege men-e kan-e wen-e kobom-e,*
 and sago DEM.here come-SM take:SG.O-SM go-SM squeeze-2SG.IMP
opno-d-en gole
 become.evening-DUR-3SG.M CONJ
 [A man rushes his wife to work faster:]

‘... and take this sago and squeeze it because it is becoming evening already.’
 [muyu026:017]

Opni ‘become evening’ is not the only verb that is used to express times of the day. There are also *midiki* ‘get dark’ and *naki* ‘day breaks’. In contrast to *opni* ‘become evening’, these verbs did not lexicalise into temporal nouns. The corresponding time of the day for *naki* ‘day breaks’ is *amyali/amkali/amkiwali* ‘morning’.

The second temporal noun besides *opnon* that is probably not a genuine noun is *amnom* ‘night’. Just like *opni*, this lexeme has a corresponding verb: *amnomni* ‘become night’. The pair *amnom* (noun) - *amnomni* (verb) clearly shows that the noun is not just a frozen inflected form of the verb. Rather, the verb seems to be a derivation of the noun. However, the derivational morpheme *-n* ‘-VBLZ’ usually applies to adjectives rather than nouns (see Section 3.3.2). This seems somewhat surprising, since *amnom* behaves like any other temporal noun. Further research is needed here.

3.2.5 Nouns with classifying function

Names of natural kinds are typically preceded by a more generic noun for the whole class. So, for example, the name of a certain kind of bird typically follows the noun *on* ‘bird’, e.g. *on kidim* ‘crowned pigeon’ (*Goura cristata*) or *on anekok* ‘bird of paradise’. At first glance, these elements look like classifiers in other languages but they really are nouns, as will be discussed below. Nouns like *on* which are available for a classifying function will be called **generic class nouns** in the remainder of this chapter. Generic class nouns are not obligatory but they clearly are preferred and rarely omitted.

Here is a list of generic class nouns in Muyu:

-
- (ii) *Sampai opn-on=e, wen-e adon*
 until(BI) become.evening-3SG.M=DS.SEQ go-SM sun
kel-on=e, “Eh, nup=ko monopni yanop=an”, engg-an.
 become-3SG.M=DS.SEQ INTJ 1PL=PTC hunger there.is=COP say-1SG
 [They worked all day to make sago:]

‘Until in the evening, it became time (to eat), I said “oh we are hungry”.’

[muyu026:014]

In (i), the single-word clause *opnoden* ‘it is becoming evening’ is subordinated via the clause conjunction *gole*. In contrast, (ii) shows a clause chain with *sampai opnon* ‘until it becomes evening’ chained via the enclitic *=e* to the subsequent clauses. In both examples, *opni* is clearly identifiable as verb.

(18)	<i>ado</i>	‘frog’
	<i>ap</i>	‘tree’
	<i>ayi</i>	‘lizard’
	<i>but</i>	‘shrimp’
	<i>nin</i>	‘snake’
	<i>ok</i>	‘river’
	<i>omani</i>	‘banana’
	<i>on</i>	‘bird’
	<i>ton</i>	‘fish’
	<i>yum</i>	‘banana’

As seen in (18), animal kinds prevail but also fruit, trees and rivers have generic class nouns. Interestingly, generic class nouns are used when referring to the whole entity rather than parts of it. Therefore, the certain kind of tree *tibilop* will be referred to as *ap tibilop* but its leaf is *tibilop embit* (lit. *tibilop* leaf) instead of **ap tibilop embit*.

Generic class nouns and the juxtaposed nouns together form NPs that are used like any other NP. The following examples illustrate cases in which they function as subject (19) and object (20) of the clause.

(19)	<i>[On anekok</i>	<i>odo]</i>	<i>ap</i>	<i>kobi</i>	<i>nop</i>	<i>tiyo-d-un.</i>
	bird	bird.of.paradise	DEM	tree	high	sit-DUR-3SG.F
	‘That bird of paradise is sitting high on a tree.’					[Dictionary]

(20)	<i>Andi ok=tem</i>	<i>[ayi benep]</i>	<i>ni-ngg-o-den.</i>
	Andi	river=in	lizard
			crocodile
			seize-SG.O-3SG.M-PFV
	‘Andi caught a crocodile in the river.’		
			[Dictionary]

In (19) we see the noun *anekok* ‘bird of paradise’ with the generic class noun *on* to the left and the demonstrative *odo* to the right. The whole NP is the subject. In (20) the certain kind *benep* ‘crocodile’ is classified by *ayi* ‘lizard’ to the left. Together they act as the object of the clause.

Generic class nouns really are nouns, as they can be used unaccompanied and with referential meaning. Consider again (19) where the generic class noun *ap* ‘tree’ stands in a postpositional phrase with *kobi* ‘on’ but without a further noun to specify the kind of tree. Another example, contrasting with (20), is the following:

- (21) *Ne anon ayi tomon-on=e* ...
 1SG dog lizard bite-3SG.M=DS.SEQ
 ‘My dog caught a lizard and then ...’ [muyu049:004]

Once more, a generic class noun appears as the sole noun of an NP. Beyond *ayi*, the kind of lizard is of no importance in this utterance and therefore is not mentioned. To sum up, generic class nouns support the full range of nominal functions, they head simple NPs to become arguments of the clause and are compatible with postpositions. Therefore, we count them as a subclass of the noun word class rather than a separate word class.

The syntactic status of constructions with generic class nouns requires further scrutiny. Since both elements in constructions like *on anekok* in (19) and *ayi benep* in (20) are nouns, they can be interpreted as ordinary N-N compounds. There are, however, two problems with this interpretation. First, we need to take a look at the semantic headedness by comparing again the whole entity with a part of that entity:

- (22) *ap tibilop* ‘tibilop tree’ (i.e. a certain kind of tree)
tibilop embit ‘leaf of a tibilop tree’
- (23) *on anekok* ‘bird of paradise’
on kimi ‘bird feather’

The direction of semantic headedness in each of the two pairs above is different. In (22), the second instance (*tibilop embit*) is a compound with the second noun (*embit* ‘leaf’) as the semantic head. Similarly, the second instance in (23) shows a compound that is semantically right headed. In contrast, both first instances in (22) and (23) show a classified noun, in which the first noun is the semantic head. We therefore conclude that generic class nouns in classifying function differ from ordinary N-N compounds by direction of semantic headedness.

A second argument why constructions with generic class nouns should be distinguished from ordinary N-N compounds is the tendency for some generic class nouns to fuse with subsequent nouns in segmental attrition:

- (24) *On a-kawi kobi tem-a-den.*
 bird tree-pine on see-1SG-PFV
 ‘I saw a bird in a pine tree.’ [Dictionary]

In (24) we find the general class noun *ap* ‘tree’ reduced to /a/ and fused with *kawi*. In contrast, there is no tendency for reduction and fusion in compounds. Compounds like *ap kokap* ‘tree trunk’ in (25) and *ap kap* ‘tree seed’ in (26) keep the final /p/ of *ap*:

- (25) *Kep=ko ap kokap ogo katkil-e.*
 2SG.M=PTC tree trunk DEM watch.out-2SG.IMP
 ‘Beware of that tree trunk.’ [Dictionary]
- (26) *Yi=go ap kap kim talep kebet alumo-d-ip.*
 3PL=PTC tree seed road big side plant-DUR-3PL
 ‘They are planting tree seeds at the side of the main road.’ [Dictionary]

Comparing fused forms of generic class nouns like in (24) with ordinary compounds that resist reduction and fusion like in (25) and (26) might point to an ongoing grammaticalisation of what may become a classifying prefix in the future. However, at the present state the full forms of generic class nouns prevail.

To sum up, generic class nouns can be used with classifying function and always precede a name of a certain kind. The resulting constructions are semantically left-headed, which is a feature that separates them from N-N compounds. They are real nouns but some of them are perhaps grammatising to classifying prefixes.

3.2.6 Compound nouns

The most productive way of word formation is composition. Compound nouns almost exclusively consist of noun stems, i.e. N-N compounds. Since nouns have no morphological complexity, the stems are merely juxtaposed with neither intervening elements nor stem alternation in the element nouns. Semantically, the head of the compound is the rightmost noun, whereas the noun to the left modifies the head. To illustrate this we can say that an *embon ambip* ‘toilet’ is a kind of house (*ambip*) associated with faeces (*embon*) and not a kind of faeces (*embon*) associated with houses (*ambip*). Virtually all compound nouns involve two stems. Compounds consisting of three stems are possible but very rare (see below).

Some further examples of compound nouns are:

- (27) *kodolok kat* ‘hat’ [head+skin]
yon kat ‘shoe’ [foot+skin]
upneng komon ‘asthma’ [breath+secret]
tabuk tuk ‘cigarette stub’ [tobacco+stub]
kodom amun ‘anthill’ [ant+nest]
epkat kedeng ‘dust typically on clothes’ [cloth+dust]

The examples given so far have been quite transparent in meaning. However, compound nouns sometimes are more idiomatic as the following examples show:

- (28) *ambom kono* ‘car’ [turtle+bone]
kawat ok ‘sperm, amiotic fluid’ [kind of tree+water]

Compounds are formed productively, as can be seen from compounding with Indonesian loans:

- (29) *apyop keranjang* ‘fruit basket’ [Indo. *keranjang* ‘basket’]
ambip hutan ‘forest house’ [Indo. *hutan* ‘forest’]

Compound nouns are similar to another N-N combination: possessive constructions. In possessive constructions, the possessor noun precedes the possessed noun, which is the head of the phrase. These nouns can be linked with a pronoun like *ye* in (30) below.¹⁹ Compound nouns, in contrast, only allow for direct juxtaposition.

- (30) a. *ye anggotmi (ye) ambip* ‘his friend’s house’ (=double possessive NP)
b. *woya ye ambip* ‘grandmother’s house’ (=possessive NP)
c. *ot ambip* ‘bank (lit. money house)’ (=compound noun)

The difference between (a) and (b) on the one hand and (c) on the other is not only in formal marking but also in semantic reference of the modifying element. *ye anggotmi* ‘his friend’ and *woya* ‘grandmother’ refer to specific and definite entities, whereas *ot* ‘money’ is neither specific nor definite. In fact, the left element of a compound is never used referentially. Therefore, most possessive constructions are also identifiable when the linking pronoun

¹⁹If the possessor is a kin term, the linker pronoun is obligatory. See Section 6.3.1.

is missing: *Lukas ambip* is ‘the house of Lukas’.

Another kind of N-N combination occurs when addressing people:

- (31) *Bapak Lukas* ‘Mr. Lukas’ (lit. father Lukas)
Ena Anse ‘Mrs. Anse’ (lit. mother Anse)
Tana Alex ‘Alex’ (lit. child Alex)

All examples in (31) have in common that the first element is a human noun, while the second element is a proper name of an individual. These words are used either separately or combined. A man named Lukas can be addressed with either *Bapak*, *Lukas* or *Bapak Lukas* alike. Each of the elements is enough and both can be juxtaposed.²⁰ At the moment, we see no reason why combinations as in (31) should be excluded from compounds.

3.2.6.1 Common heads of compounds

Some heads of compound nouns recur frequently and are thus worth mentioning separately. This subsection lists compound nouns containing the head nouns *ambip* ‘house’, *ok* ‘water’ and *bon* ‘place’. Note, though, that such lists cannot be exhaustive since compounding is a productive word formation strategy in Muyu.

Compounds with *ambip* ‘house, village, area’ as head are manifold and belong to one of three groups: (a.) the name of a certain region as in (32), (b.) various types of buildings as in (33) or (c.) certain containers with ‘house’ as a metaphorical meaning as in (34):

- (32) *Awin ambip* ‘Awin area’
Awuyu ambip ‘Awuyu area’
Naki ambip ‘Naki area’
Oktap ambip ‘Oktap area’
- (33) *embon ambip* ‘toilet’ [faeces + house]
mit ambip ‘hotel, guesthouse’ [small.money²¹ + house]
nenem ambip ‘brothel’ [sexual.intercourse + house]
ot ambip ‘bank’ [large.money + house]
tut ambip ‘hunting lodge in the jungle’ [forest + house]

²⁰This is not the same as to say that all are equal in pragmatic terms. The mere first name, i.e. *Lukas*, is clearly less formal and considered less polite.

- (34) *aniduk ambip* ‘trash bin’ [waste + house]
awon ambip ‘pigsty’ [pig + house]
tabuk ket ambip ‘ashtray’ [tobacco + ashes + house]
tun ambip ‘heaven’ [<Indon. *tuhan* ‘lord’ + house]

Fluids are often designated with *ok* ‘water’ as a head. These must not be confused with *ok* as a generic class noun (see above), where *ok* is preceding a name as in *ok Bian* ‘the river Bian’.

- (35) *atunggum ok* ‘water in tree knots’ [tree.knot + water]
awut ok ‘tea’ [sugar.cane + water]
kawat ok ‘sperm, amiotic fluid’ [kind.of.tree + water]
konop ok ‘tears’ [eye + water]
ena yu muk ok ‘breast milk’ [mother + her + milk + water]

There are many compounds with *bon* ‘place’ as a head²²:

- (36) *adambon* ‘party place’ [party + place]
amkodep bon ‘oven, hearth’ [ashes + place]
aniduk bon ‘garbage dump’ [waste + place]
anot bon ‘place on tree where birds play’ [? + place]
embon bon ‘dirty place, dump’ [faeces + place]
iki bon ‘bright place (lit by lamp/sun)’ [? + place]
ket bon ‘sacral place’ [ashes + place]
konombon ‘grave, tomb’ [bone + place]
men bon ‘large estuary’ [traditional bag + place]
ok bon ‘market’ [water + place]
otbop bon ‘meeting’ [language + place]

Furthermore, many nouns that designate certain places end on a syllable *-bon* and at the same time are not analysable, while in other lexemes the element preceding *-bon* has no transparent semantics and cannot stand alone. Since all of them include locational semantics, it is reasonable to assume a compound noun as diachronic source:

²¹In pre-modern times, the Muyu used shells and dog’s teeth as money. Shell money is called *ot*, money made of dog’s teeth *mit*. Although this traditional form of money is no longer in use, the words have survived: *ot* designates money in general, whereas *mit* is reserved for small amounts of money. It is this semantic difference of the current use that lead to the glosses ‘small.money’ and ‘large.money’ in this section. In other parts of this study, we confine simply to ‘money’ to gloss both items.

- | | | |
|------|-----------------|--|
| (37) | <i>adimbon</i> | ‘bridge’ |
| | <i>amkombon</i> | ‘hill, mountain’ |
| | <i>balambon</i> | ‘birth place, delivery room’ |
| | <i>bayambon</i> | ‘old garden’ |
| | <i>yitbon</i> | ‘yard (=next to house)’ |
| | <i>yongbon</i> | ‘garden (=for agriculture, outside the village)’ |

As the examples in (37) show, compounds tend to be lexicalised.

3.2.7 Additive co-compounds

Different to ordinary N-N compounds, the meaning of additive co-compounds (the term was adopted from Wälchli 2005) is not dominated by a head that is modified by another noun. Rather, both nouns of this compound type add up to a joint meaning. Consider *bit ok* ‘region, area’ which is formed from *bit* ‘crest’ and *ok* ‘water, river’. This compound is neither a kind of water nor a kind of crest. Thus, we cannot determine the semantic head of the compound. Instead, both nouns contribute equally to the meaning of the whole: Crests and rivers form the landscape and therefore the ‘area’ in the Muyu speaking region.

Here are some examples:

- | | | |
|------|--------------------|-----------------------------------|
| (38) | <i>ambi amban</i> | ‘married couple’ [husband + wife] |
| | <i>anon awon</i> | ‘domestic animals’ [dog + pig] |
| | <i>ena emba</i> | ‘parents’ [mother + father] |
| | <i>bit ok</i> | ‘region, area’ [crest + water] |
| | <i>kon kaduk</i> | ‘people’ [woman + man] |
| | <i>nimbin tana</i> | ‘family’ [women(PL) + child] |

In fast speech these forms tend to fuse. Thus in the corpus we sometimes hear /ɛ.nam.ba/ for *ena emba* and /am.bi.ban/ for *ambi amban*.

²²The word separation in these examples follows the preferred orthography of the Muyu speakers. If the first element ends on a vowel /a/ or /o/, *bon* is prenasalised. In this case Muyu speakers prefer to write the /m/ in the orthography as well and not to separate the two element nouns. Otherwise the elements are separated as is the case for most other compound nouns as well. Notice though, that this is only a rule of thumb and not strictly abided.

3.2.8 Verbal nouns from infinitive -i

This section can give a short outline of verbal nouns only, with details discussed in other parts of this grammar. The infinitive form of a verb can be used as a verbal noun, i.e. as the head of a noun phrase. Infinitives are formed with the suffix *-i*, which is incompatible both with subject suffixes and aspect/mood marking (see Section 7.6.1). Besides their function as verbal nouns, verb forms in *-i* are used as predicates in a series of constructions. Since predicate functions are more frequent in the corpus than verbal noun functions, we decided to label these forms infinitives and the suffix *-i* as an infinitive marker rather than as a verbal noun derivational morpheme.

The following examples show the use of infinitives as verbal nouns. Each infinitive here is part of a copula clause with an adjectival predicate:

- (39) *Kok-i=go* *tap=an.*
 fall:SG.SBJ-INF=PTC bad=COP
 ‘Falling is bad.’ [elicited]
- (40) *Nup ambangg-i=go kudok=an.*
 1PL work-INF=PTC good=COP
 ‘(The process of) our work is good.’
 or
 ‘(The result of) our work is good.’ [elicited]
- (41) *Kep bulungg-i=go kudok=an.*
 2SG.M meet:SG.O-INF=PTC good=COP
 ‘Meeting you is nice.’ [elicited]

Semantically, infinitives mostly refer to the process that is denoted by the verb. It is the process of falling in general that is considered bad in (39), independent of who is falling or the consequences. However, sometimes the infinitive refers to the result rather than the process. Example (40) is ambiguous between a **process reading** and a **result reading**. In the result reading, the outcome of the work is considered good. For example, fruits that were harvested or objects that were crafted. The result reading is rare and restricted to a minority of verbs. To date, we have found only two verbs: *ambanggi* ‘work’ → ‘result of the work’ and *opkoni* ‘think’ → ‘thought’. Finally, verbal nouns can also have arguments. In (41), *kep* ‘you’ is the object of *bulunggi* ‘meet (sg.obj.)’. When infinitives are interpreted as verbal nouns,

the pronoun *kep* ‘you’ in (41) can be considered a possessor to the head noun. However, since Muyu does not formally distinguish personal pronouns from possessive pronouns, its function in these cases is not clear.

Verbal number also plays a role for verbal nouns. Compare (39) to the following example:

- (42) *Omani mim kok-i=go* *kudok=an, ta omani*
 banana one fall:SG.SBJ-INF=PTC good=COP and banana
kadap kombil-i=go *tap=an.*
 many fall:PL.SBJ-INF=PTC bad=COP
 ‘(When) one banana falls, it is good but (when) many bananas fall,
 it is bad.’ [elicited]

The infinitives in (42) are formed from verbs with a different verbal number and keep their verbal number semantics also when used as verbal nouns (for details on verbal number see Chapter 8).

Finally, we put forth some comparative notes about the broader Ok context. Cognates of Muyu *-i* are widespread in this language family. Both Mian (Fedden 2011:100) and Bimin (Weber 1997:8) have a suffix *-in* to derive nouns from verbs. Voorhoeve (2005) reports *-on* in Ngalum and *-in* in Teléfomin. Loughnane & Fedden (2011:27) reconstruct *-Vn for Proto-Ok-Oksapmin (a language grouping subsequently labeled Greater Ok). In this scenario, Muyu *-i* resulted from a loss of the final nasal.²³ Furthermore, Van den Heuvel & Fedden (2014) summarise that reflexes of this form are also found in some of the neighbouring Greater Awyu languages.²⁴

3.2.9 Noun reduplication

Reduplication is not a common feature in Muyu. There are instances, however, in which nouns are fully reduplicated in the corpus. Such reduplications always denote a pluralisation of the referents. They are probably a result of Indonesian influence, where plural reduplication is highly frequent.

²³Note that Muyu generally tends to open syllables at the end of non-finite forms.

²⁴The question whether the reflexes of *-Vn in three of the Greater Awyu languages (Korowai, Sawuy, and Aghu) are due to language contact or are rather a chance product of independent development is still open for debate.

- (43) *Kole, oto tana~tana olale-y-i=mo kem-ip*
 CONJ DEM child~RED talk-PL.RCV-INF=always do-2/3PL
oto, ...
 DEM
 ‘So, when they talk (advice) to the children, ...’ [muyu067:151]
- (44) *“ne=go kedo, ton~ton bat kedo oktikap eyanu*
 1SG=PTC out fish~RED hunt out downstream down.here
wan-an-e kem-an=o”, engg-on.
 go-IRR-SM do-1SG=QUOT say-3SG.M
 ‘ “I want to go downstream to find some fish”, he said.’
 [muyu007:015]

Both *tana~tana* ‘children’ in (43) and *ton~ton* ‘fish’ in (44) denote that the respective referent is plural. Another way of expressing plurality of referents in Muyu is the quantifier *kadap* ‘many, much’.

3.3 Verbs

In many ways, verbs are the dominant word class in Muyu. Firstly, their morphology is by far more complex than for other word classes. Muyu is a head-marking language and verbs bear the bulk of information in the clause. Secondly, verbs outnumber nouns and adjectives in token frequency. Since many sentences omit their arguments when they are recoverable from context, large stretches of discourse can be solely realised with verbs and minor function words. This section only gives a short outline of the defining features and inflectional possibilities of verbs. For a detailed treatment of the verb morphology, the reader is referred to Chapter 7.

Verbs are clearly distinguishable as a word class from nouns and adjectives. They are affixed with argument indexes, aspect and mood markers as well as morphemes related to switch reference. Neither nouns nor adjectives have such morphological capabilities, though Muyu offers derivational means to form deadjectival verbs (see Section 3.3.2).

The standard citation form of verbs throughout most of this thesis is the infinitive. It is formed by suffixing *-i* directly to the verb stem, e.g. *ani* ‘eat’, *wini* ‘go’, *temi* ‘see’. These forms are generally delivered by speakers when

asked for a certain verb.²⁵ Infinitives are also used as verbal nouns and can fill the argument position of another verb.

Morphological categories related to the verb are aspect, mood and switch reference marking. All of them are realised via suffixes to the verb. Unlike in other Ok languages (e.g. in Mian, see Fedden 2011), tense is not found in Muyu.

Finite verbs are those verb forms that have a subject suffix attached to them. Every verb is compatible with subject indexing and hence can be finite. In contrast, object indexes which come either as suffixes or prefixes behave very differently and are mostly employed on a closed subclass of verbs. These verbs will be called ‘object verbs’ and further discussed in Chapter 7. Since we defined finite verbs as verb forms including a subject suffix, all verbs lacking a subject suffix are consequently labeled ‘non-finite’. These include infinitives, two kinds of participles, as well as non-final verbs in multi-verb constructions and auxiliary constructions.

Syntactically, Muyu clauses exhibit the basic constituent order SOV. Thus, finite verbs mostly conclude a verbal clause, though sometimes the final verb is followed by a constituent that logically belongs to the clause, like afterthoughts or postposed locational adjuncts. Each clause has maximally one finite verb. Non-finite verbs, on the other hand, commonly precede the finite verb and are (probably) not limited in number.

Another important distinction is related to the position of a verb in a clause chain. Muyu is a clause chaining language and links up several clauses to a complex sentence by the use of designated markers for switch reference. Verbs differ morphologically in respect to their position in the clause chain. Final verbs inflect for the full range of aspect and mood categories and are host to illocutionary force clitics. Medial verbs are restricted in regard to aspect and mood but additionally take switch reference markers and are host to clause chaining clitics. The distinction between final verbs and medial verbs applies to finite verbs only. For details about the clause chaining system, the reader is referred to Chapter 12.

Loan verbs from Indonesian cannot be inflected directly. Speakers must employ them together with the auxiliary verb *keli* ‘become, do’ which takes all the morphology.²⁶

²⁵Especially in lexeme translation tasks with Indonesian as a contact language. E.g. for “How do you say *makan* (i.e. ‘eat’) in your language?” we would expect the answer “*ani*”.

²⁶Loans are glossed ‘(BI)’ (i.e. Bahasa Indonesia or Indonesian). Note that internationalisms like *meter* are also considered loans from Indonesian since this is the dominant

- (45) *Ne=go Muyu otbop belajar kel-ok min-in.*
 1SG=PTC Muyu language learn(BI) become-SBJV come-1SG
 ‘I came to learn the Muyu language.’ [muyu001:040]
- (46) *50 meter, emba=bet tanam kel-o-den.*
 50 meter(BI), father=OBL plant(BI) become-3SG.M-PFV
 ‘Father planted 50 metres (of rubber trees).’ [muyu027:041]

Both *belajar* in (45) and *tanam* in (46) are verbs in Indonesian. Nonetheless, they must be accompanied by the auxiliary *keli* to have all the inflectional options, like subjunctive in (45) or a final verb inflection as in (46).

Loan verbs are proper parts of the predicate rather than complements of the verb. This is illustrated by the argument structure in (45). The sequence *belajar keli* ‘learn’ behaves like any transitive verb and takes *Muyu otbop* ‘the Muyu language’ as the object argument. Otherwise, we would need to analyse *keli* as having three arguments which is not supported by the data unrelated to loan verbs. In conclusion, loan verbs are part of complex predicates which are generally a salient feature in Muyu (see Chapter 10 and 11).

Semantically, we can distinguish full verbs from auxiliaries and light verbs. Full verbs are rich in descriptive meaning and contribute largely to the predicate, e.g. *nenggi* ‘cook, burn’, *olali* ‘talk, tell’, *nangmi* ‘fight, make war’. Auxiliaries, on the other hand, are a closed class of verbs which are mainly used to contribute grammatical meaning to an adjoined full verb. Nonetheless, most auxiliaries can be used as a sole predicate for a certain function too. The auxiliaries and their functions are listed in Table 3.5.

Aux	Gloss	Function(s) as AUX	Function as main verb
<i>bili</i>	‘AUX.CONT’	continuative	-
<i>kemi</i>	‘do’	habitual, desiderative, complex predicates	‘do’, e.g. ‘What are you doing?’
<i>keli</i>	‘become, do’	accompanying loan verbs existentials (past, future)	‘become’, e.g. ‘We became teachers.’

Table 3.5: Auxiliaries and their functions when accompanying full verbs or as main verbs.

lingua franca and direct borrowing from English is highly unlikely. We are not aware of loans from other languages yet.

Auxiliaries and their functions will be discussed extensively in Chapter 11. Within the limits of this outline two examples shall suffice. In (47) *keli* ‘become, do’ is used to express a future existential. The existential marker *aip* is a particle and cannot take verbal morphology on its own. Another function of *keli*, i.e. to accompany Indonesian loan verbs, was illustrated above in (45) and (46). The predicate in example (48) makes use of *kemi* ‘do’ to form a habitual construction. The main verb is *ambanggi* ‘work’. Contrast this use of *kemi* ‘do’ in a habitual construction with (49) where it occurs as a main verb.

- (47) *Animan aip kel-an-on.*
 food there.is become-IRR-3SG.M
 ‘There will be food.’ [muyu056:066]
- (48) *Tana ye edo mekmetkono ambangg-e kem-en.*
 child 3SG.M DEM diligently work-SM do-3SG.M
 ‘That kid usually works diligently.’ [Dictionary]
- (49) *Amunggun edo mok medep kemo-d-ip=ki?*
 afternoon DEM INTJ what do-DUR-2/3PL=EMPH
 ‘Oh, what are you doing this afternoon?’ [muyu035:007]

To sum up, auxiliaries are mostly used in combination with full verbs. They enter certain constructions to obtain grammatical meaning (mostly aspect or mood). Beyond that, they sometimes occur as main verbs with little descriptive meaning.

The third semantic category besides full verbs and auxiliaries is light verbs. Light verbs are more complex than auxiliaries and have far more instances and functions. We therefore refrain from discussing light verbs in this outline and refer the reader to Chapter 10.

Finally, an important feature of the Muyu verb lexicon is verbal number. Many verb stems in Muyu are specified for either the number value of one of their participants (subject or object) or the number of occurrences of the denoted event. An example pair would be *kali* vs. *nami* ‘throw one object’ vs. ‘throw multiple objects’. The two verbs in such a pair are treated as individual lexemes throughout this thesis. A thorough discussion of verbal number in Muyu is a topic in Chapter 8.

3.3.1 Basic motion verbs

This section outlines the diverse functions of the basic motion verbs. Since these are discussed in detail in other parts of this study, this section is merely a guide for the reader.

The basic motion verbs of Muyu are *wini* ‘go’ and *mini* ‘come’. Two elements of meaning are encoded in these lexical items: (a.) the fact of motion and (b.) the direction. The directions are **itive**, i.e. motion away from the deictic centre, for *wini*; and **ventive**, i.e. motion towards the deictic centre, for *mini*. It is important to notice that the basic motion verbs are not telic, by which we mean that they do not entail the arrival at a certain location. So going or coming somewhere, when expressed with *wini* or *mini*, can mean either to move in the direction of that location or to move and arrive at that location. If a speaker wants to emphasize that the subject also arrived at the location, s/he can use the verb *nanggi* ‘arrive’ in combination with *wini/mini*.

The basic motion verbs fulfil various functions in Muyu, depending on their syntactic context:

1. In simple predicates, basic motion verbs simply denote **movement of a subject**. This context effects a peculiar syntactic structure, the ‘motion verb complex’, which is discussed in Section 9.2.1.1.
2. In multi-verb constructions, basic motion verbs can occur in **caused accompanied motion MVCs**, succeeding a verb of taking. See Section 11.3.2.
3. In multi-verb constructions, basic motion verbs can occur in **associated motion MVCs**. See Section 11.3.4.
4. In auxiliary constructions, *wini* ‘go’ is used in **periphrastic inchoative constructions**. See Section 11.6.5.
5. Its inflectional form *wene* is being lexicalised to ‘until’. See Section 4.7.8.

More complex motion verbs seem to originate from *wini* and *mini* etymologically, namely *kawini/kamini* ‘climb, ascend’ and *towini* ‘pass somewhere’. These forms could perhaps go back to historic derivations but there is no independent evidence for derivational prefixes **ka-* or **to-*. Semantically,

these complex motion verbs encode an additional direction, i.e. upwards or past some location. Notice that such directional information is usually not conveyed via derivation but with the separate word class of directionals (see Section 4.4).

3.3.2 Deadjectival verbs with *-n* and *-teleb*

Verbs are derived from adjectives with the derivational morphemes *-n* and *-teleb*. The result is an inchoative verb that denotes the inception of a state. This state is predicated to the subject of the clause. The difference between the two morphemes is related to verbal number. While derivation with *-n* results in singular verbs, *-teleb* is used yielding plural verbs. For the sake of brevity, the examples in this section will focus on *-n* here. For a comparison of *-n* and *-teleb* concerning verbal number, the reader is referred to Section 8.3.1.1.

Some examples of deadjectival verb derivation using *-n* are the following:

- (50)
- | | | |
|---------------------------|---|---|
| <i>bop</i> ‘rotten’ | → | <i>bopni</i> ‘become rotten (sg.sbj.)’ |
| <i>buk</i> ‘soft’ | → | <i>bukni</i> ‘become soft (sg.sbj.)’ |
| <i>kidit</i> ‘long’ | → | <i>kiditni</i> ‘become long (sg.sbj.)’ |
| <i>kelem</i> ‘wild’ | → | <i>kelemni</i> ‘become wild (sg.sbj.)’ |
| <i>tip</i> ‘good, enough’ | → | <i>tipni</i> ‘finish, end up (sg.sbj.)’ |
| <i>yumu</i> ‘ripe’ | → | <i>yumuni</i> ‘become ripe (sg.sbj.)’ |

Such deadjectival verbs with *-n* are intransitive and have E-stems with respect to their conjugation class (for details on conjugation classes see Section 7.2.1). They are quite commonly suffixed with *-ten* ‘PFV’ if the change of state has been completed as in (51). On the other hand, states may be also situated in the future as in (52).

- (51)
- | | | | |
|-----------------|------------------------|-------------|--------------------|
| <i>Niyap=ko</i> | <i>yit-n-o-den</i> | <i>gole</i> | <i>tinggi kok.</i> |
| cassowary=PTC | cold-VBLZ.SG-3SG.M-PFV | CONJ | hand painful |
- [Having shot a cassowary. Now pulling out the feathers:]

‘The cassowary has become cold so our hands were hurting.’

[muyu037:073]

- (52)
- | | |
|-----------------------|---------------------|
| <i>Tap-n-an-on,</i> | <i>kudok balin.</i> |
| bad-VBLZ.SG-IRR-3SG.M | good NEG |

[Thinking about the future vitality of the language:]

‘It will become worse, not good.’ [muyu056:114]

Example (51) illustrates the function of deadjectival verbs quite well. Theoretically, we can refer to a state simply with an adjective as in the last part of (51): *tinggi kok* ‘the hands were hurting’ (lit. ‘hand painful’). This strategy is not employed in the initial part with the state *yit* ‘cold’. Actually, a hunter should pluck the dead cassowary when it is still warm. Yet in (51) the hunters waited for too long. The deadjectival verb in its perfective form *yitnoden* highlights the fact that the cooling of the dead bird has been completed. Such aspectual meanings fit perfectly in the verbal domain, hence the derivation of *yit* ‘cold’ to *yitni* ‘cool down’.

Similar to the examples above, speakers can derive verbs from adjectives using *-teleb*, which results in a plural verb. A couple of examples should suffice here:

- | | | | |
|------|---------------------|---|--|
| (53) | <i>bop</i> ‘rotten’ | → | <i>boptelebi</i> ‘become rotten (pl.sbj.)’ |
| | <i>buk</i> ‘soft’ | → | <i>buktelebi</i> ‘become soft (pl.sbj.)’ |
| | <i>kidit</i> ‘long’ | → | <i>kiditlebi</i> ‘become long (pl.sbj.)’ |

Finally, we would like to offer some notes on the etymology of the derivational morphemes *-n* and *-teleb*. It seems that cognates of *-n* exist in other Ok languages. Mian (Fedden 2011:108) has a morpheme *-an* that derives verbs from nouns and adjectives. (Note, however, that Muyu *-n* is incompatible with nouns.) Weber (1997) does not describe adjectives in Bimin at all, while Christensen (2013) reports about Yonggom adjectives but does not describe deadjectival derivation. Healey (1964:64) mentions the existence of two “derivational suffixes” for adjectives in Teléfól (*-im* and *-een*) but does not say anything about their functions. To sum up, Mian and Muyu both contain cognate forms for deadjectival derivation, whereas evidence from further Ok languages is missing at the moment.

In contrast, the morpheme *-teleb* seems not to have any counterpart in other Ok languages. This is probably due to the fact that verbal number is a feature of Muyu exclusively. Within Muyu, the derivational morpheme is perhaps related to the homophonous verb *telebi* ‘gather, attend’. Hypothetically, several subjects “gathered” around the property denoted in the

adjective. Gradually, this would grammaticalise into a regular derivation.

3.3.3 Nouns as predicates and (non-productive) denominal verbs

In contrast to adjectives, nouns are not productively verbalised via derivation. To use a noun as predicate, a complex predicate is formed by adding a verb to the noun. Productive means are the light verb *wai* and the auxiliary *kemi* ‘do’:

- (54) With *wai* ‘LV’:
- a. *umkan wa-i*
blood LV-INF
‘bleed’
 - b. *kibiyum wa-i*
dream LV-INF
‘dream’

- (55) With *kemi* ‘do’:
- a. *tatbo kem-i*
barking do-INF
‘bark (dog)’
 - b. *tokbut kem-i*
lie do-INF
‘to lie’

The nouns in (54) and (55) behave like ordinary nouns outside these complex predicates. The verbs *wai* and *kemi* are particularly productive, yet several other verbs are used to form complex predicates together with nouns:

- (56) *yimin wan-i*
boundary LV-INF
‘limit, restrict’

- (57) *ambokok al-i*
 bald.head LV-INF
 ‘be bald’
- (58) *bat win-i*
 hunt go-INF
 ‘hunt’

These are just a few of the numerous cases of complex predicates employing nouns for their core meaning. For a detailed account on complex predicates, see Chapter 10 and 11.

As outlined above, complex predicates are the productive means to use nouns in predicates, whereas morphological derivation is only productive with adjectives. However, there are two exceptions to this rule:

- (59) *ayet* ‘wrapping’ → *ayetmi* ‘wrap’
nik ‘earthworm’ → *nikmi* ‘tossing and winding in bed (especially babies)’

The verb *nikmi* is clearly a metaphor, comparing winding babies to earthworms. The examples in (59) can be interpreted as denominal derivation with a verbalising suffix *-m*. However, in contrast to deadjectival derivation with *-n*, this process is not productive. The two examples given in (59) are the only instances found so far and it is not possible to derive new verbs productively. The hypothetical derivations in (60) are ungrammatical:

- (60) *nonggibi* ‘medicine’ → **nonggibimi* Intended: ‘apply medicine’
 (analogous to *ayet* → *ayetmi*)
ton ‘fish’ → **tonmi* Intended: ‘swim like a fish’
 (analogous to *nik* → *nikmi*)

To conclude, denominal derivation may have been available at an earlier stage as evidenced by the examples in (59). At the present stage, however, verbs are not derived from nouns. They must form complex predicates with light verbs instead.

3.4 Adjectives

Adjectives denote a certain quality of a referent. They are rather numerous and probably constitute an open word class in Muyu. Adjectives occur both as attributive modifiers in NPs, as in (61) and as predicates in non-verbal clauses, as in (62).

- (61) *Ne kalalang **tabadap**=ko kede wene=n?*
 1SG machete **flat**=PTC where where=COP
 ‘Where is my flat machete?’ [Fieldnotes]
- (62) *Niyap ima odo **talep** kai=in.*
 cassowary thigh DEM **big** very=COP
 ‘That cassowary thigh is very big.’ [Fieldnotes]

Furthermore, adjectives can occur attributively without an explicit head noun. This is due to the fact that the head of the NP can be dropped if it is recoverable from the context. The following example is from a narrative about fishing. After the protagonists caught some fish they discuss sorting them for further storage:

- (63) *Edo talep. **Talep** kai edo yeka.*
 this big **big** very this 3SG.M.REFL
 [While sorting fish:]
 ‘This one is big. This huge one is by itself. (i.e. separated from the other fish)’ [muyu038:168]

Adjectives in headless noun phrases occur mainly when the referent is given in the context. The extract in (63) sets in when the fish as main referents have been firmly established. The adjective helps selecting a certain referent from a set of fish. Notice also, that in the first clause of (63) the big fish was identified with a deictic demonstrative *edo*.

The word class of adjectives must be distinguished from verbs and nouns. Verbs are morphologically unique since they are the only word class in Muyu with complex morphology, whereas neither adjectives nor nouns inflect for any grammatical features.²⁷ However, verbs are derived productively from

²⁷The only exception to this, the kinship plural, does not apply to the whole word class of nouns but to a small subclass.

adjectives via the two morphemes *-n* and *-teleb* (see Section 3.3.2 for details).

Adjectives and nouns are distinguishable by three criteria, the most important of which is their diverging syntax. Adjectives always follow the head they modify as in (64), whereas modifying nouns typically precede the NP head as in (65). The modifying element is in boldface:

- (64) *[ton]*_{HEAD} ***kok***
 fish **dry**
 ‘dried fish’
- (65) ***towot*** *[amtit]*_{HEAD}
 guest room
 ‘guest room’

The respective semantic head in the examples (64) and (65) is marked by the subscript _{HEAD}. Thus, a *ton kok* is a fish that was dried in the sun but a *towot amtit* is a room for a guest rather than a guest in a room. The latter meaning would be rendered by the reverse word order. Indeed it can be forced in elicitation sessions as in (66). However, our consultants highlight that this meaning sounds strange to them and they would not use it.

- (66) ?*amtit towot*
 room guest
 ‘(Intended:) a guest (staying) in a room’

The examples given so far illustrate different directions for nominal and adjectival modification. In fact, both modifiers may apply in the same phrase. In such cases, the head is in the middle between modifiers at both sides:

- (67) *towot [amtit]*_{HEAD} ***talep***
 guest room big
 ‘a large guest room’

Secondly, adjectives are distinguishable from nouns by the fact that only adjectives can be intensified with *kai* ‘very’ (see Section 3.4.2). And, thirdly, adjectives but not nouns can form adverbs with *-mo* (see Section 4.2.3).

Some lexemes seem to transcend word class boundaries. A case in point is the polysemous *kambali*, which as adjective means ‘big’ and as a noun means ‘big man, respected person’. In the latter meaning, it has lexicalised to a full

noun that is used as a form of address and in to designate individuals as in (69).

- (68) *Yi=go ambip kambali yeno-d-ip.*
 3PL=PTC house **big** build.house:SG.O-DUR-2/3PL
 ‘They are building a big house.’ [Dictionary]
- (69) **Kambali** *Engelbertus ye tana=go et aip=an.*
big.man PN 3SG.G child=PTC seven there.is=COP
 ‘Mr. Engelbertus has seven children.’ [Dictionary]

3.4.1 Semantic domains of adjectives

As we would expect from a language with an open word class of adjectives, the items of this class cover a wide range of semantic domains. Although such semantic domains are commonly established in the languages of the world (Dixon 2004), various groupings are possible. In order to facilitate a comparison with other Ok languages, we follow the grouping offered by Fedden (2011:114-115) for Mian here. The following list gives representative lexical items and is not exhaustive.

Some adjectives of **age** are: *inggot* ‘young (of animals)’, *kili* ‘new’, *kodolom* ‘young (of fruit)’, *kodop* ‘old (of objects)’, *top* ‘oldest (of several persons)’, *yamum* ‘young (for females only)’.²⁸

Some adjectives of **size/dimension** are: *alalok* ‘wide’, *ambunop* ‘short (of persons)’, *belon* ‘small’, *kidit* ‘long (spatial)’, *kolomtong* ‘short, tiny’, *minidem* ‘narrow’, *mup* ‘narrow, tight’, *nom* ‘thick’, *nop* ‘high’, *noyok* ‘wide (of clothing)’, *talep* ‘big, wide’, *taman* ‘far’, *tuk* ‘short (of objects)’, *tunggum* ‘short (of objects)’.

Some adjectives of **value** are: *kudok* ‘good’, *tap* ‘bad’, *tip* ‘good, nice, appropriate’.

Adjectives of **colour** are: *bap-bap* ‘grey’, *kalangni kat* ‘blue, clear’, *kayok* ‘white’, *kukni* ‘white’²⁹, *midikono* ‘black’, *nup* ‘striped’, *yumu* ‘red, ripe’.

²⁸Children are usually not said to be ‘young’ but rather *belon* ‘small’. Young adults have separate nominal designations instead of adjectives: *kewet* ‘young person’, *kakewet* ‘young man’, *konkewet* ‘young woman’

²⁹The difference between the two whites is not fully clear yet. In our data *kayok* is used with *awon* ‘pig’, whereas *kukni* is used with *epkat* ‘cloth’ but also in the idiomatic designation for western foreigners *kat kukni* ‘lit. skin white’.

Physical properties form a large class of adjectives. Some of them are: *amtam* ‘dry’, *ayapkat* ‘slim (of persons), flat (of fish)’³⁰, *buk* ‘soft’, *buli* ‘cold’, *kambulup* ‘barren (of persons)’, *kamkono* ‘hard’, *kawang* ‘raw’, *kene mini* ‘deaf’, *kok* ‘dry’, *kokmaya* ‘bitter’, *kun* ‘heavy’, *neduk* ‘sour’, *nembeleng* ‘strong’, *niki* ‘withered’, *nimin* ‘hot’, *oni* ‘upright, straight’, *tabadap* ‘thin, flat’, *tamaken* ‘weak’, *tamap* ‘tasteless’, *tambelemop* ‘meager, slim’, *telep* ‘sweet like coconut milk’, *temkodon* ‘solid, tight’, *teng-teng* ‘firm, dense’, *teni kono* ‘liquid’, *tini* ‘mature, ripe’, *tobop* ‘straight (of trees and sticks)’, *tulip* ‘good smelling, fragrant’, *tum* ‘moist’, *tumbop* ‘wet’, *tutbop* ‘wet’, *ut* ‘wrinkled’, *walutki* ‘mute’, *waum* ‘crippled’, *wawuk* ‘toothless’, *wayok* ‘empty’, *wayokat* ‘cross-eyed’, *wukap* ‘blunt’, *yangganun* ‘rough, strong, hard’, *yeng* ‘dry’, *yepyep* ‘slippery’, *yepyep kono* ‘fine, smooth’, *yukmup* ‘soft, tender’, *yuluk* ‘cold’, *yutkuk* ‘cold’.

Adjectives of **human propensity** are: *kalik-kalik* ‘nervous’, *kawili* ‘lazy’, *nenekbat* ‘reckless, stubborn’, *tabakat* ‘stubborn’, *tenten* ‘naughty’, *titkono* ‘naughty’, *yakmanim* ‘rough (of character)’, *yewenup* ‘gentle’.

Adjectives of **difficulty** are: *bedenong* ‘difficult’, *kaluwot* ‘easy’, *minidem* ‘difficult’, *welen* ‘difficult, sick’.

Adjectives of **qualification** are: *amop* ‘holy, forbidden, taboo’, *endengmi* ‘strange’, *indeng andeng* ‘strange, creative’, *kabam* ‘wrong’, *kadonggip* ‘awkward (of persons)’, *kunkono* ‘awkward’, *nonot* ‘strange’, *yanam* ‘true’.

Adjectives of **order** are: *adin* ‘first’, *mimyon* ‘last’.

Some lexical items seem to be ambiguous between nouns and adjectives, as was shown with *kambali* ‘big, big man’ above. Colour terms are clearly adjectives in Muyu as can be seen from the following examples:

- (70) *Anon midikono ongo odo nup anon=an.*
 dog black there that 1PL dog=COP
 ‘That black dog over there is our dog.’ [Dictionary]
- (71) *Koko ye epkat kukni kom yon-o-den.*
 PN 3SG.M cloth white become.dirty become.dirty-3SG.M-PFV
 ‘Koko’s white clothing has become dirty.’ [Dictionary]

³⁰This adjective can only modify human referents and fish.

3.4.2 Intensification with *kai* ‘very’ and *kolem* ‘MOD’

There are two different lexemes for intensification: *kai* ‘very’ and *kolem* ‘MOD’. The basic means to intensify adjectives is *kai* ‘very’ which augments the scalar degree of the quality denoted by the adjective:

- (72) *Kip yon kudok kai.*
 2PL foot good **very**
 ‘Your feet are very beautiful.’ [Dictionary]
- (73) *“kole om=ko amop kai” engga-ip.*
 CONJ sago=PTC taboo very say-2/3PL
 ‘ “so the sago is very harmful”, they said’ [muyu032:126]

Kai is confined to this function and is thus only found with adjectives. In contrast, *kolem* has broader functionality and is analysed as a modality particle in Section 4.8.9. It is not limited to modification of adjectives but when it does occur in this context, the meaning is equivalent to *kai*. Both cases are illustrated with the adjective *monopni* ‘hungry’ in the following examples:

- (74) *Monopni kai ta-up.*
 hungry very LV-1PL
 ‘We are very hungry.’ [Dictionary]
- (75) *Robert=ko kolem monopni ta-en.*
 PN=PTC MOD hungry LV-3SG.M
 ‘Robert is very hungry.’ [Dictionary]

Comparing (74) and (75), we find that *kolem* precedes the adjective while *kai* follows it. Hence, *kolem* is not part of the same phrase but rather a particle that applies at the clause level.

Some adjectives seem to have specialised intensifiers. For example, *kayuluk* can only intensify *amop* ‘holy, forbidden, taboo’. This item is never found with other lexemes or alone:

- (76) *Amop kayuluk kole nup ena emba kaba-y-e*
 taboo very CONJ 1PL mother father be.angry-PL.RCV-SM
kem-ok balin.
 do-SBJV NEG
 ‘Since it is particularly tabooed, do not make our parents angry.’

[Dictionary]

3.4.3 Adjective reduplication

Reduplication is not a common feature in Muyu. In some very rare instances, however, adjectives are reduplicated as in (77), in which the adjectives denote the plurality of the referents. Such instances in our corpus probably originate from Indonesian influence where plural reduplication is highly frequent.

- (77) Two speakers talk about the infertile soil. They concede that some fruit grow there but ...
- a. *Kudok kudok balin.*
good good NEG
'They are not good.'
- b. *Talep talep balin.*
big big NEG
'They are not big.'
- [muyu017:084-85]

Besides that, some adjectives are lexicalised reduplicated forms: *indeng andeng* 'creative, strange', *nenggelek-nenggelek* 'colourful', *teng-teng* 'firm, strong, dense' and *yepyep* 'slippery'. None of these items exist in a non-reduplicated form.³¹ Therefore, it is possible that reduplication was more productive at an earlier stage of the language.

3.4.4 kima, ma 'other, another'

The adjective *kima* 'other, another' or its more frequent short form *ma* is worth discussing separately. Like other adjectives, it can modify nouns or verbal nouns (78) or stand alone in a headless phrase (79).

- (78) *Ta ambangg-i ma nowan.*
and work-INF other NEG
'But there was no other work.'
- [muyu017:022]
- (79) *Durian=a ta eh... ma medep=an?*
Durian=LNK and HES other what=COP

³¹The only exception to this, *nenggelek* 'letter, writing', is not an adjective but a noun.

[Explaining which fruits have been planted:]

‘Durian and uhm... what was the other one?’ [muyu017:101]

Since *(ki)ma* often occurs at the right edge of a noun phrase, it can be erroneously analysed as a determiner. However, contrary to determiners, *(ki)ma* is not in the phrase final slot but in the modifier slot (see Chapter 6 for details). This can be seen from possessive constructions as in (80) and (81). In possessive constructions, a determiner can never be attached to the possessor preceding the head noun. Thus *(ki)ma* is analysed as an adjective rather than a determiner.

(80) *kaduk kima ye ot*
 man other 3SG.M money
 ‘someone else’s money’ [Fieldnotes]

(81) *Yeka ok ma ye kaduk.*
 3SG.M.REFL water other 3SG.M man
 [Talking about the primary investigator:]

‘He is a man from far away.’ (lit. man of other waters)
 [Overheard]

In many cases, the noun modified with *(ki)ma* is used to distinguish its referent from another given (i.e. previously mentioned or otherwise accessible) referent as the English translation ‘other’ suggests. However, *(ki)ma* can also occur twice to contrast two referents explicitly, more resembling ‘one...the other’:

(82) *ta ne=go wen-e nong ma nin-an, nowan, ta*
 and 1SG=PTC go-SM rope **other** hold:SG.O-1SG NEG and
wen-e nong ma nin-e tem-an: ...
 go-SM rope **other** hold:SG.O-SM see-1SG
 [On a hunting expedition:]

‘I went to check one trap - but nothing, then I went to check the other trap and saw: ...’ [muyu004:009]

When a noun phrase is modified with more than one adjective, *(ki)ma* obli-

gatorily occurs last and takes scope over the other modifiers. Compare (83) with (84) in which the reverse order renders the example unacceptable. Notice, though, that multiple adjectives are not common in Muyu NPs and the following examples are elicited.

- (83) *Apyop yumu ma edo kudok balin.*
 fruit red other DEM.this good NEG
 [There are two red fruit. Pointing at the first: “This red fruit tastes good”. Then pointing at the other one:]

‘This other red fruit does not taste good.’ (lit. is not good) [elicited]

- (84) **Apyop ma yumu edo kudok balin.*
 fruit other red DEM.this good NEG
 [Same context as (84):]

‘(Intended:) This other red fruit does not taste good.’ [elicited]

Chapter 4

Word classes II: Closed word classes

4.1 Introduction

The previous chapter outlined open word classes of Muyu. This chapter deals with closed word classes, which comprise the following:

- adverb
- pronoun
- demonstrative
- directional
- postposition
- quantifier
- conjunction and subordinator
- particle
- interjection

In contrast to open word classes, the closed word classes of Muyu comprise only a limited number of items and show no morphological complexity.

The following sections discuss each word class in turn. The only class not included in this chapter is demonstratives, which are discussed in a separate dedicated chapter.

4.2 Adverbs

Adverbs are a small word class with a few dozen items. They are used to modify a predicate, which means that they add information about the event, as in (1) and (2). Unlike nouns, they never occur as core arguments of a clause.

- (1) *Kok-e won-o-den=go wen-e kawut wen-e*
 fall:SG.S-SM go-3SG.M-PFV=PTC go-SM directly go-SM
balak-o-den.
 disappear-3SG.M-PFV
 ‘When he fell down, he disappeared immediately.’ [muyu034:087]
- (2) *yem alin-an-ip=e*
 quiet sit:PL.S-IRR-2/3PL=DS.SEQ
 ‘They would sit quietly and then ...’ [muyu013:081]

Adverbs are sometimes hard to separate from adjectives, since the latter can also occur in adverbial functions. There is an adjective-to-adverb derivation (see Section 4.2.3 below) but this is only optional and adjectives can always stand underived in the adverbial function. In this section, we treat only those items which are not adjectives as genuine adverbs.

Most importantly, we find two semantic groups: locational adverbs and temporal adverbs. Both groups and the items pertaining to them are outlined in the following subsections. The remaining adverbs are of various semantic content and are listed here as follows:

- (3) *badop* ‘a little bit’
emeduk ‘in vain’
kabamon ‘useless’
kaluwot ‘only, merely’
kanggon ‘also, either’
kawut ‘directly’
kedep ‘maybe’

<i>kuluk kalak</i>	‘wrongly’
<i>mimyon</i>	‘finally, for the last time’
<i>mimtot</i>	‘sometimes, once upon a time’
<i>minok</i>	‘still, slowly’
<i>mo</i>	‘only’
<i>mokalik</i>	‘still’
<i>mokap</i>	‘already’
<i>nawan</i>	‘clearly’
<i>oyip</i>	‘also’
<i>tanggung</i>	‘rarely, seldom’
<i>tawak</i>	‘just’
<i>top</i>	‘merely’
<i>tunmo</i>	‘always’
<i>wenwai</i>	‘roughly’
<i>yanggon</i>	‘also’
<i>yem</i>	‘quietly’

Another word class that needs to be distinguished from adverbs is postpositions. Since many adverbs can co-occur with other elements (e.g. adnominally), they could be mistakenly seen as postpositions. However, there are criteria to distinguish these two word classes, for which the reader is referred to Section 4.5 which deals with postpositions.

4.2.1 Locational adverbs

Muyu has a rich inventory of locational adverbs. Almost all of them convey deictic semantics and are therefore discussed as demonstratives in Chapter 5. The only locational adverb without deictic meaning known so far is *wom* ‘inside’. It will be briefly described below. Note also that locational information is conveyed by postpositions (see Section 4.5) and spatial relation nouns (see Section 3.2.3).

Wom ‘inside’ (and its much less frequent variant *waum*) refers to a location inside a container. This container can be a concrete entity, e.g. *ambip wom* ‘in the house’, or rather abstract, e.g. *nup otbop wom* ‘in our language’. *Wom* can only express spatial relations with respect to referents of explicitly encoded NPs or to those that have been introduced in discourse, but it is not possible to use *wom* along with pointing at some situationally given entity.¹

¹This deictic function is fulfilled by the demonstrative *eyom* ‘inside this’ instead. *Eyom*

Therefore, *wom* is not a demonstrative.

In fact, *wom* seems to be a hybrid between adverb and postposition, since it can stand alone as the head of a phrase, as in example (4) below, or together with a noun phrase as in (5). Diachronically, it may have started out as a noun with the meaning ‘inside, middle’. However, at the present stage *wom* is not interpreted as a spatial relation noun since it is neither compatible with possessive constructions nor with compound formations.

- (4) *Balakna-n-e tem-on=go, ih wom odo nowan.*
 unwrap-SS-3SG.M see-3SG.M=PTC INTJ inside DEM NEG
 [A giant finds a packet wrapped in banana leaves:]
 ‘He opened it and saw that, oh there was nothing in it.’
 [muyu067:119]
- (5) *tana bon ambip wom timbel-e kem-un.*
 child place house inside sit-SM do-3SG.F
 [When a pregnant mother is close to giving birth:]
 ‘She remains in the delivery room of the house.’ [muyu046:022]

4.2.2 Temporal adverbs

This section deals with temporal adverbs as a means to express temporal relations. Besides that, temporal relations are also expressed with oblique phrases (§9.3.4), phrases with postpositions (§4.5) and as sequential or simultaneous events in clause chaining syntax (§12.2).

The following adverbs refer to days from the deictic origin of ‘today’:

- (6) *(kibiyon) tanipya* ‘day before yesterday’
kibiyon ‘yesterday’
kibik ‘today, now’
ine ‘tomorrow’
one ‘day after tomorrow’
katma ‘day after day after tomorrow (=in 3 days)’

As can be seen from (6), the days covered by temporal adverbs are asymmetrical, with two days in the past and three days in the future. In Section 3.2.4, we described the capacity of *kibik* ‘today, now’ to occur as a pre-head

and *wom* probably share a diachronic source. See also Section 5.7.

modifier with temporal nouns. This way of using *kibik* centers the noun deictically at the origo of the discourse, e.g. *kibik amyali* ‘this morning’ and *kibik wot* ‘this month’. Note that *kibik amnom* ‘(lit.) today night’ refers to the past night rather than the upcoming night. All the adverbs in (6) are centered at the time of utterance and do not need further deictics.

The following adverbs refer to more unspecific times:

(7)	<i>amaen</i>	‘another time, next time’
	<i>amen-amen</i>	‘forever’
	<i>kidin</i>	‘in the past’
	<i>omodom</i>	‘long time ago’
	<i>onetko</i>	‘now’
	<i>wanot-wanot</i>	‘long time ago, in the past’
	<i>yamo</i>	‘always’
	<i>yedokmoden</i>	‘since time immemorial’

4.2.3 Deadjectival manner adverbs in -mo and -kono

Manner adverbs can be derived from adjectives by either *-mo* or *-kono*. A semantic difference between these two suffixes could not be determined yet. Most likely, adjectives are lexically specified for which suffix they will take.

Some examples are the following:

(8)	<i>bopti</i>	> <i>boptimo</i>	‘slowly’
	<i>kadonggip</i>	> <i>kadonggipkono</i>	‘awkwardly’
	<i>kenambun</i>	> <i>kenambunmo</i>	‘strongly’
	<i>keyap</i>	> <i>keyapmo</i>	‘quickly’
	<i>tabin</i>	> <i>tabinmo</i>	‘clearly’
	<i>tekwali</i>	> <i>tekwalikono/tekwalimo</i>	‘bravely’

The last element in (8), *tekwali* ‘brave’, is attested in the corpus with both *-mo* and *-kono*.

As was mentioned earlier, the application of these derivational morphemes is mostly optional. Adjectives can occur without any derivational suffixes in adverbial function. Compare the following examples:

(9)	<i>Tana kon</i>	<i>mim</i>	<i>kedam=bet</i>	<i>ap</i>	<i>neyong</i>	<i>keyap-mo</i>
	child	woman	one	knife(BI)=OBL	tree	branch quick-ADV

womb-u-den.

cut:SG.O-3SG.F-PFV

‘A woman cut a branch of tree with a knife quickly.’

[Cut_and_break:020]

- (10) *kinkin otbop=ko keyap opko-ngg-i adep balin.*
 spirit language=PTC quick think-2/3SG.O-INF like NEG

‘we cannot understand the words of the Holy Spirit quickly.’

[muyu019:144]

4.2.4 kanggon ‘also, either’

The adverb *kanggon* ‘also, either’ is used to highlight that a certain piece of information is given in addition to some previously mentioned information. Syntactically, this adverb favours second position in the clause, although it seems to be flexible.

- (11) *kaduk=ma wadi kedo alebol-on, ne kanggon kedo alebal-an,*
 man=other up out stand-3SG.M 1SG also out stand-1SG
ey, kono odo nanggil-i adep kol-on=e.
 INTJ boat DEM flip.over-INF like become-3SG=PTC
 [Two men, trying to get out of a canoe:]

‘The other man stood, I also stood up and Oh!, the canoe almost flipped over.’

[muyu038:109]

Kanggon ‘also, either’ is flexible in scope. It can relate to any element of the clause. In the following examples, the (b.) clauses add information to the preceding (a.) clauses:

- (12) a. Jack likes bananas.
 b. *Peter kanggon omani opko-en.*
 PN also banana think-3SG.M
 ‘Peter likes bananas too.’ [elicited]
- (13) a. Peter likes sago.
 b. *Peter kanggon omani aip opko-en.*
 PN also banana there.is think-3SG.M
 ‘Peter likes bananas too.’ [elicited]

The two examples above differ in what elements of the clause are contrasted. In (12), the subjects are contrasted, i.e. besides Jack also Peter likes bananas. In contrast, in (13), the objects are contrasted, i.e. besides sago, Peter also likes bananas. Both cases use *kanggon* ‘also’ in the same syntactic position.

Furthermore, *kanggon* ‘also, either’ is compatible with negative contexts, as in the following example:

- (14) *Mary=go John omyat kon-ok balin ta George kanggon.*
 PN=PTC PN invitation give-SBJV NEG and PN either
 ‘Mary did not invite John, and (she did not invite) George either.’
 [elicited]

4.3 Pronouns

Pronouns are a closed word class which consist of a personal pronoun paradigm (§4.3.1) and a derived paradigm of reflexive pronouns (§4.3.2). Additionally, there is an indefinite negative pronoun *nowan* ‘nothing’ (§4.3.3).

4.3.1 The personal pronouns

The personal pronouns consist of a single paradigm whose items are used either as (1.) NP heads in core arguments of the clause or (2.) possessors in possessive NPs. They can co-occur with other elements of the NP, like quantifiers or determiners (see Chapter 6 on noun phrase structure).

Table 4.1 shows the personal pronouns. The distinctive categories are person, number and gender. There are three person values (1st, 2nd, 3rd) and two number values (singular vs. plural). A clusivity distinction for first person plural (inclusive vs. exclusive), which is known from other Ok languages², is not present in Muyu. Gender (masculine and feminine) is only distinguished in second and third person singular.

The pronoun forms shown in Table 4.1 have clear correspondences within the same person values. Thus, initial /n/ indicates first person, /k/ second person and /j/ third person. Furthermore, all second person forms and first person plural have a final /p/, whereas all third person forms and first person singular are open syllables. The vowel alternation /e/ vs. /u/ corresponds to

²A distinction between exclusive vs. inclusive 1PL is found in Mian *nī* vs. *nībo* (Fedden 2011:125) as well as in Ngalum *nu* vs. *nup* (personal fieldnotes, A.Z.).

Person	Gender	Singular	Plural
1.		<i>ne</i>	<i>nup</i>
2.	masc.	<i>kep</i>	<i>kip</i>
	fem.	<i>kup</i>	
3.	masc.	<i>ye</i>	<i>yi</i>
	fem.	<i>yu</i>	

Table 4.1: Paradigm of free pronouns.

the gender distinction masculine vs. feminine, while /i/ stands for plurality (except for first person plural). For a comparison of free pronouns and bound subject suffixes, see Section 7.3.1.

The free pronoun forms of Muyu are obvious reflexes of the pTNG forms reconstructed by Ross (2005). Compare Table 4.1 with the proto-forms in Table 4.2.

Person	Singular	Non-Singular
1.	* <i>na</i>	* <i>ni</i> / * <i>nu</i>
2.	* <i>ɲga</i>	* <i>ɲgi</i>
3.	* <i>(y)a</i> /* <i>ua</i>	* <i>i</i>

Table 4.2: Reconstructed pTNG pronouns (Ross 2005:29).

Syntactically, we find pronouns in all core argument positions, i.e. as subjects (15) and objects (16). Besides that, a pronoun can also be the complement of a postposition, as shown in (17).

- (15) *yi=go anggotmi win-ip-ten.*
 3PL=PTC friend go-2/3PL-PFV
 ‘They went to (a) friend(s).’ [muyu034:079]
- (16) *awon=ko ne=go teme-d-ok balin.*
 pig=PTC 1SG=PTC see-1SG.O-SBJV NEG
 ‘The pig did not see me.’ [muyu004:064]
- (17) *odo ne yeman kole.*
 DEM 1SG for CONJ
 ‘Because that is for me.’ [muyu038:074]

Furthermore, pronouns also occur appositionally, i.e. next to a co-referential

NP in the same argument position of the clause. In (18), both *tana kambali* ‘big man’ and *kep* ‘you (masc.)’ refer to the addressee.

- (18) *Ih ogo, tana kambali kep=ko ok*
 INTJ DEM, child big.man **2SG.M**=PTC water
an-e=yo.
 eat-2SG.IMP=HORT
 [Directed at the recording primary investigator:]
 ‘Oh here, big man, please drink the water!’ [muyu010:009]

The second important syntactic function of pronouns is pronominal possession. Pronouns refer to possessors when they stand in the pre-head slot of a noun phrase (see Section 6.3.1). Here are two examples³:

- (19) *Ih, kep ot=ko ka-d-ip-ten=go*
 INTJ **2SG.M** money=PTC give-1SG.RCV-2/3PL-PFV=PTC
komb-a-den.
 put:SG.O-1SG-PFV
 [Asking a bank clerk if a certain transfer was received:]
 ‘Oh, they have sent me your money and I have put it (on your account).’ [muyu030:207]
- (20) *Nup otbop nowan kel-an-on.*
 1PL language NEG become-IRR-3SG.M
 [Thinking about the future:]
 ‘Our language will disappear.’ [muyu012:008]

4.3.2 Reflexive pronouns

Reflexive pronouns are derived from the personal pronoun paradigm (see Section 4.3.1) by attaching the suffix *-ka*. The resulting forms are shown in Table 4.3. Intervocalic lenition is not applied to these forms, so that *yeka* is pronounced [yɛ.ka] instead of the expected [*yɛ.ɣa]. Therefore, we

³Note that pronouns are often involved in phonological processes. For example, *kep* in (19) and *nup* in (20) are pronounced [kɛw] and [nuw] respectively, due to the intervocalic position of the offset plosive. Open-syllable pronouns (*ne*, *ye*, etc.) can undergo vowel elision if the succeeding word is vowel-initial. Such phonological processes are usually not represented in the orthography used in this study. For details, see Section 2.3.

treat reflexive pronouns as fully lexicalised forms rather than resulting from productive derivation.⁴

Person	Gender	Singular	Plural
1.		<i>neka</i>	<i>nupka</i>
2.	masc.	<i>kepka</i>	<i>kipka</i>
	fem.	<i>kupka</i>	
3.	masc.	<i>yeka</i>	<i>yika</i>
	fem.	<i>yuka</i>	

Table 4.3: Paradigm of reflexive pronouns.

The main functions of reflexive pronouns are:

1. To indicate co-referentiality of clausal arguments ('he V-ed himself, she V-ed herself').
2. To highlight a deictic referent ('himself, herself').
3. To highlight a possessor ('his own, her own').

As to the first function, reflexive pronouns establish co-referentiality between clausal arguments. In the following examples, the actor of the event is also the beneficiary (21) or the patient (22). Notice, that the reflexive pronoun is the subject in both examples, whereas the object is a full possessive NP.

- (21) *Paul ye ambip yeka yen-en.*
 Paul 3SG.M house **3SG.M.REFL** build.house:SG.O-3SG.M
 'Paul built a house for himself. (lit. Paul's house himself build.)'
 [Dictionary]

- (22) *Paula yu tinggi yuka nal-u-den.*
 Paula 3SG.F hand **3SG.F.REFL** cut-3SG.F-PFV
 'Paula cut her own hand. (lit. Paula's hand herself cut.)'
 [Dictionary]

⁴Compare reflexive form *yeka* [yɛ.ka] to basic pronouns with phrase clitic =*ko*, resulting in *ye=go* [yɛ.ɣɔ].

Reflexive pronouns that establish co-referentiality can also refer to inanimate entities, as in (23). Both arguments of the transitive verb *wombi* ‘cut’ refer to the patient. In contrast to (21) and (22), there is no actor since the rope breaks by itself. This meaning is reinforced by the adverb *yedon* ‘by.self’.

- (23) *Nong odo yeka yedon womb-e alop*
 rope DEM **3SG.M.REFL** by.itself cut:SG.O-SM two
kel-o-den.
 become-3SG.M-PFV
 [Video stimulus. Rope is being torn without external influence:]
 ‘The rope broke into two parts by itself.’ [Cut_and_break:046]

Secondly, reflexive pronouns are used to highlight and put emphasis on a certain referent. In (24), there is emphasis on the parents who should make the decision. The clause clitic =*ki* also marks this emphasis. The reflexive pronoun in (25) is the non-verbal predicate of a verbless clause. It conveys distributive meaning to single out a certain referent.

- (24) “*Ah emba eyuk, ah ta ena eyuk, kipka*
 INTJ father yes INTJ and mother yes **3PL.REFL**
wonggo=gi”, *engg-an-un.*
 there=EMPH say-IRR-3SG.F
 [A young woman, being asked by her parents if she wants to marry a certain man:]
 ‘ “Oh yes father, oh and yes mother, it is up to you”, she would say.’ [muyu018:042]
- (25) *Edo talep. Talep kai edo yeka.*
 DEM.this big big very DEM **3SG.M.REFL**
 [While sorting fish:]
 ‘This one is big. This huge one is by itself. (i.e. shall be separated from the other fish)’ [muyu038:168]

Thirdly, reflexive pronouns can stand as pronominal possessors and thus focus the possessor of an entity. This can result in a meaning similar to Engl. ‘his/her/their own, etc.’ as can be seen in (26). Structurally, this is a kind of nominal possession with the reflexive pronoun in a position where a noun is expected (for the structure of possessive NPs, see Section 6.3.1). Therefore, the reflexive pronoun is followed by a pronominal linker *yi*.

- (26) *Ogan=ko yika yi otbop mo=on.*
 foreigner=PTC **3PL.REFL** 3PL language only=COP
 [The school teacher should be a local man with knowledge of the
 local language:]
 ‘The foreigners have only their own language.’ [muyu030:237]

4.3.3 The indefinite pronoun *nowan* ‘nothing’

The pronoun *nowan* ‘nothing’ is used to express the absence or non-existence of a referent. It is also used in contexts that are better translated with ‘nobody’, ‘nowhere’ or simply ‘no’. Formally, it is not further analysable. We categorise *nowan* ‘nothing’ as a pronoun based on its syntactic distribution. Note, however, that *nowan* ‘nothing’ is quite different from the other pronouns discussed in this section. It does not distinguish any grammatical categories and it cannot be used anaphorically. For a more detailed discussion including examples, the reader is referred to Section 9.7.4.

4.4 Directionals

It is a well known fact that many Papuan languages convey directional meaning as a grammatical category of some sort. Foley (1986:148-152) distinguished two strategies by which directionals can be encoded: (a.) directional affixes that are attached to verb stems (as in Yimas) or (b.) directional verb stems that are part of a serial verb construction (as in Dani). Muyu represents a third type, in which directionals are a separate word class, possibly deriving from SVCs historically. This third strategy seems to be typical for Ok languages and was also described for Mian (Fedden 2011:140-143).

The word class of directionals contains lexemes that denote the direction of a motion event and some metaphoric extensions thereof. This section deals with lexical features of directionals. For their syntactic distribution in the so-called ‘motion verb complex’, the reader is referred to Section 9.2.1.1.

Directionals are a small group of lexemes which is exhaustively given in the following list:

- (27) Directionals in Muyu:
yado ‘up’
kido ‘down’

kolo ‘back’
kedo ‘out’
wudo ‘into, hither’

The main function of directionals is to modify motion verbs, mostly *wini* ‘go’ and *mini* ‘come’, and thereby add the direction of motion to the predicate. It should be noted, though, that the basic motion verbs do include directional meaning already, i.e. itive and ventive as discussed in Section 3.3.1. Directionals thus add further directional meanings.

Although a directional is part of the motion predicate, they remain separate words. This is seen by the fact that a locational argument (e.g. a goal of movement) can intervene between the directional and the motion verb:

- (28) ***kido*** *tut wun-up=ki.*
 down forest go-1PL=EMPH
 ‘we went right down to the jungle.’ [muyu023:007]

Directionals belong to the predicate and must be distinguished from adverbials with similar directional semantics. A useful syntactic test consists in adding the oblique marker *=bet* (see Section 9.3.4 for details), which is compatible with adverbials, as in the (a.) examples of (29) and (30), but not with directionals, as in the (b.) examples:

- (29) a. *Kono yibi wano=bet timbel-e.*
 boat rear.end down=OBL sit-2SG.IMP
 ‘Sit down at the boat’s rear end!’ [Dictionary]
 b. **kido=bet wen-e*
 down=OBL go-2SG.IMP
 ‘(Intended:) ‘Go down!’ [elicited]
- (30) a. *Ih, onggadi=bet napnap yanop, ta onggano=bet*
 INTJ up.there=OBL shaking there.is and down.there=OBL
napnap yanop=an.
 shaking there.is=COP
 [Hunting. Having lost a pig that must be hiding out in the bushes:]
 ‘Oh! Up there, there was shaking, and down there, there was shaking.’ [muyu004:039]

- b. **yado=bet mun-up*
 up=OBL come-1PL
 ‘(Intended:) We came up.’ [elicited]

The oblique marker =*bet* cannot be attached to directionals as in (29-b) and (30-b) because the directional is a part of the predicate itself rather than an independent adjunct or an argument thereof.

In the Mountain Ok language Mian, directionals can be inflected like verbs and thereby form intransitive verbs of motion. These inflected directionals can only occur as medial verbs with a same subject marker. The following example shows the Mian directional *daak* ‘down’ as an intransitive verb of motion:

- (31) *sin tl-Ø-e-bu=e*
 first come.PFV-REAL-3SG.M.SBJ-GPST=SG.M
daak-n-e=a *skilón=e*
 down-SS.SEQ-3SG.M.SBJ=MED foot=SG.N1
bu-^hb'-a-n-e=a
 hold-give.PFV-3SG.M.R-SEQ-3SG.M.SBJ=MED
 ‘The one (i.e. a crow) who came first went down and held his (the male protagonist’s) foot and then ...’ (Fedden 2011:337)

Muyu does not support direct inflection of directionals as in the Mian example in (31). However, there are two verbs of motion that are probably related to the directionals of the same direction:

- (32) *kido* ‘down’ → *kidili* ‘come down, fell (tree)’
wudo ‘into, hither’ → *wudili* ‘enter’

The formal similarity of the verbs in (32) to their respective directional is evocative of the direct inflection of directionals in Mian. However, there are two important differences: (1.) the directional-verb correspondence in Muyu is restricted to the two items in (32) and cannot be extended productively to other directionals, (2.) there are no morphological restrictions to the verbs in (32). Recall that the Mian inflected directionals have to be medial verbs marked with *-n* ‘SS.SEQ’. No such rules apply to Muyu *kidili* ‘come down, fell (tree)’ or *wudili* ‘enter’.

Although Muyu directionals cannot be directly inflected as in Mian, the

existence of the two directional-verb pairs in (32) points to a diachronic stage where such an inflection was possible. Indeed, Drabbe (1954:186) describes forms ending in *-o* as “participles” of verbs ending in *-ere* (i.e. *-ili* in the present dialect). Besides the already mentioned *kidili* and *wudili*, Drabbe’s data for the Ninati dialect include verbs that correspond to two further directionals: *keto* → *ketere* ‘stand up’, *yapato* ‘up’ (i.e. Kawip *yado*) → *yapetere* ‘go up’. These pairs are instructive for our understanding of directionals as a word class. We propose the following lexicalisation scenario for directionals: At one stage, directions were conveyed via verbs ending in *-ere* (i.e. *-ili*). These directional verbs were serialised to motion verbs to express the direction of the respective motion. Such serialised directional verbs were inflected with *-o* (similar to today’s serial marker *-o*, see Section 7.6.5). Due to the high frequency of basic motion verbs, the forms in *-o* became more common than the fully inflected forms of these verbs. Over time, most of the directional verbs became obsolete leaving only the forms in *-o*. Finally, the forms in *-o* were reinterpreted as a separate word class.

There is evidence that the diachronic development is continuing, with lexicalised directionals becoming the basis for further word formation processes. The verb *kedoni* ‘start to’ is obviously derived from *kedo* ‘out’ with the verbalising suffix *-n*. If this process were to continue and one day expand to the remaining directionals, the development verb→directional→verb would come full circle.

4.5 Postpositions

Postpositions are a closed word class which take a noun phrase or a clause as complement and typically express spatial and other relations. They always occur after their complement (hence postpositions) and neither inflect themselves nor trigger any morphological change in their complements. Some postpositions can be combined with the bound deictic morphemes *e-* and *o-* to form demonstratives. These forms are discussed in Chapter 5 and will be left out here.

Lexical items that express (locational) relations need not necessarily belong to this word class. Hence, postpositions must be carefully distinguished from spatial relation nouns, locational adverbs and directionals. The following criteria can help differentiate postpositions from these other word classes:

- Postpositions must take a complement, while adverbs and spatial nouns

can stand alone.

- Postpositions are always directly juxtaposed to a noun, while spatial relation nouns can be linked with *ye* to another noun.
- Contrary to postpositions, spatial relations nouns can be the first element of a compound noun.
- Contrary to postpositions, directionals never take complements.
- Postpositional phrases are either adjuncts or arguments, whereas directionals are part of the predicate.

A comprehensive list of Muyu postpositions is provided in (33).

(33)	<i>adep</i>	‘like’
	<i>kobi</i>	‘on (trees only)’
	<i>tap/tawap</i>	‘under’
	<i>tem</i>	‘in, into’
	<i>ya</i>	‘at, to’
	<i>yeman</i>	‘for’
	<i>yinim</i>	‘on, onto’
	<i>yom</i>	‘with (comitative)’

The three most important postpositions *adep* ‘like’, *ya* ‘on, onto’ and *yeman* ‘for’ are briefly discussed in the following subsections. The remainder of this section outlines some general features of postpositional phrases.

Semantically, the two items for ‘on’ deserve some explication. *Kobi* is restricted to locations that are on trees, while *yinim* is the general postposition for locations on surfaces.⁵ This latter postposition seems to denote that a referent has surface contact with another entity. Meanings like ‘above’ are not compatible with *yinim* and in fact not conveyed by any postposition in Muyu.

Here are some examples for postpositional phrases:

(34)	<i>ta kido</i>	[<i>keranjang tem</i>]	<i>yal-e=go</i>
	and down	basket	in put:PL.O-SM=PTC
	<i>kol-ip=ko</i>	(...)	
	finish-2/3PL=PTC		

⁵Locations on trees were culturally important at the time when the Muyu still lived in tree houses. This may be the motivation for a separate postposition relating to trees.

‘and they put (the fruits) down into the basket and when they finished ...’ [muyu011:027]

- (35) *Botol alop mim edo [meja tap] yal-a-den.*
 bottle(BI) three DEM.this table(BI) under put:PL.O-1SG-PFV

‘I have put these three bottles under the table.’ [elicited]

- (36) *[ok adimbon yinim] nangmo-n-ip*
 river bridge on fight-SS-2/3PL
 [Two goats meeting on a bridge:]

‘They fought on the bridge and then they ...’ [muyu014:012-13]

- (37) *Ne=go [mangga kobi]=bet kubun-an.*
 1SG=PTC mango on=OBL descend-1SG

‘I come down from the Manggo tree.’ [Fieldnotes]

Postpositional phrases are mostly used in adverbial function (for exceptions with *ya* ‘at, to’ see Section 4.5.2 below). They can be marked as oblique with =*bet* as in (37). In this example, =*bet* indicates that the tree is the source of motion rather than its goal.

The complement of a postposition is not a single noun but a whole noun phrase. Adjectives follow the head noun directly:

- (38) *epkat yumu tap*
 cloth red under
 ‘under the red shirt’

- (39) *meja belon yinim*
 table(BI) small on
 ‘on the small table’

However, postpositional phrases cannot take complements with demonstratives, as shown in (40) and (41). An exception is *ya* which has dedicated demonstrative forms: *eya* ‘here’ and *oya* ‘there’ (see Section 5.3).

- (40) *tut *ege tem*
 forest DEM.here in
 ‘(Intended:) in this forest’ [elicited]

- (41) *meja *edo yinim*
 table(BI) DEM.this on
 ‘(Intended:) on this table’ [elicited]

While demonstratives are never found inside the postpositional phrase, they can occur next to it:

- (42) *Anon=ko ambom kudu tap eyani angg-en.*
 dog=PTC car car under down.here lie-3SG.M
 ‘The dog lies under this car.’ [Fieldnotes]

The demonstrative adverb *eyani* ‘down here’ in (42) refers to *ambom kudu* ‘car’. However, the syntactic structure of such constructions is not clear yet. It seems that the demonstrative is part of the phrase and attaches after the postposition. This is probably a residue from the diachronic source of such postpositions. If we assume *tap* ‘under’, *tem* ‘in, into’ and *ysinim* ‘on, onto’ are spatial relational nouns, then combinations such as *meja yinim* ‘on the table’ is a compound and we would correctly predict that the phrases (40) and (41) are unacceptable. However, this analysis would also predict that (38) and (39) are unacceptable, but they are not. To conclude, we must acknowledge that some postpositions seem halfway in their grammaticalisation from a relational noun to a postposition. From a synchronic point of view, we prefer to analyse them as postpositions.

One further evidence for a residual noun-ness of *tap* ‘under’ is related to demonstratives. As explained above, postpositions obligatorily require a complement. However, this requirement does not apply to certain postpositions juxtaposed to demonstratives, as in (43). Our consultants insist that it is very important that both speaker and addressee can identify the location.

- (43) *But=ko [tap onngo] wun-u-den.*
 shrimp=PTC under down.there go-3SG.F-PFV
 [The hiding place is known to both speaker and addressee:]
 ‘The shrimp went down under that.’ [Fieldnotes]

However, *tap* ‘under’ cannot occur without the complement if there is no demonstrative adjoined:

- (44) **But=ko tap wun-u-den.*
 shrimp=PTC under down.there go-3SG.F-PFV

‘(Intended:) The shrimp went under it.’ [elicited]

Examples like (43) and (44) indicate in-between stage of such lexemes. The item *tap* can occur without complement (like nouns) but not without determiner (unlike nouns). This is just one item we were able to test. At the present state of knowledge, it is not clear which postpositions can combine with which demonstratives in such constructions. Very likely, the various lexical items differ in their stage of grammaticalisation. Further research is needed.

Some postpositions can combine to form complex postpositional phrases:

- (45) [*Bot tap tem*] *angg-en*.
 stone under in lie-3SG.M
 ‘He is lying under the stones.’ [Fieldnotes]

The combination of *tap* ‘under’ and *tem* ‘in’ in (45) signals that the location of the referent is both under and inside a pile of stones. Therefore, the combination of postpositions seems to effect a transparent combination of their meanings. The question which postpositions can form complex postpositional phrases is left for further research.

Most postpositions can be unequivocally assigned to this word class. One exception is *yom* ‘and, with’ which can either be a postposition or a conjunction. Generally, these two word classes are distinguished as follows: A postposition subordinates an element at a lower syntactic level, whereas a conjunction coordinates two elements at the same syntactic level. As for *yom* ‘and, with’, both structures can be found. In its coordinating function, *yom* can be analysed as an NP coordinating conjunction and translated as ‘and’ (see Section 4.7.1). In its comitative function, *yom* can be analysed as subordinating and translated as ‘with’. Only the latter is a postposition. However, the boundaries between these two functions of *yom* are fuzzy. For a discussion, the reader is referred to Section 9.3.5.

4.5.1 *adep* ‘like’

This section deals with simple postpositional phrases based on *adep* ‘like’. Furthermore, *adep* is used in infinitive constructions to convey complex modal semantics. For these constructions, the reader is referred to Section 9.4.3.

The postposition *adep* has a similitive meaning which often translates as ‘like’:

- (46) *anon adep* ‘like a dog’
kayabak adep ‘like a big man’
kep ambip adep ‘like your house’

Combined with adjectives, *adep* sometimes expresses that a certain quality is only given approximately. Hence, it denotes a certain attenuation of the quality:

- (47) *alopkono adep* ‘yellowish’
yumukono adep ‘reddish’
kidit adep ‘longish’
talep adep ‘medium sized, not too big’

The examples in (47) show that the combination of *adep* with gradable lexemes can result in attenuative interpretation (roughly: “like X” > “not fully X”, i.e., the quality is not instantiated to the full extent). This facet of the similitive meaning is also exploited for temporal functions as in the following example:

- (48) *Nup win-i yeman ye adon **adep** kel-on.*
 1PL go-INF for 3SG.M sun like become-3SG.M
 ‘The time has almost come that we go.’ [Dictionary]

The complement of *adep* in (48) is the complex NP *nup wini yeman ye adon* ‘(lit.) the time for our going’. Here it is not a quality but a point in time that is approaching.

Finally, *adep* is found lexicalised together with other elements. Some examples are the complex question words *medep adep* ‘how, when, how much’ and *kede adep* ‘how’, but also *mongadep* ‘greedy’ from *mong* ‘wasp’, i.e. ‘greedy’ means literally ‘like a wasp’.

4.5.2 *ya* ‘at, to’

In its basic meaning, *ya* ‘at, to’ is a spatial postposition, referring to locations. In this sense, it is mostly used with toponyms or nouns denoting physical entities:

- (49) *Upyetetko ya, Kanggewot ya* ‘in Upyetetko, in Kanggewot’
Ok Widi ya ‘at the Widi river’
ambip ya, kowotbon ya ‘at the house, on the wall’

In addition, *ya* ‘at, to’ can also be used with temporal expressions:

- (50) *nakon ya* ‘in the morning’
minggu ya, sabtu ya ‘on sunday, on saturday’

Postpositional phrases headed by *ya* ‘at, to’ mostly have adverbial functions. However, some predicates require *ya* to mark arguments of a verbal clause. Most importantly, this is used for recipients in speech events:

- (51) *enamba ya kumungg-up.*
 parents at tell-1PL
 ‘We told our parents.’ [muyu038:024]

- (52) *ta kedo Adi ya kumungg-un,*
 and then father at tell-3SG.F
 ‘and then she told her father ...’ [muyu016:018]

Other cases where *ya* marks the clause argument seem to depend on some kind of surface contact with the marked referent:

- (53) *nong odo kan-e wen-e [ambom kudu mim ya]*
 rope DEM take:SG.O-SM go-SM car car one at
yenengg-e, (...)
 tie-SM ...
 [Trying to pull the car out of the mud:]
 ‘(We) took a rope and tied it to one car ...’ [muyu036:062]

- (54) *Kedo [ne tinggi ya] tob-un=go (...)*
 and.then 1SG hand at bite-3SG.F=PTC
 [Trying to catch a mouse:]
 ‘Then it bit my hand and ...’ [muyu040:039]

- (55) *tuyang=bet kedo [kono ya] bulun-a-den*
 paddle=OBL then boat at hit-1SG-PFV
 [Trying to make some noise:]
 ‘I hit at the canoe with a paddle.’ [muyu038:111]

In (53), the ‘car’ represents the place of application and is - besides the agent (we) and the object (rope) - an argument of the verb. As such it is marked with *ya*. The ‘hand’ in (54) is a specific location where the biting event occurs. To narrow down the biting event to the hand (rather than the whole person), *ya* is used. Finally, the target of the hitting event in (55) is the ‘canoe’. Here, the *ya*-phrase is perfectly analogous to the ‘at’-phrase in the English translation.⁶

4.5.3 *yeman* ‘for’

This section deals with simple postpositional phrases based on *yeman* ‘for’. *Yeman* is also used in infinitival constructions to form complex modal structures. For these constructions, the reader is referred to Section 9.4.4.

The postposition *yeman* ‘for’ has a purposive meaning, as in (56), and can mark beneficiaries, as in (57).

- (56) *Okun-e alambon yeman kem-e kem-up.*
 like.that-SM laughing for do-SM do-1PL
 ‘Like that, we used to make fun of it. (lit. we did like that for laughing)’ [muyu004:095]
- (57) *Kristian=bet tinggalan nup yeman kan-e mon-on.*
 PN=OBL meat 1PL for take:SG.O-SM come-3SG.M
 ‘Kristian brings meat for us.’ [Dictionary]

In (56), the reason for the protagonists to do what they do is *alambon yeman* ‘for laughing’. In (57), the phrase *nup yeman* ‘for us’ represents the beneficiary of the event denoted by the clause. The valency of the transitive predicate *kane mini* ‘bring (lit. take come)’ does not include a third argument. Therefore a beneficiary can only be added via the postpositional phrase based on *yeman*.

Christensen (2013:6) offers the gloss ‘thing.of’ for *yeman*, probably following a suggestion by Drabbe (1954:154-155) who analysed it as *man* preceded by a linker *ye*, as in possessive constructions (see Section 6.3.1). Indeed,

⁶English *at* and Muyu *ya* do not necessarily have full equality in such clauses. Namely, English *at* can convey conative meaning, i.e. a certain effect was intended but not accomplished, as in *Mary hit the pinjata* vs. *Mary hit at the pinjata* (Kroeger 2010). Whether Muyu clauses can express conative meaning is unknown yet.

such an analysis is tempting, since *alambon yeman* in (56) is compatible with an interpretation ‘thing for laughing’ and such paraphrases often make sense. In our data of the Kawip dialect, we find two elements that support this analysis. First, there is *=man* ‘person of’ that is typically used to form designations for groups of people: *Ninati=man* ‘someone from Ninati’, *Muyu=man* ‘a Muyu person’, *Austria=man* ‘an Austrian’, *Prancis=man* ‘a Frenchman’.⁷ Second, the noun *man-man* ‘something, anything’ is clearly a reduplicated form and has the corresponding meaning as in the following example:

- (58) *Kep=ko man-man aip kan-e men-ep=ko?*
 2SG.M=PTC something there.is take:SG.O-SM come-2SG=Q
 ‘Do you bring something?’ [elicited]

The two elements *=man* ‘person of’ and *man-man* ‘something, anything’ seem to be related diachronically to *yeman*. However, we disagree with the Christensen and Drabbe, who treat this item as synchronically analysable. We rather interpret *yeman* as a fully lexicalised postposition, mainly for two reasons: Firstly, although *=man* ‘person of’ and *man-man* ‘something, anything’ are found in our data, there is no simple element **man* that can be used as a simple head in an NP:

- (59) **Man ogo ka-d-e.*
 ? DEM give-1SG.RCV-2SG.IMP
 ‘(Intended:) Give me that thing!’ [elicited]

If *yeman* was simply a combination of the linker *ye* and *man*, we would expect *man* to occur outside of such constructions as well. Since this is not the case, *yeman* is not analysable.

Secondly, when the complement of *yeman* is a bare pronoun, it behaves like a postpositional phrase rather than a possessive construction with linker *ye*. Consider example (57) again. Here, we find the phrase *nup yeman* ‘for us’. If this phrase were a possessive construction, we would not expect the linker intervening. Pronominal possessors must precede the possessed

⁷Drabbe (1954:154) suggests a broader meaning for *man*, citing examples in which it can also designate things and abstract entities, e.g. *ambi-man* ‘something of the house’. However, such broad meaning is not attested in our data. With the exception of *animan* ‘food’ (from *ani* ‘eat’), the Kawip dialect seems to employ only the ‘person of’ meaning.

noun directly, hence we would expect **nup man* in (57). *Nup yeman* clearly cannot be analysed as a possessive construction with an assumptive noun **man*.⁸ In conclusion, *yeman* is a fully lexicalised postposition, probably sharing a diachronic source with *=man* ‘person of’ and *man-man* ‘something, anything’.

4.6 Quantifiers

This section deals with the closed word class of quantifiers which contain numerals (§4.6.1) and general quantifiers (§4.6.3). Quantifiers in Muyu can be defined on two levels of description. Semantically, quantifiers denote the quantity of a given referent (three, many, all etc.). Syntactically, quantifiers occupy the quantifier slot of noun phrases, i.e. the position between modifier and determiner (see Chapter 6).

Furthermore, this section deals with body-tally counting and its decline in Muyu (§4.6.2).

4.6.1 Numerals

Muyu has three basic numerals: *mim* ‘one’, *alop* ‘two’ and *alopmim* ‘three’. They are basic in the sense that they are exclusively number lexemes, whereas most numerals above 3 also denote body parts.⁹ The highest numeral is 10. The Muyu number system and body-tally counting are now virtually defunct. Elder people do remember counting on their bodies but rarely employ numerals above 3 in their natural speech. Instead, numbers are mostly expressed with Indonesian numerals. The most important domains for Indonesian numerals are dates (e.g. 12. June 2018) and amounts of money (e.g. 250.000 Rupiah). Body-tally counting and its decline is discussed in Section 4.6.2.

The Muyu numerals are listed in Table 4.4. The rightmost column gives the lexical meaning of the respective numeral. As can be seen, *alopmim*

⁸However, *nup yeman* ‘for us’ would be a possessive construction if we assume a noun *yeman* with the meaning ‘reason, purpose’. Synchronically, there is no such noun and we do not have any evidence that it might have been the source of the postposition diachronically.

⁹One exception would be *et* ‘eight’ which is also used as a number only. However, this lexeme is not stable across dialects (as will be discussed in Section 4.6.2) and is thus not considered a basic numeral.

‘three’ is actually a combination of *alop* ‘two’ and *mim* ‘one’.

Lx	Number	Lexical meaning
<i>mim</i>	1	-
<i>alop</i>	2	-
<i>alopmim</i>	3	1+2
<i>kanin</i>	4	???
<i>anggo</i>	5	‘thumb’
<i>niki</i>	6	‘inside of the elbow’
<i>ben</i>	7	‘arm’
<i>et</i>	8	-
<i>kop</i>	9	‘inner part, content’
<i>kung</i>	10	‘tip’ (here: of the head)

Table 4.4: Numerals of Muyu. Some of them denote body parts.

The list of numerals in Table 4.4 contains ten terms and therefore suggests a base 10 numeral system for Muyu. However, there are two objections to this idea. First, since our consultants never counted beyond 10, there is no point in speculating about the base of the system. Base 10 would require higher numerals that are lexically composed of $10x + y$. Second, data from Drabbe (1954) suggests that the Ninati and Metomka dialects had actually a base 6 numeral system. However, composed number lexemes ($6x + y$) started from 12 rather than 6, which is probably the reason why we don’t see base 6 in the numbers of Kawiyet.¹⁰ For more discussion on the decline of Muyu numerals, see Section 4.6.2.

The following examples show occurrences of Muyu numerals in the corpus:

- (60) *Ambip mim mo=n.*
house **one** only=COP
[Explaining that the ancestors shared one house:]
‘It was just one house.’ [muyu010:134]
- (61) “*Ah, ambo nup alop wan-an-up*”, *engg-e kedo*
INTJ older.brother 1PL **two** go-IRR-1PL say-SM then

¹⁰In other words, if numerals above 10 have been lost in Kawiyet and the base 6 system started at 12, it would no longer be visible. For evidence that the base 6 systems are widespread in Southern New Guinea, see Evans et al. (2018:690).

nekwao-n-e, alop wun-up.

prepare-SS-3SG.M **two** go-1PL

[Preparing to hunt:]

‘He said “Oh brother, we two can go together” and he prepared everything and then the two of us went.’ [muyu004:004]

- (62) *Kole Kawaup=ko ambangga-ip=ko wen-e alop mim aip*
 CONJ PN=PTC work-2/3PL=PTC go-SM **three** there.is
kel-o-den.

become-3SG.M-PFV

[About recording dance videos with the music group ‘Kawaup’:]

‘So they produced three ‘Kawaup’ (cassettes).’ [muyu012:088]

- (63) *On yom kil-ip-ten odo, ambi amban yi*
 bird bat become-2/3PL-PFV DEM husband wife 3PL
tana=go kanin aip=an.

child=PTC **four** there.is=COP

[At the beginning of a story:]

‘In the story about the origin of the bat, the married couple had four children.’ [muyu032:068]

As can be seen from the examples above, numerals occur in different syntactic configurations. They modify a preceding noun (60) or a preceding pronoun (first occurrence of (61)), they are used as bare numerals in core-arguments (second occurrence of (61)), and they are used predicatively as in (62) and (63).

4.6.2 Some remarks on body-tally counting

By body-tally counting we refer to the practice that speakers count numbers not only with their fingers and/or toes but also with other parts of their bodies by pointing at these body parts and associating a numerical value with it. Such systems are typically found in languages of New Guinea (Laycock 1975) with Ok languages in the geographical center (Hammarström 2009:3). According to Healey (1964) and Fedden (2011:147), all Mountain Ok languages have body-tally counting.¹¹ Furthermore, the Greater Awyu languages to

¹¹Actually, Healey (1964) claims that Mian and Wagarabai (the western dialect of Mian) are exceptional as the only Mountain Ok languages without body-tally counting. However,

the west and south of Ok also employ this practice (de Vries 2020:195-196). It is, therefore, hardly surprising that it can also be found in Muyu. However, in this section, we argue that body-tally counting is in decline in Muyu and now virtually defunct. This finding is supported by a comparison of the data from our own fieldwork with those of Drabbe's (1954) work about 80 years ago¹², as well as a list provided by Christensen (2013) from the Yonggom dialect at the PNG side of the international border. As a result of this comparison, we will formulate some hypotheses about the decline of body-tally counting in Muyu at the end of this section.

Numerals and counting words do not necessarily coincide. Although speakers of European languages are used to equating counting (*one, two, three, four*) with object quantification (*My sister has four dogs*), there are languages that formally separate these two uses.¹³ Diverging systems are attested even within the Ok language family. For example, Faiwol (Mountain Ok, Healey 1964:65) has diverging forms for numerals and counting words in the first four numbers as outlined in Table 4.5. Other languages use the same lexemes as a basis but add further marking to one of the categories. For example, Bimin (Mountain Ok, Weber 1997) takes body-part terms for counting and adds the locative case marker *kel* to use them as numerals in noun phrases, e.g. *king* 'shoulder' becomes *king kel* '10 (lit. at the shoulder)'.¹⁴ A third type is found in Mian (Fedden 2011:144-148), in which counting words are body-part terms, whereas numerals are phrases composed of basic numerals, e.g. number 6 is *asúke asúke asúke* 'two two two' and 5 is *asúke asúke make* 'two two another'. As for Muyu, we do not find a difference between numerals and counting words. The same ten lexemes, some of which are body part terms, are used without special marking for counting and for quantifying in noun phrases. However, the use of these lexemes is in strong decline, making way for the use of Indonesian numerals.

According to our consultants from the Kawiyet dialect, body-tally count-

Fedden (2011:145-147) falsifies this claim. In his view, this misunderstanding might have arisen because lexemes of the Mian counting systems cannot be used as numerals in noun phrases.

¹²Note that Drabbe visited the Muyu area in the early 1940s, although the text cited here is dated 1954.

¹³Similar to the fact that some languages differentiate between cardinal and ordinal numbers, while others don't.

¹⁴Similar systems are found in Greater Awuy languages to the west (de Vries 2020:72). Languages from the Dumut subgroup use the suffix *-kup*, while Becking-Dawi languages form compounds with the noun *anop* to use body part terms as numerals.

	Numeral	Counting word
1	<i>batkatkat</i>	<i>maakas</i>
2	<i>katkatkamaam</i>	<i>aleb</i>
3	<i>waninwanin</i>	<i>asuno</i>
4	<i>dil</i>	<i>alaleb</i>

Table 4.5: Faiwol (Healey 1964:65) differentiates numerals and counting words.

ing works as follows: Counting starts at the pinky of the left hand by pushing down the counted fingers one by one up to the thumb (1-5), proceeding to the inner of the elbow (6) and the shoulder (7), then counting the belly (8), the chest (9) and, finally, the top of the head (10). Counting ends at ten and our consultants neither remember the practice of counting down on the other half of the body¹⁵ nor lexical terms for higher numbers. A comparison of Kawiyet counting and counting in three other dialects is given below.

Body-tally counting systems are notoriously prone to change and are reported to be in decline for most languages:

Counting systems are easily borrowed, combined and discarded in the New Guinea context because they are tightly connected to, and reflections of, changing contexts of language contact, multilingualism, trade networks, political integration in nation-states and of religious and ritual practices. Therefore, most if not all, counting systems of New Guinea described in older sources (including my own descriptions of Greater Awyu numeral systems) have been wholly or partially replaced by counting systems and numerals of English, Tok Pisin, Indonesian and Papuan Malay. (de Vries 2020:75)

While these points can be confirmed for Muyu, we are able to paint a more detailed picture with the data available. In the remainder of this section, we compare four lists from different varieties of Muyu, recorded at different points in time (spanning 80 years). As a result, we state a short hypothesis about how the decline of body-tally counting probably took place in Muyu.

¹⁵Suggestions of counting down again by the principal investigator usually leads to confusion.

Drabbe (1954) reports on the counting systems from the two villages Ninati¹⁶ and Metomka, while Christensen (2013) provides data for Yonggom from the PNG side of the border. Table 4.6 lists the findings from this study next to the other three lists. The designated body parts of these terms are given in brackets (except for the Kawiyet list, see above). Note that both Drabbe’s and Christensen’s lists do not end with 10. Drabbe continues up to 100, while Christensen ends with 25. However, since Kawiyet speakers no longer remember counting beyond 10, we do not list forms for higher numbers here.

N	Kawiyet	Ninati	Metomka	Yonggom
1	<i>mim</i>	<i>mim</i>	<i>mimmo/mia-mo</i>	<i>mimo</i>
2	<i>alop</i>	<i>ajoop</i>	<i>arop</i>	<i>ayoop</i>
3	<i>alopmim</i>	<i>ajoo-miim</i>	<i>arop-mim</i>	<i>ayoopmim</i>
4	<i>kanin</i>	<i>kaning</i> (index f.)	<i>kandin</i> (index f.)	<i>kanij</i>
5	<i>anggo</i>	<i>anggo</i> (thumb)	<i>anggo</i> (thumb)	<i>ajo</i>
6	<i>niki</i>	<i>kung</i> (wrist)	<i>mbenme</i> (wrist)	<i>benmε</i> (wrist)
7	<i>ben</i>	<i>et</i>	<i>mbenkambe</i> (forearm)	<i>kurupmim</i> (lw.fr.arm)
8	<i>et</i>	<i>kop</i> (u. arm)	<i>mbentom</i> (elbow)	<i>doknikono</i> (up.fr.arm)
9	<i>kop</i>	<i>penme</i>	<i>mben-nemterendi</i> (u. arm)	<i>buɟgumut</i> (inr.o.elb.)
10	<i>kung</i>	<i>punggup</i> (elbow)	<i>makkondo</i> (shoulder bl.)	<i>benkaba</i> (biceps)

Table 4.6: Comparison of Muyu numerals from different sources: Kawiyet (own fieldwork), Ninati & Metomka (Drabbe 1954:200-202), Yonggom (Christensen 2013:36).

In the following paragraphs, we will first compare the forms of the numerals and then the counted body parts. According to the forms, we find convergence up to 5. Numerals higher than 5 display more divergencies. Therefore, the following comparison will focus on the numbers 6-10.

A cross-comparison of all four lists reveals that Kawiyet and Ninati are more similar to each other than each of them is to Metomka or Yonggom. In fact, Metomka and Yonggom numbers higher than 6 almost completely diverge from the other two lists. The only similar forms found across these lists are Ninati *penme*, Metomka *mbenme* and Yonggom *benmε*. Metomka forms 6-10 seem to be all compounds based on *mben* ‘arm’, while Yonggom has such compounds only in *benmε* and *benkaba*. This form is also found as

¹⁶Drabbe (1954:202) asserts that in the vicinity of Ninati the counting system differs from village to village. We will only consider the terms from his main list in this study and ignore all alternative lexemes he gives for Ninati.

ben in Kawiyet. The Ninati numerals are more similar to Kawiyet, although the ordering of the elements is different (see below). Three out of five numerals are formally equal: *kung*, *et* and *kop*. The only form unique to Kawiyet is *niki*, whereas Kawiyet *ben* is probably part of the Ninati *penme* and all Metomka compounds mentioned earlier.

The most startling differences are found in the ordering of the numerals with similar forms. *Kung* is 6 in Ninati but 10 in Kawiyet. Not only the numerical values but also the lexical meanings are divergent. Drabbe reports that *kung* is the upper part of a tree stem where the branches begin. The corresponding body part is the wrist since it can be seen metaphorically as branching like a tree. In contrast, the Kawiyet consultants of this study agree that *kung* is not the branching part of a tree but its tip. The metaphorically related human body part is the top of the head. This difference in the lexical meaning of the word is reflected in its position in counting. Counting up the body, the wrist is at position 6, while the top of the head is at position 10. This example clearly shows that in body-tally systems lexical meanings precede numerical values.

Another divergence in numerical value is the lexeme *et*, which represents 7 in Ninati but 8 in Kawiyet. This difference is probably based on different lexical meanings in the respective dialects as was the case with *kung*. However, neither Drabbe nor the consultants of this study were aware of the lexical meaning of *et*. Synchronically, it is found solely as a number. As for the counted body part, the Kawiyet speaker touches his upper belly, approximately where his ribs begin.

If we accept that Kawiyet *ben* corresponds with Ninati *penme* and Metomka *mбенme*, the numerical values and counted body parts of all three terms are distinct (Yonggom and Metomka are equal here). We find 7 in Kawiyet, 9 in Ninati and 6 in Metomka. Drabbe reports that the meaning of Metomka *mбенme* is ‘wrist’, while he could not find a lexical meaning for Ninati *penme*. The consultants of this study identify *ben* as ‘arm’ but the body part they are touching is the shoulder (probably representing metonymically the whole arm). As was the case with Ninati *kung*, the respective term for ‘wrist’ counts as 6. Interestingly, while both Kawiyet *ben* and Metomka *mбенme* refer to the arm or a part of it, Ninati *penme* is associated with a higher number that should be counted on the body beyond the arm. The question arises if *penme* lost its lexical meaning first and then moved up to 9 or moved up to 9 and eventually lost its lexical meaning. In accordance with our hypothesis that lexical meanings are primary, we tend to the view that the lexical meaning

must have been lost before it could have been associated with a later body part and hence a higher number. However, this is highly speculative.

As for *kop*, we find the value 8 in Ninati but 9 in Kawiyet. Drabbe reports ‘upper arm’ as the lexical meaning in Ninati, whereas we found it to denote the inner part of something in Kawiyet, e.g. the pulp of a fruit, also outside the domain of counting or body parts. The counted body part in the Kawiyet system is the chest, approximately on a level with the heart.

Finally, Kawiyet *niki*, whose meaning and counted body part is the ‘inner of the elbow’, is not found in the other three dialects. Its lexical source is probably the verb *niki* ‘to bend’.

Table 4.7 is intended to give a better overview of the counted body parts. Since all four lists count 1-5 with the same fingers, the table starts with 6. As we can see, only three of them are fully clear, whereas Drabbe’s account on Ninati is lacking information for 7 and 9. Furthermore, it seems inaccurate to fully rely on the lexical meaning of the Ninati terms, since the order of 10 and 8 are such that the speaker would count up to the upper arm and down again to the elbow.¹⁷ Notice that Kawiyet speakers count all the way up to the head to reach 10, while the Ninati, Metomka and Yonggom counting reaches 10 at some part of the arm already. It is probably the case that Ninati and Metomka speakers continue counting up their bodies beyond 10. However, there is no information about that in Drabbe’s work. As for Yonggom, the counting continues up the body, with the breast bone as turning point before counting down the other side of the body (not in the table, see Christensen 2013:36). In contrast, Kawiyet counting stops at the top of the head with 10.

We can summarise our findings as follows. The first five numbers are stable across the dialects and neither vary in their forms, numerical values nor in their counted body parts. Variation sets in only for numbers succeeding the values that can be counted on the fingers of the left hand. For numerals higher than 5, all four dialects have varying forms, with Kawiyet and Ninati having similarities in three out of five numerals. However, similar forms do not refer to the same body parts and they represent differing numerical values. Yonggom is the only attested variety with a full round trip system, which means that one body half is counted up to a turning point and then

¹⁷The counting of Kawiyet is fully attested with video recordings and hence based on more reliable data. Drabbe (1954) does not describe the counting procedure itself, so that we have to rely on the lexical meanings for Ninati and Metomka.

Body-part	Kawiyet	Ninati	Metomka	Yonggom
Wrist		6	6	6
Forearm			7	7, 8
Elbow	6	10	8	9
Upper arm / biceps		8	9	10
Shoulder	7		10	
Belly	8			
Chest	9			
Head	10			

Table 4.7: Counted body parts in four different dialects: Kawiyet, Ninati, Metomka, Yonggom.

counted down on the other half. Ninati and Metomka do have forms for numbers higher than 10 (based on a senary system) but their counted body parts are not documented. Kawiyet is restricted to 1-10, ending at the top of the head.

Based on these findings, we can give a short hypothesis of the decline of body-tally counting. At the core of this decline are two main driving forces. First, languages with other ways of counting and quantifying objects become more important in the Muyu area (in this case Indonesian). Second, cultural and social practices related to body-tally counting become obsolete. Of course, these two phenomena may interact when new practices arise that are tightly related to other languages, e.g. when Muyu speakers sell their garden products in cities where Indonesian is the *lingua franca*. While these forces tell us why body-tally counting is in decline, we now list some points on how this decline takes place:

1. The range is reduced substantially. Ninati and Metomka build higher numbers productively on a base 6 system and probably counted up and down the body parts. Yonggom, although no productive number forming is reported, still counted up and down the body. Finally, Kawiyet discarded the second half of the body and only counting up remains. Furthermore, the body parts that are counted are fewer in Kawiyet. Similar reductions have been reported for other languages.¹⁸

¹⁸Christensen (2012:36) states that some Yonggom speakers only count to 10 instead of 25. Fedden (2011:147) finds that many Mian speakers have troubles counting down while the first part of the body can still be counted up easily. Finally, Weber (1997:62) reports

2. The lexemes gradually lose their lexical meaning denoting body parts. This loss is completed in *Ninati et* ‘seven’ and *penme* ‘nine’ as well as *Kawiyet et* ‘eight’. Variation was probably already given when the counting systems were still fully intact. The meaning of some forms may be reanalysed by associating them with other body parts in counting, e.g. *Kawiyet kop* ‘inner part/chest’ (=Ninati ‘upper arm’) and *Kawiyet kung* ‘top of the head’ (=Ninati ‘wrist’).
3. Strongly related with the change/loss of meaning for the lexemes is a change in the order of counting and hence a change in the numerical value. Once a lexeme loses its lexical meaning to denote a body part, its form is arbitrarily related to the numerical value it designates. However, it is not entirely clear which is the cause and which the effect. Do the lexemes change their lexical meanings and effect a reordering of the system? Or does the system undergo reordering and trigger semantic change in the lexemes?

While these developments apply for numbers higher than 5, the numerals 1-5 are fairly stable in both counting and as quantifiers in noun phrases. This probably has to do with the fact that (a.) lower numerals are used more frequently and (b.) they are counted with the fingers, which is fully compatible with the intruding counting practices from Indonesian. The next stage in this development - still in the future - allows for two possibilities: Either the numbers 6-10 are forgotten completely or they become attached to a new system in which all ten fingers are counted. This would mean that body-tally counting disappears entirely and the lexemes refer arbitrarily to the respective number values. Such a future development is of course highly speculative.

4.6.3 General quantifiers

Quantifiers that are not numerals are very restricted in Muyu. There are only three items: *kadap* ‘many, much’, *timbang* ‘many, much’ and *kumun* ‘all, together, each/every’. High quantities are expressed with *kadap*. Here are two examples:

that Bimin counting was largely reduced to 10 until language revitalisation efforts set in (Bimin Vernacular Prep-Schools). Nowadays, Bimin school children proudly count their body up and down to 27.

- (64) *Kaduk tana, ye yom ye amban yom ambip mim*
 man child 3SG.M and 3SG.M wife and house one
ti-ip, ye=go [anon kadap].
 live-2/3PL 3SG.M=PTC dog many
 [Beginning a story:]
 ‘(There once was) a man, he and his wife lived in a house, he had
 many dogs.’ [muyu031:005]
- (65) *Aih, midin=ko kadap=an.*
 INTJ kind.of.shrimp=PTC many=COP
 [Upon checking a shrimp trap in the river:]
 ‘Oh, there were many little shrimps.’ [muyu038:068]

In (64), *kadap* occurs in the quantificational slot of a noun phrase. As mentioned in the introductory Section 4.6, this syntactic position is the main definitional criterion for quantifiers as a word class. However, *kadap* also occurs as a predicate, as shown in (65).

Timung also denotes higher quantities. A semantic difference between *kadap* and *timung* has not been found yet. However, *timung* is only found occasionally in the corpus, while *kadap* has a higher frequency. Here is one example:

- (66) *ta otbop timung balin*
 and language much NEG
 [At the end of a monological recording:]
 ‘and there is not much more to say (about it)’ [muyu046:035]

The second quantifier is *kumun* ‘all, together, each/every’. Keep in mind, that Muyu quantifiers do not inflect and no derivational morphology is available. The exact meaning depends largely on its syntactic context as the following examples will show. In the attributive use, *kumun* combines either with nouns (67) or pronouns (67). The latter case conveys the meaning of ‘together’:

- (67) [*Kaduk kumun*] *kayebak Paskalis ye ambip yitbon*
 man all big.man PN 3SG.M house yard
enmon-ip-ten.
 gather-2/3PL-PFV

‘All the people gathered in front of Mr. Paskalis’ house.’

[Dictionary]

- (68) “*Ambangg-em, [nup kumun]*”, *engg-ip=kot, yanam.*
 work-1PL.IMP 1PL **together** say-2/3PL=and.then true
 [Upon proposing to produce a dance video:]

‘ “Let’s do it together”, they said. - “Alright!” ’ [muyu012:076]

When used as a bare head of a phrase, *kunum* has a meaning similar to Engl. ‘everything’ or ‘anything’:

- (69) *Jadi [kumun] tipn-ok balin, [kumun] mo*
 so(BI) all finish-SBJV NEG all just
nin-ok balin.
 hold:SG.O-SBJV NEG

[About someone who engages in both gardening and animal breeding:]¹⁹

‘So he has not completed anything, he has not mastered anything (in one field).’ [muyu010:243]

4.7 Conjunctions and subordinators

This section deals with a closed word class with lexemes used for syntactic coordination or subordination. Clause chaining and its clitics are not considered here (see Section 12.2).

Conjunctions and subordinators must be distinguished from postpositions. Most postpositions in Muyu can take clauses as complements and therefore fulfil the function of subordinating a clause to a matrix clause. However, postpositions are always compatible with noun phrase complements, whereas most conjunctions and all subordinators are incompatible with noun phrases.

The following list contains all elements of this word class:

- (70) *yom* ‘and’ (NP)

¹⁹Traditionally, a man of the Muyu people can choose either to grow a garden or raise pigs. In this example, the speaker talks about a man who tries both but is not skilled in either one.

<i>ta</i>	‘and’ (clause)
<i>ma</i>	‘but’
<i>nea</i>	‘or’
<i>kole</i>	‘because, so’
<i>kanet</i>	‘if’
<i>onet</i>	‘but’
<i>wene</i>	‘until’

Yom is the only element that is strictly confined to noun phrases. All other items are clause conjunctions or subordinators. A special case is *wene*, a conjunction that goes back to the verb *wini* ‘go’. As such, it shows grammatical features of both verbs and conjunctions. In Section 4.7.8, we argue that *wene* is half way grammaticalised as a conjunction.

Syntactically, subordinators are mostly in clause-final position, while the conjunctions *ma* and *ta* mostly occur clause initially. In coordinated NPs, *yom* ‘and’ or *ka* ‘or’ always follow the respective coordinated element.

Additionally, Muyu has two clitics, =*ket* ‘and.then.SS’ and =*kot* ‘and.then.DS’, that occur clause finally in clause chains. They are not treated as conjunctions here but as clause chaining devices and will be discussed in Section 12.2.12.

The following subsections give only a very brief outline of the respective elements. Syntactic issues related to these words are discussed in other parts of this grammar.

4.7.1 *yom* ‘and’

Yom ‘and’ is the only conjunction that is restricted to NPs. There is some uncertainty about this element since it can also mark comitatives (‘with’) in which case it is interpreted as postposition. For details on noun phrase coordination, the reader is referred to Section 6.8; for comitative marking, see Section 9.3.5.

Here is an example:

- (71) *Om nengg-an=e, [ne yom emba yom] om an-up.*
 sago cook-1SG=DS.SEQ 1SG and father and sago eat-1PL
 ‘I cooked sago then father and I ate the sago.’ [muyu026:029]

In (71), the conjunction *yom* occurs after both coordinated elements, which is

not obligatory. An alternative would be *ne, emba yom* (the comma indicates a short prosodic break here).

4.7.2 *ta* ‘and’

The conjunction *ta* coordinates clauses. This conjunction does not convey any meaning relevant for clause chaining, which means that the conjoined clause is not specified for subject switching nor is there any temporal implication, as will become clear from the example below. For a more detailed discussion, see Section 12.3.2.

- (72) *[Wadi won-on]*_{CL1}, [*ta ne wen-e nong ma nin-an*
 up go-3SG.M and 1SG go-SM rope other hold:SG.O-1SG
*nowan]*_{CL2}, [*ta wen-e nong ma nin-e tem-an]*_{CL3},
 NEG and go-SM rope other hold:SG.O-SM see-1SG
 ‘He went up there, and I went to check one trap - but nothing, then
 I went to check the other trap, ... ’ [muyu004:009]

There are three coordinated clauses in (72). CL1 is unmarked, whereas CL2 and CL3 both begin with *ta* after a short prosodic break. Between CL1 and CL2 the subject shifts from 3SG.M to 1SG, while the subject remains 1SG in CL3. Furthermore, CL1 and CL2 denote simultaneous events, while the events in CL2 and CL3 are clearly sequential.

The mountain Ok language Mian has a clitic =*ta*, which Fedden (2011:158) identifies as a medial verb clitic in clause chaining. This function is rather similar to the Muyu conjunction *ta*, since both are used to conjoin clauses. However, the difference lies in the syntactic position of the element. Mian =*ta* is a clause final clitic with the final verb of the preceding clause as its host. Muyu *ta*, in contrast, is a free standing conjunction that mostly occurs at the beginning of the succeeding clause. It is likely that the Mian enclitic grammaticalised from a Muyu-type conjunction.

4.7.3 *ma* ‘but’

Similar to *ta* ‘and’, the conjunction *ma* ‘but’ occurs clause initially. It coordinates two clauses with a weakly adversative meaning. For more adversative force, the conjunction *onet* ‘but’ is preferred (see below). This conjunction

is probably diachronically related to the directive particle *ma* (see Section 4.8.8).

- (73) *Enggon ah, kep=bet mo wum-ep=a ma nup ode?*
 friend INTJ 2SG=OBL only smoke-2SG=LNK but 1PL how
 [Sharing is important:]
 ‘Oh man, you smoke all by yourself, but what about us?’
 [muyu019:066]

4.7.4 *nea* ‘or’

Muyu has a disjunctive conjunction *nea* ‘or’, but it is quite rare. Most notably we find it in question formation (see Section 9.5.1.4). Besides that, we have only elicited examples for its clause coordinating function:

- (74) *Kaduk=an nea kon=an.*
 man=COP or woman=COP
 ‘It’s a man or a woman.’ [Fieldnotes]
- (75) *Ton an-en nea awon an-en.*
 fish eat-3SG.M or pig eat-3SG.M
 ‘He ate a fish or a pig.’ [Fieldnotes]

Noun phrase coordination with *nea* ‘or’ is not possible. Compare (75) with the following example:

- (76) **Ton nea awon an-en.*
 fish or pig eat-3SG.M
 ‘(Intended:) He ate a fish or a pig.’ [elicited]

4.7.5 *kole* ‘because, so’

The syntax of *kole* ‘because, so’ is more complex than for other conjunctions and subordinators. It occurs in different positions and seems to fulfil slightly different functions, although the basic meaning is stable across those functions. Firstly, in clause final position, *kole* marks causal clauses as in (77). Such a causal clause can be syntactically embedded in a matrix clause although this is not obligatory. Secondly, clause initially or between two (prosodically) uninterrupted clauses, *kole* coordinates the clauses with less

causative force. In (78), the bringing of the palm midrib is not the reason for squeezing the sago but rather renders it possible. Finally, *kole* is sometimes found as a filler word in discourse. For an account of *kole* ‘because, so’ in adverbial clauses, see Section 12.4.1.

- (77) *Ne mobil yanop kole.*
 1SG car(BI) there.is because
 [The previous discourse implies that a car is available:]
 ‘Because I have a car.’ [muyu025:022]
- (78) [*Ambulok=ko b-e man-an*]_{CL1} *kole*
 palm.midrib=PTC take:PL.S-SM come-1SG so
 [*wedek=ko onongm-e komb-e kobom-e*]_{CL2}.
 sago.midrib=PTC make-SM put:SG.O-SM squeeze-2SG.IMP
 ‘I have brought the ribs of a palm tree, so please make the sago
 midrib and squeeze (the sago).’ [muyu026:008]

4.7.6 kanet ‘if’

The lexeme *kanet* ‘if’ marks conditional clauses and always occurs clause finally. Formally, it resembles the conjunction *onet* ‘but’ but no common diachronic source has been found so far. For details on conditional clauses, see Section 12.4.2.

- (79) *Yal-a=go ningg-on kanet, okun-e*
 put:PL.O-1SG.IMP=PTC hold:SG.O-3sG.M if like.that-SM
Yanu kep men-e, taman wano
 PN 2SG.M come-2SG.IMP younger.brother down
mon-ok.
 come-3SG.IMP
 [Hunting in the forest, giving orders:]
 ‘Let me set (the traps) and if one of them catches (a pig), Yanu you
 come and the younger brother shall (also) come down!’
 [muyu010:028]

4.7.7 *onet* ‘but’

The conjunction *onet* ‘but’ coordinates two clauses with adversative meaning. It is not clear yet if *onet* is prosodically attached to the first clause or the second clause. Both cases occur in the corpus and some examples do not have a prosodic break between the clauses at all, as in the following example. For more details, see Section 12.3.4.

- (80) *[Tana manggan wani bamba-un]*_{CL1} ***onet***
 child daughter down.there call.several.times-3SG.F but
*[wedambil-i nowan]*_{CL2}.
 hear-INF NEG
 ‘His daughter called him but he did not hear her.’ [muyu011:045]

4.7.8 *wene* ‘until’

As was mentioned in the introductory section for this word class, *wene* ‘until’ is a special case since it is not yet fully grammaticalised as a conjunction and still shows features of its verbal origin from *wini* ‘go’. This subsection provides a brief discussion of its features and why it is interpreted as a conjunction.

The meaning of *wene* is dependent on its context. Most of the time it occurs as motion verb ‘go’ in complex predicates, e.g. caused accompanied motion MVC (see Section 11.3.2) or associated motion MVC (see Section 11.3.4). In other cases, *wene* seems to have lost its motion verb semantics, especially in association with temporal meanings. Such instances can be analysed as conjunctions rather than verbs.

- (81) *Ne eto angg-a-ten ombet wene amkiwali.*
 1SG DEM.this sleep-1SG-PFV OBL.DEM until morning
 [Some boys found the protagonist asleep:]
 ‘It was where I slept until morning.’ [muyu066:034]
- (82) *Timbel-e wene amkono kel-an-on.*
 stay-SM until adult become-IRR-3SG.M
 [A boy lives with his parents:]
 ‘He will stay until he becomes an adult.’ [muyu057:056]

- (83) *Kobom-in=e wene wene midik-o-den.*
 squeeze-1SG=DS.SEQ until until become-3SG.M-PFV
 [Working at the sago place:]
 ‘I squeezed it until it was dark.’ [muyu006:059]

All occurrences of *wene* in the examples above clearly preclude its interpretation as a motion verb. The protagonist in (81) is sleeping and not going anywhere. The arrival of the morning could metaphorically be seen as motion (of the sun), but the interpretation of *wene* as ‘until’ is much more plausible. Similarly, the boy in (82) is not moving but staying and hence no motion verb interpretation is possible. Finally, the work in (83) takes places at one spot without any change of location.

The examples above show occurrences of *wene* with non-motional meanings. However, *wene* ‘until’ is often also found in association with movement. Frequently, *wene* is repeated (up to four times), as in (84).

- (84) *Keto won-on. Wen-e wen-e wene tem-on=go (...)*
 out go-3SG.M go-SM go-SM until see-3SG.M=PTC
 ‘He went out. He went until he saw ...’ [muyu067:101-102]
- (85) *Kowo=go ok Widi=bet boma-n-up=ko wene Kilok Kone*
 PN=PTC river NP=OBL go-SS-1PL=PTC until PN PN
kaba.
 estuary
 [Planing a boat trip:]
 ‘In Kowo, we will go from Widi river to the estuary of Kilok and Kone (river),’ [muyu038:022]

When *wene* is repeated several times, it is not entirely clear, how many of the occurrences have to be glossed ‘until’. Only the last one or all but the first one? The meaning of motion and ‘until’ seem to blend into each other here. However, our consultants are confident that *wene* must be translated with ‘until’ (Indonesian ‘sampai’) in all the examples given so far. We take this speaker judgement about the semantics of *wene* as evidence that the grammaticalisation to a conjunction is taking place.

Syntactically, one finds that the conjunction *wene* precedes the clause or phrase that it conjoins, making it similar to conjunctions like *ta* ‘and’, *ma* ‘but’ and some cases of *kole* ‘because, so’ but unlike *yom* ‘and’, *ka* ‘or’,

kanet ‘if’ and other cases of *kole* ‘because, so’. Diachronically, this syntactic position comes probably from the peculiar behaviour of the motion verb in associated motion constructions (see Section 11.3.4) which are highly frequent in Muyu discourse. If such a construction denotes a previous motion in combination with a subsequent transitive action (e.g. ‘He went and caught a fish’), the motion verb typically occurs before the main verb and its core-argument (lit. *go fish catch-he*). Therefore, the motion verb is often the first element of an utterance. The grammaticalisation of *wene* as a conjunction is probably motivated by omitting the final verb of such associated motion constructions. Thus *go fish catch-he* becomes *go fish* and, in analogy, utterances like *go morning* demand a reinterpretation of ‘go’ to ‘until’.

There is, however, also evidence that *wene* has not lost its verbal features entirely. This has to do with the fact that it is still sensitive to syntactic rules of clause chaining. Full conjunctions like *ta* ‘and’ allow for final verbs in the first conjunct. This is not the case with *wene*, which still needs some further mechanism to link the clauses. Reconsider the examples (84) and (85) above. In the former, the clauses are linked via tail-head linkage (for details see Section 12.9). The final verb of the first clause is *wonon* and becomes *wene* in the second clause. Only then can *wene* ‘until’ occur. The clauses in (85) are linked via clause chaining, since the first clause has a medial verb marked with the same subject marker *-n*. Finally, in (83), we find a clause final clitic *=e* attaching to the first clause, indicating that another clause is chained to it. Although there is flexibility in which device must apply, *wene* ‘until’ requires one of these strategies and cannot (yet) coordinate clauses with final verbs on its own.

To sum up, *wene* is currently grammaticalising into a conjunction meaning ‘until’. Evidence comes from (a.) speaker judgements about its meaning, (b.) the fact that it can denote situations and events that clearly do not involve motion, and (c.) its compatibility with temporal endpoints rather than spatial ones. However, its grammaticalisation is not completed yet, as evidenced by the fact that it requires further clause linking mechanisms to render the coordination grammatical.

4.8 Clitics and particles

This section assembles those elements which are not easy to assign to any other word class. Some of these elements stand freely as independent words

in the clause, while others are clitics that attach to host lexemes or the clause as a whole.

The most frequent item from this group is the clitic *=ko* which is used to delimit syntactic units (§4.8.1). Next, there is the linking clitic *=a* (§4.8.2).

The negative particle *balin* (§4.8.3) occurs clause finally, while the associative plural *edawo* (§4.8.4) is attached to noun phrases.

Illocutionary force is marked with clause final clitics: interrogative *=e* (§4.8.5), quotative *=o* (§4.8.6) and emphatic *=ki* (§4.8.7).

Furthermore, we discuss the directive particle *ma* (§4.8.8), the modal particle *kolem* (§4.8.9) and the epistemic modality clitic *=non* (§4.8.10) in this section.

4.8.1 The delimiting clitic *=ko*

The clitic *=ko* (and its intervocalic variant *=go*) is ubiquitous in Muyu speech. It attaches to any kind of syntactic unit, such as phrases (86), clauses (87) and segments of multi-verb constructions (88). Its function is somewhat hard to grasp in a concise term, hence the generic gloss as “particle”, i.e. ‘PTC’. Clause combinations with *=ko* are discussed in Section 12.3.3; for MVCs with *=ko*, see Section 11.4.2. With noun phrases, *=ko* is mostly optional.

- (86) *Niyap=**ko** yitn-o-den.*
 cassowary=PTC become.cold-3SG.M-PFV
 ‘The cassowary became cold.’ [muyu037:073]
- (87) *Yongg-an=**go** mon-on.*
 call.several.times-1SG=PTC come-3SG.M
 ‘I called him and he came.’ [muyu004:020]
- (88) *Kambing alop odo odan-e=**go** kawut=*mo* nangm-ip.*
 goat(BI) two DEM quarrel-SM=PTC directly=ADV fight-2/3PL
 ‘The two goats got angry at each other and then they fought.’
 [muyu011:011]

Furthermore, the clitic *=ko* can be stacked upon other clitics (89) and occur several times within a single clause (90).

- (89) (...) *wen-e nangge-n-up=ket=**ko** tem-up-ten.*
 ... go-SM arrive-SS-1SG=and.then.SS=PTC see-1PL-PFV
 ‘... we arrived there and saw it.’ [muyu030:129]
- (90) *Awon=**ko** ne=**go** teme-d-ok balin.*
 pig=PTC 1SG=PTC see-1SG.O-SBJV NEG
 ‘The pig did not see me.’ [muyu004:064]

In contrast, it cannot be attached within phrases:

- (91) **ambip=**ko** yeman*
 house=PTC for
 ‘(Intended:) for the house’ [elicited]

Turning now to the function of *=ko*, we see that there is hardly anything that the examples above have in common. Nonetheless, two generalisations are possible: (1.) *=ko* always occurs at syntactic boundaries. (2.) the utterance usually is continued beyond the boundary marked with *=ko*. From these two observations, we follow that *=ko* simultaneously **signals syntactic closure and informational incompleteness**.²⁰ This interpretation is supported by two further contexts in which *=ko* is occasionally found.

Firstly, this clitic can be used to mark questions:

- (92) *Kip=**ko** ne ambo aip tem-ip=**ko**?*
 2PL=PTC 1SG older.brother there.is see-2PL=PTC
 ‘Have you seen my older brother?’ [Dictionary]

The element of interest in (92) is the *=ko* at the end that is attached to the final verb. In contrast, the first *=ko* is attached to a noun phrase and the utterance is continued subsequently. Questions fulfil the conditions we mentioned before: They are syntactically complete but informationally incomplete, i.e. they require further information.

²⁰The semantic effect of *=ko* on noun phrases is often not clear. For example, the subject NP of a transitive clause can include the particle, as in *nup=**ko** anup* ‘we eat’, or not, as in *nup anup* ‘we eat’, without a clear-cut semantic effect. However, it can delimit adjacent phrases that would otherwise be ambiguous: *nup awon anup* means either ‘we eat the pig’ (i.e. *nup* is the subject NP) or ‘we eat our pig’ (i.e. *nup* is the possessive pronoun inside the object NP). In contrast, *nup=**ko** awon anup* unambiguously means ‘we eat the pig’ with *nup* as a separate phrase.

Secondly, this particle sometimes occurs as free standing form *ko*. As such, it can set an unexpected boundary to the current discourse segment. This is often found as a repair strategy, as in the following example:

- (93) *Ti-in=go* *wene... wene... ko.* *Ye kedo Merauke*
 stay-1SG=PTC until until PTC 3SG out PN
won-on=e,
 go-3SG.M=DS.SEQ
 ‘I stayed until, until, ok. He went to Merauke and then ...’
 [muyu030:233]

The first part in (93) is interrupted by *ko* when the speaker does not find a good continuation of the story. After *ko*, he starts anew and tells the events from a different perspective. Again, this can be seen as a syntactic closure, since *wene* ‘until’ requires a continuation here, combined with informational incompleteness.

Note further that the demonstratives *ogo* and *ege* could have lexicalised from =*ko*.

4.8.2 The linking clitic =a

The clitic =*a* ‘LNK’ is similar to =*ko* in that it attaches to various syntactic units, such as phrases (94) and clauses (95). Unlike =*ko*, it is much less frequent and is more often than not accompanied by a subsequent intonational break. For the use of =*a* in clause chaining, see Section 12.2.12.

- (94) *Senter=a,* *yanggan, ogan ye yanggan eyen.*
 flashlight(BI)=LNK torch foreigner 3SG.M torch this.is
 ‘A flashlight, a torch, that’s a foreign torch.’ [muyu005:014]
- (95) *Enggon=a, kep=bet mo wum-ep=a, ma nup ode?*
 friend=LNK 2SG.M=OBL only smoke-2SG=LNK but 1PL how
 [Sharing is important:]
 ‘Hey friend, you smoke all by yourself, but what about us?’
 [muyu019:066]

Like =*ko*, =*a* can also be stacked upon other clitics:

- (96) *senter=bet=a, ekin-e kim ogo*
 flashlight(BI)=OBL=LNK like.this-SM road DEM
kolobe-d-en.
 show-DUR-3SG.M
 [Imitating a waving gesture:]
 ‘He was doing like this with the flashlight, pointing at the road.’
 [muyu005:011-12]

The clitic *=a* does not have a clear semantic contribution to the element it attaches to. Rather, it signals syntactic non-finality. Most often, it is found immediately before pauses. It has probably developed for phonological reasons, as it often bears non-final intonation (i.e. rising pitch).²¹ An *=a* in mid-clause position can therefore be interpreted as a floor-holding device. However, there is no rule when *=a* has to be attached. Our consultants could not find contexts where *=a* is obligatory.

The linking clitic must not be confused with the homophonous kinship plural *-a* that is suffixed to (kinship) nouns.

4.8.3 The negative particle: *balin*

The clause final particle *balin* ‘NEG’ encodes negative polarity. Formally, it is not analysable. It typically follows a verb in irrealis or subjunctive mood but can also appear in non-verbal clauses. An example can be seen in (97). For a detailed discussion including examples, the reader is referred to Section 9.7.

- (97) *Agus=ko kep ambip man-an-on balin.*
 PN=PTC 2SG.M house come-IRR-3SG.M NEG
 ‘Agus will not come to your house.’ [Dictionary]

²¹Phonologically, Muyu shows a tendency that non-finality is signaled with an open syllable, while consonant endings signal finality. A good example is the subject suffix set that is used with SS medial verbs. This set contains reduced forms of the regular subject suffixes with ellipsis of all final /n/ phonemes: *-in* → *-i* ‘1SG’, *-en* → *-e* ‘3SG.M’, *-un* → *u* ‘3SG.F’.

4.8.4 The associative plural: *edawo*

The particle *edawo* collocates with nouns and denotes associative plural. This means that the resulting NP refers to a group of referents by naming only one entity directly. Although formally *edawo* looks like a complex form, it is synchronically not analysable.²² Since the word class of *edawo* is not fully clear yet, we categorise it as a particle here.

Here are two examples:

- (98) *Ok edawo b-e min-ip ogo kede*
 water ASS.PL take:PL.O-SM come-2/3PL DEM where
yal-ip-ten?
 put:PL.O-2/3PL-PFV
 ‘Where did you put the water and other things you brought?’
 [Dictionary]
- (99) *Ne, Vinsen, Abraham, Yamuk, anggotmi edawo yi kumun*
 1SG PN PN PN friend ASS.PL 3PL all
okun-e ali-up.
 like.that-SM stay-1PL
 ‘I, Vinsen, Abraham, Yamuk, together with other friends, we all
 stayed together.’ [muyu041:040]

The associative plural can apply both to inanimates (98) and humans/animates (99). Furthermore, the entities can be of different kinds, e.g. in (98) the things brought include water, fruit and other foods, or of the same kind, e.g. in (99) the associated entities are all human. The application of *edawo* triggers plural agreement, both in the subject index of the verb (99) and in verbal number, as in *be* and *yalipten* in (98).

4.8.5 The interrogative clitic =e

The clitic =e is attached clause finally to mark questions. The syntax of the clause differs from its declarative counterpart. For details on question

²²However, we collected data from other dialects that can give us hints here. In the Alee dialect, the form of this particle is *adewa*, suggesting a lexicalisation from the postposition *adep* ‘like’ and a yet unidentified *-a*. Synchronically, this origin is not transparent to the speakers. The postposition *adep* ‘like’ can also be attached to the particle, yielding *X adewa adep* ‘X and other things like that’.

formation, see Section 9.5. For the purposes of this outline, two examples shall suffice:

- (100) *Kep=ko an-ep=e?*
 2SG.M=PTC eat-2SG=Q
 ‘Did you eat?’ [overheard]
- (101) *Wom=ko medep=an=e?*
 inside=PTC what=COP=Q
 ‘What is inside?’ [muyu030:110]

Note also that the interrogative clitic is homophonous to the clause chaining clitic =*e*.

4.8.6 The quotative clitic =*o*

The clitic =*o* is attached to clauses to mark them as quotations of direct speech. It is often followed by a speech act verb like *enggi* ‘say’. For details on embedded quotatives, see Section 12.6. For the purposes of this outline, two short examples shall suffice:

- (102) *aih... kim=ko eyen=o*
 INTJ road=PTC DEM.COP.this=QUOT
 ‘Oh... here is the road! (he said)’ [muyu005:011]
- (103) *“ombalin=o” engg-on*
 no=QUOT say-3SG.M
 ‘He said, “No!” ’ [muyu029:020]

4.8.7 The emphatic clause clitic =*ki*

The clause final clitic =*ki* puts emphasis on an assertion. Corpus frequency of =*ki* is rather low, and mostly found after the verb *wini* ‘go’. This clitic is never obligatory and some consultants cannot sense any semantic difference when =*ki* is added to or removed from a given example. Two examples of =*ki* will be given in the following paragraphs.

The =*ki* marked clause in (104) is from a narrative about gardening. Whereas some members of the group left by car, the protagonist and her friend walked on foot. This fact is highlighted with =*ki*. Notice that the verb

wini ‘go’ is neutral with respect to manner of motion or means of transport. The crucial information here is *yonka* ‘on foot’. Thus, emphasis is on the whole clause rather than narrowly on the hosting verb.

- (104) *Yonka wun-up=ki, ne yom ta kawan yom odo.*
 on.foot go-1PL=**EMPH** 1SG CONJ and friend CONJ DEM
 [After a part of the group left by car:]
 ‘We walked on foot, I and a friend.’ [muyu027:026]

A similar example is (105). Here the emphasis is on the fact that the transport of peanuts is interrupted. The final verb is a light verb *kemi* ‘do’ (lit. ‘they only did to Woropko’) instead of the expected *wini* ‘go’. However, this does not impair the intended meaning of the clauses since emphasis is on ‘to Woropko only’.

- (105) *Kono long boat ombet b-e Woropko mo*
 boat long(E) boat(E) OBL.DEM take:PL.O-SM PN only
kim-ip=ki.
 do-2/3PL=**EMPH**
 [Having loaded peanuts on a boat. They shall be taken to the market but the river is only navigable up to Woropko village:]
 ‘They only brought them with the long boat as far as Woropko.’ [muyu025:027]

4.8.8 The directive particle: *ma*

The particle *ma* ‘DIR’ is sometimes found in directives such as commands, requests, etc., although it is not obligatory for these speech acts. *Ma* ‘DIR’ directly precedes the verb, which has to be inflected for the imperative mood. Its rigid word order is also the main criterion to separate *ma* from a homophonous interjection (*mah!* ‘oh!’) which is syntactically more free.

Here are two examples:

- (106) *Nup=ko ma wen-em.*
 1PL=PTC DIR go-1PL.IMP
 ‘Come on, let’s go!’ [Dictionary]
- (107) *Mok okun-e “ma kan-e wilin-e,*
 INTJ like.that-SM DIR take:SG.O-SM turn.around-2SG.IMP

yoeh”, *engg-an*.

INTJ say-1SG

‘ “Come on, turn it around!”, I said loudly like that.’

[muyu004:066]

4.8.9 The modal particle: *kolem*

The particle *kolem* ‘MOD’ has several functions which are not easily subsumed under a more precise gloss: quality intensification, action intensification and deontic modality. Quality intensification applies to adjectives and nouns, action intensification to verbs, while deontic modality pertains to the whole clause. In the remainder of this section, we will give examples for each function.

Quality intensification means that a quality, usually expressed through an adjective, is intensified. Commonly, adjectives are intensified with *kai* ‘very’. However, *kolem* does the same job, as in the following examples:

(108) *Ye=go kolem kunkono=on.*
3SG.M=PTC MOD awkward=COP
‘He is very awkward.’ [muyu010:170]

(109) *Robert=ko kolem monopni ta-en.*
PN=PTC MOD hungry LV-3SG.M
‘Robert is very hungry.’ [Dictionary]

In both (108) and (109), the particle precedes the adjective it modifies. This stands in contrast to *kai* ‘very’ which always follows the adjective.

Another case of quality intensification is seen in (110) where the intensified element is not an adjective but an adverb:

(110) *amkiwali, kolem amkibidi=mo*
morning MOD early.morning=ADV
‘in the morning, in the very early morning’ [muyu030:155]

The next function of *kolem* to be discussed here is action intensification. By this we mean that a certain action is carried out with a high degree of intensity or with a special focus of attention. The particle directly precedes the verb denoting the action. Here are two examples:

- (111) *Onetki kolem momb-an begini kawut,*
 now MOD shoot-1SG like.this quickly
 [After having missed the pig previously:]
 ‘This time I shot more focused and quickly,’ [muyu035:054]
- (112) *Kolem wedamba-in.*
 MOD listen-1SG
 ‘I listened carefully.’ [Dictionary]

In the following example, ‘taking all at once’ is probably an intensification of taking (especially in its singular verb form):

- (113) *Yeni yu ot kumun kolem kan-u-den.*
 PN 3SG.F money all MOD take:SG.O-3SG.F-PFV
 ‘Yeni took all the money at once.’ [Dictionary]

The last function regularly found with *kolem* is deontic modality. In some cases, *kolem* denotes that a certain action must be performed by the addressee.

- (114) “*man-an-on=go kolem owet kobi kawan-an-an*”,
 come-IRR-3SG.M=PTC MOD bamboo on climb-IRR-1SG
engg-an.
 say-1SG
 [Hunting for pigs:]
 ‘ “... if (the pig) comes, I must climb on the bamboo”, I said (to myself).’ [muyu004:058]
- (115) *Kep=ko ine=go kolem ne ambip*
 2SG.M=PTC tomorrow=PTC MOD 1SG house
min-i=n.
 come-INF=COP
 ‘You must come to my house tomorrow.’ [Dictionary]

Finally, we need to highlight another function. In combination with ‘like that’, *kolem* denotes the certainty of the speaker about an event, as in (116). The resulting meaning seems to be epistemic or even evidential. However, this meaning is restricted to combinations with demonstrative verbs like *okuni* and is certainly not central to the functions of *kolem*.

- (116) ***Kolem*** *okun-an-on*.
 MOD like.that-IRR-3SG.M
 ‘It will exactly happen like that.’ [muyu010:143]

4.8.10 The epistemic modality clitic =non

The clitic particle =non occurs clause finally and denotes the epistemic modality of uncertainty similar to the English adverb ‘maybe’.

- (117) *Tana yumudi=mo a-∅-ip=non*.
 child forceful=ADV 3SG.M.O-hit-2/3PL=MAYBE
 ‘Maybe they hit the child forcefully.’ [Dictionary]
- (118) “*Ricky=bet=an=non*”, *engga-un*.
 PN=OBL=COP=MAYBE say-3SG.F
 [Someone was hunting pigs illegally:]
 ‘ “Maybe it was Ricky”, she said.’ [muyu005:038]

Both examples above contain an overt predicate: (117) is a verbal clause, whereas (118) has a copula. These elements look like hosts to the clitic in the respective examples. However, the clitic =non does not depend on overt predicates but is rather attached to the clause boundary. In the following example, the verbless clause consists of a single noun only but, nonetheless, =non cliticizes smoothly:

- (119) “*Ai, tana=non*”, *eng-an-u*.
 INTJ child=MAYBE say-SS-3SG.F
 [Upon witnessing someone’s arrival:]
 ‘ “Oh, maybe (it is) the children”, she said and then she ...’
 [muyu038:113]

Semantically, the epistemic modality marker =non marks that the speaker is not committed to the truth of the statement. S/He believes that a certain assertion is true but does not know it for sure. The examples above included positive declarations, but =non can also attach to negated clauses:

- (120) “*Ne tana, kep ogo kelas enam kel-ep-ten onet*
 1SG child 2SG.M DEM class(BI) six(BI) become-2SG-PFV but

a, pelajaran wom ogo kep kat, kep kat
 PTC lesson(BI) inside DEM 2SG.M knowledge 2SG.M knowledge
*balin=**non**=o*”, *engg-on.*
 NEG=MAYBE=QUOT say-3SG.M
 [Upon the news that his son skipped one grade of school:]
 ‘ “My son, you have become a sixth grader but probably you do
 not know the lessons”, he said.’ [muyu041:032]

If another clause clitic is present, epistemic modality =*non* precedes the other clitic. In (120) and (121) we see a quotative clitic =*o* after the epistemic modality marker while in (122) the particle *ko* marks the clausal boundary in a complex sentence. The clitic order =*non*=*o* and =*non ko* in these examples are in accordance with the scope of epistemic modality. Only the hosting clause is marked as uncertain whereas the epistemic modality cannot extend to the right by skipping clause boundaries.

- (121) “*Nik yop ambon bomo-n-u,*
 Nik fruit search walk-SS-3SG.F
*tan-u-den=**non**=o*”, *engg-an.*
 die-3SG.F-PFV=MAYBE=QUOT say-1SG
 [Upon finding the dead body of a woman in the forrest:]
 ‘ “Maybe she looked for Nik fruits and then died”, I said.’
 [muyu037:044]
- (122) “*Beras aip=an=**non**=ko nup aip sedikit*
 rice(BI) there.is=COP=MAYBE=PTC 1PL there.is a.little(BI)
komb-e-y-ime”, *engg-up=ki.*
 put-E-PL.RCV-2PL.IMP say-1PL=PTC
 ‘ “If you have some rice, maybe, please give a little to us”, we said.’
 [muyu038:150]

4.9 Interjections and formulaic utterances

This section deals with the often neglected word class of interjections (§4.9.1) and includes some information about formulaic utterances (§4.9.2).

4.9.1 Interjections

Interjections are ubiquitous in the corpus both in monological and conversational speech. This subsection gives a short outline of interjections and some of their various functions but cannot do justice to the rich variety of this important word class.

We define lexical elements with the following features as prototypical interjections:

- absence of referential meaning
- no inflection
- syntactically autonomous
- peculiar phonological structure

Formally, two types of interjections can be distinguished in Muyu. The first type comprises of vocalic interjections, i.e. single vowels or diphthongs, which are often associated with rising or falling pitch and a higher intensity than the surrounding discourse. In order to distinguish vocalic interjections from the homophonous particles, they are transcribed with a final <h> which is a purely orthographic convention and does not correspond to any phoneme. The second type is segmentally complex with forms resembling full content words.

Here are some examples for both types. They are probably not exhaustive:

(123) Vocalic interjections:
ah, aeh, aih, ayih, eh, eyh, ih, iyeh, mh, oih

(124) Segmentally complex interjections:
bayang ‘guy’, *enggon* ‘friend’, *mok, moko, moyon, sih, mah*

As can be seen in (124), *bayang* ‘guy’ and *enggon* ‘friend’ do not conform to our first definitional criterion: absence of referential meaning. However, we will show presently that these two items can fulfil functions that are typically associated with interjections in which case the referential meanings are negligible. Therefore, these items are classified as “secondary interjections”

(Nübling 2004) here.²³ Besides the Muyu interjections listed above, we find some interjections from Indonesian in the corpus: *aduh!* ‘ouch (reaction to pain)’, *wah* ‘oh no! (expression of disappointment)’, etc.

Coherent functional categories for the description of interjections are still less established than for other word classes. In this study, we follow the typology proposed in Ameka (1992). The basic idea is to categorise interjections via communicative functions as proposed in studies like Bühler (1934) and Jakobson (1960). This leads to three types: expressive interjections, conative interjections and phatic interjections. It is important to note that a given interjection can belong to more than one type based on the function it fulfils in a given utterance.

Expressive interjections are related to the mental state of the speaker. They are linked to emotions and sensations but also to certain cognitive states. Most vocal interjections in (123) can express that the speaker is surprised. The interjection *moyon* is related to a state of high emotional arousal, as in the following examples:

- (125) *Moyon, tana wat, kip=ko om ege kede adep*
INTJ child uterus 2PL=PTC sago DEM.here what like
kem-ip=ke?
 do-2PL=Q
 [Parents, finding out that the sago they stored in the house is gone.
 Raised voice:]
 ‘Oh... stupid children, what did you do with this sago?’
 [muyu032:083]
- (126) *Moyon odo kene wan-an=e. Ton alok! Ton alok!*
INTJ DEM forget forget-1SG=DS.SEQ fish alok fish alok
 [Trying to remember the name of a certain kind of fish:]
 ‘Oh gosh, I forgot it and... The Alok fish! The Alok fish!’
 [muyu038:182]

Bayang is found in similar utterances, but it tends to express a certain kind of disbelief:

²³Cross-linguistically, referential terms that convey dearness and familial closeness frequently develop to interjections. In the neighbouring Greater Awyu languages, interjections with ‘friend’-terms also occur (e.g. in Korowai, see van Enk and de Vries 1997:132-135).

- (127) *Ih, bayang, kaduk kat kukni!*
 INTJ INTJ man skin white
 ‘Oh my gosh, a white man!’ [muyu044:129]

In many cases, various interjections are juxtaposed:

- (128) *Moyon mok medep kun-an-an=Q?*
 INTJ INTJ what do-IRR-1SG=Q
 [Annoyed since he is not allowed to eat sago:]
 ‘Oh dear me, what can I do?’ [muyu007:053]

The interjection *moko* ‘oh no!’ expresses that a certain event or situation is undesirable for the speaker.

Conative interjections are directed towards the addressee. *Mok* ‘come on!’ can be used to provoke a reaction. The secondary interjection *enggon* ‘friend’, pronounced sharply and with rising pitch, is a common means to get someone’s attention. When approaching someone’s house, the interjections *oih* and *eih* informs the people inside the house about one’s presence. Animals like dogs and chicken are chased away with a sharp and aggressive *sih!*

Finally, phatic interjections are concerned with maintaining contact. *Mh* and *eh* are minimal reactions in conversation, encouraging the speaker to go on with his talk.

A very special case that deserves special attention here is *ih* in the context of joking and humorous situations. This interjection occurs after laughing, namely in the following way:

1. Something funny happens or something funny was said by somebody.
2. I keep on laughing until my breath is gone.
3. I shortly inhale.
4. I exhale with a high-pitched *ih* (falsetto voice) until my breath is gone again.
5. I inhale normally.

This patterns creates a certain rhythm in joking conversations in which speaking, laughing and *ih* alternate in predictable patterns.²⁴ The function of this interjection is not easily determined. It seems to highlight the appreciation of the funny event/utterance, i.e. the expressive function. Furthermore, each member of the group joins in and signals that the joking conversation can go on like this, i.e. the phatic function. Finally, the interjection is probably also related to turn taking. After all participants had their laughs, the stage is open for somebody else to tell a joke.

Another important function of vocalic interjections is related to direct speech quoted in narratives. Most frequently, we find direct speech introduced with a vocalic interjection from the list above. In (129), the quoted speech intervenes between the NP denoting the speaker and the verb of speech. The edges of the quote are marked by the interjection *ah* to the left and the quotative particle *=o* to the right. Note that such a marking of quotes via interjections and vowels is similar to quotation marks in written language that fulfil the same function in many orthographic systems.

- (129) *Amban ombet* “**Ah**, *odo Yanu ye*
 wife OBL.DEM INTJ DEM PN 3SG.M
emba=an=o”, *engg-un*.
 father=COP=QUOT say-3SG.F
 [Asking his wife who the visitor from before was:]
 ‘(His) wife said, “Oh, that was Yanu’s father.” ’ [muyu010:046]

Similarly, interjections can help to track a switch of speaker when a dialogue is quoted. Example (130) illustrates a dialogue that is quoted in a narrative. The speaker indicates who said what in the original dialogue with the help of the subject index on the verb of speech *enggi* ‘say’. Additionally, each quote after a switch of speaker is introduced with an interjection.

- (130) [Quoting a dialogue between the narrator (A) and another person (B). A made up a story about finding a dead body in the forest. B is sceptical]:
 a. “Nik yop ambon bomonu tanuden non o”, *enggan*.
 “Maybe she looked for Nik fruits and then she died”, I said,
 (=A)

²⁴During fieldwork, I had countless opportunities to engage in this practice. After initial reluctance, I soon joined the others with a high-pitched *ih* after laughing.

- b. “**Ah** mok a”, enggon.
 “Oh, come on”, he said. (=B)
- c. “**Aih**, yanam o”, enggan.
 “Oh, it’s true”, I said. (=A) [muyu037:044]

Interjection as in (129) and (130) are probably being grammaticalised to quotative markers.

4.9.2 Formulaic utterances

The formulaic utterances outlined in this section comprise the acts of greeting, thanking and agreeing. They are described regarding their forms and the typical situations of use.

Greetings are composed of the respective time of day expression and *kudok* ‘good’, followed by some form of address for the interlocutor.²⁵ The form of address depends on gender, age/generation relative to the speaker and social hierarchy. Here are some examples:

- (131) *Amyali kudok, emba.*
 morning good, father
 ‘Good morning, sir.’ [overheard]
- (132) *Amunggun kudok, oni.*
 afternoon good, older.sister
 ‘Good afternoon. (to female, same generation as self)’
 [overheard]
- (133) *Opnon kudok, taman/tana.*
 evening good, younger.sibling/child
 ‘Good evening. (to female/male, generation younger than self)’
 [overheard]

These greetings are used commonly when two people meet, whether during unintentional encounters on the road or when visiting someone.²⁶ In modern

²⁵The elements of greetings show great dialectal variation. E.g. in the Kamindip dialect, one would say *amitri amun* ‘good morning’ instead of Kawip *amyali kudok*.

²⁶Muyu formulaic expressions of greeting are perhaps calques from the respective Indonesian expressions: *selamat pagi* ‘good morning’, *selamat siang* ‘good afternoon (early)’, *selamat sore* ‘good afternoon (late)’, *selamat malam* ‘good evening’.

times, these formulaic expressions are also used as conversation starters in text messages or social media.²⁷ The proper answer to these greetings is simply *eyuk* ‘yes’.

When leaving, someone can say goodbye with a formulaic expression comprising a pronoun and *oyen* ‘that is it’. In contrast to greetings, saying goodbye does not differentiate times of day or sociolinguistic factors such as age and social hierarchy. Merely gender is expressed via the pronoun:

- (134) *Kep oyen.*
2SG.M that.is.it
‘Goodbye. (to male)’ [overheard]
- (135) *Kup oyen.*
2SG.F that.is.it
‘Goodbye. (to female)’ [overheard]

The act of **thanking** someone is performed with formulaic expressions based on the verb *ka-* ‘give’:

- (136) *Tip ka-yil-ep.*
good give-NON.1SG>1SG-2SG
‘Thank you. (lit. you gave me good)’ [overheard]
- (137) *Tip ka-yil-ip.*
good give-NON.1SG>1SG-2PL
‘Thank you. (lit. you (pl.) gave me good)’ [overheard]
- (138) *Kaimo ka-yil-ip.*
very.good give-NON.1SG>1SG-2SG
‘Thank you. (lit. you (pl.) gave me very good)’ [overheard]

Interestingly, the formulaic expressions above have an archaic morpheme which is no longer used in the Kawip dialect. The suffix *-yil* stands exactly where the object suffix would mark the receiver of the giving event. The productive paradigm of object suffixes does not include *-yil*, see Section 7.3.2. However, Drabbe (1954:199-200) mentions two allomorphs of *ka-*, *kajir-* and *kajika-*, of which the former clearly includes our *-yil*. These allomorphs re-

²⁷For example, when initiating a WhatsApp chat, a Muyu speaker would start with one of the formulaic expressions above, even if the rest of the chat continues in Indonesian.

place *ka-* in the verb paradigm, if and only if the receiver is first person and the giver is non-first person. Additionally, the number of the transferred object is distinguished, with *kajir-* for singular theme objects and *kajika-* for plural theme objects. Drabbe's description seems to implicate that this variation was still productive in the Metomka dialect when he collected the data. In Kawip, the only place where we find *-yil* is in the formulaic expressions for 'thank you'. It is a fossilised form, otherwise being lost entirely, just like its plural counterpart **-yika* which is still present in Drabbe's data.

Although its form indicates otherwise, the formulaic expression for 'thank you' is not restricted to answers to an event of giving. One can always say *tip kayilep* if s/he is grateful for something, e.g. by receiving a compliment or getting advice.

The common response to someone expressing 'thank you' is *kep/kup kang-gon* 'you also'. This is probably due to the literal meaning 'you gave me good' - 'you also'. Further responses are *eyuk* 'yes' and *otbop nowan* 'no problem'.

The act of **agreeing** is performed with the formulaic expression *yanam an* 'it is true'. This expression is heard very often from speakers of Muyu and seems to have a stronger effect of agreement than *eyuk* 'yes' with which it is frequently combined. Another formulaic utterance used for this function is *okunedep* 'it is like that' (i.e. *okune* 'like that' + *adep* 'like').

Chapter 5

Word classes III: Demonstratives

5.1 Introduction

This chapter discusses a group of lexemes that we subsume under the category demonstratives. We understand as demonstratives all lexical items that encode deixis of some sort. It is important to note that demonstratives in Muyu belong to different word classes, including determiners, pronouns, adverbs, copula and others. Nonetheless, we can group them together here, based on the following criteria:

- Morphologically, most demonstratives are formed from **two bound morphemes** *e-* and *o-*. These morphemes never occur on their own but are obligatorily bound to another element, which can itself be a bound morpheme, a clitic or a free morpheme.
- Semantically, most demonstratives form pairs that paradigmatically distinguish **two values** that refer to spatial localisation. This distinction roughly resembles what was traditionally identified as proximal vs. distal values. However, as will be shown below, the Muyu spatial deixis is asymmetric, encoding spatial information only in one of the two elements of a pair.
- Pragmatically, all demonstratives fulfil certain functions, such as spatial deixis, anaphora and discourse deixis.

Since the deictic elements *e-* and *o-* are bound morphemes, demonstratives strictly speaking have complex morphology. However, we will treat them as simple elements in this chapter, since they can be seen as fully lexicalised items. Furthermore, there is no inflection of demonstratives in Muyu, as is expected given the lack of nominal inflection in this language.

The analysis proposed in this study is informed by Diessel (1999), who distinguishes four categories of demonstratives, based on their syntactic distribution: demonstrative pronouns, demonstrative determiners, demonstrative adverbs and demonstrative identifiers. These four categories represent a maximally differentiated demonstrative system and are not necessarily present in each language. As we will see shortly, Muyu does not distinguish demonstrative pronouns from demonstrative determiners, i.e. certain demonstratives can both modify and replace a noun. Additionally, we find another category in Muyu, the demonstrative copula, which is distinct from Diessel's category of demonstrative identifiers, as discussed below.

The functions of demonstratives can be either exophoric or endophoric (Halliday & Hasan 1976:33). Exophoric uses of demonstratives convey spatial deixis in the situational context of speech, oriented in a *Zeigfeld* (Bühler 1934) with a deictic centre (origo) of *here*, *now* and *I*. In contrast, endophoric uses of demonstratives fulfil discourse internal functions such as anaphora, information ordering or a recognitional function (Himmelman 1996). This section will mostly deal with exophoric uses of demonstratives, while endophoric uses are discussed more thoroughly in other parts of this study.

Muyu encodes what can be called a simple demonstrative system, distinguishing only two contrasting values, as e.g. Engl. *this* and *that*. Most standard accounts of simple demonstrative systems describe this contrast as a symmetrical opposition of distance, *this* = proximal, *that* = distal (Lyons 1977, Anderson & Keenan 1985, Diessel 1999). Recently, however, this assumption has been challenged by Enfield (2003) who suggests a semantically lean interpretation, originating from his analysis of Lao (Kra-Dai; Laos) determiners. In Lao, *nii*⁴ is a general demonstrative lacking any spatial specification, whereas *nan*⁴ (the superscript indicates tone) specifies the referent as 'not here'. The distance distinction for close and remote referents follows pragmatically, since *nii*⁴ and *nan*⁴ establish a paradigmatic contrast. Such an interpretation of a simple demonstrative system does not only assert an asymmetrical encoding of demonstratives but also replaces the semantic category of DISTANCE with that of LOCATION (i.e. 'not here' is not the same as 'far away'). For our analysis of the Muyu demonstrative system, we fol-

low the basic idea of Enfield (2003) with one important difference: In Muyu, the neutral demonstratives are those based on *o-* (traditionally: distal), while the forms based on *e-* (traditionally: proximal) add the semantic value ‘here’. Evidence for this analysis will be presented in Section 5.14.

Muyu offers a rich inventory of demonstratives, which belong to diverse word classes and fulfil various functions. An overview of all demonstrative lexemes is given in the two following tables. Table 5.1 includes an outline of all demonstratives except elevational and semantically complex items. The latter are outlined in Table 5.2.

Forms	Functions	Gloss
<i>edo/odo</i>	pronominal, adnominal, relative, identificational	DEM.this / DEM
<i>ege/ogo</i>	pronominal, adnominal relative, adjunct	DEM.here / DEM
<i>eya/oya</i>	adverbial, adnominal	here / there
<i>eyamin/oyamin</i>	adverbial	until.here / until.there
<i>éyom/oyom</i>	adnominal	COM.DEM.this / COM.DEM
<i>eyóm</i>	adverbial	in.here
<i>eyot/oyot</i>	adnominal	CONTR.DEM.this / CONTR.DEM
<i>eyot/oyot</i>	conjunctive	CAUS.DEM.this / CAUS.DEM
<i>eyen/oyen</i>	copula	here.is / there.is
<i>embet/ombet</i>	oblique	OBL.DEM.this / OBL.DEM
<i>eye/oye</i>	adnominal	POSS.DEM.this / POSS.DEM
<i>ekuni/okuni</i>	predicate	like.this / like.that

Table 5.1: Outline of demonstratives in Muyu (except elevationals and semantically complex).

As was stated at the beginning of this introductory section, demonstratives are defined via deixis. However, there are some lexical items in Muyu that have deictic function but are not analysed as demonstratives. Most importantly, this applies to motion verbs which encode itive and ventive mo-

Forms	Gloss	Comment
<i>eyadi</i>	up.here	
<i>wadi</i>	up.there	
<i>eyani</i>	down.here	
<i>wani</i>	down.there	
<i>wonggo</i>	there.UNSPC	neutral, same level, unspecific
<i>onggo</i>	there.SPEC	neutral, same level, specific
<i>onggani</i>	down.there.far	
<i>onggadi</i>	up.there.far	
<i>eyangga</i>	here.INV	invisible (i.e. out of sight)
<i>wangga</i>	there.INV	invisible (i.e. out of sight)
<i>eyonggo</i>	hither	approaching from different directions

Table 5.2: Elevational and semantically complex demonstratives in Muyu.

tions and can deictically refer to the location of the speaker. Furthermore, basic pronouns and possessive pronouns are deictic in nature but are not demonstratives in the narrower sense.

This chapter is divided into sections that discuss each type of demonstrative in turn. In the first three sections, we discuss basic demonstratives (§5.2), locationals (§5.3) and elevationals (§5.4). Next, we continue with a discussion of semantically complex locationals (§5.5). After that, we proceed with comitatives (§5.6), inessive (§5.7), limitationals (§5.8), contrastive/causal demonstratives (§5.9), demonstrative copulas (§5.10), obliques (§5.11), demonstrative possessives (§5.12) and demonstrative verbs (§5.13). The chapter finishes with a discussion about the semantic asymmetry of the forms based on *e-* and *o-* (§5.14).

5.2 Basic demonstratives in two sets: edo/odo, ege/ogo

Muyu comprises two sets of basic demonstratives: *edo/odo* (Set I) and *ege/ogo* (Set II). They probably stem from a combination of the bound deictic morphemes with the clitic particle *=ko/=go* and its variant *=to/=do*.¹ In

¹The variant *=to/=do* for *=ko/=go* is mostly present in the dialects of the south (personal fieldnotes, A.Z.). It is quite exceptional in Kawiyet and therefore not included

the case of *ege*, the second vowel assimilates to the initial bound morpheme *e-*, whereas in *edo*, the second vowel remains /o/. The remainder of this section discusses the syntax of these elements.

The most common function of these demonstratives is the determination of NPs. In this function, the contrast between *e-* and *o-*forms roughly translates to a contrast in proximity as in the following examples (but see below for a detailed examination of asymmetric encoding):

- | | | |
|-----|-----------------------|-----------------------|
| (1) | <i>kon edo</i> | ‘this woman’ |
| | <i>tana kadap odo</i> | ‘those many children’ |
| | <i>kaduk ege</i> | ‘this man’ |
| | <i>ok ogo</i> | ‘that river’ |

Demonstratives do not encode gender or number and the noun-demonstrative combinations in (1) can be varied freely.

The neutral demonstrative of Set I is *odo* and is glossed ‘DEM’, while *edo* adds further information and is glossed ‘DEM.this’ (for an outline of this asymmetric analysis see Section 5.14). The English translations of the following examples mostly translate *edo* as ‘this’ and *odo* ‘that’. In Set II, the neutral demonstrative is *ogo* which is glossed ‘DEM’, while *ege* adds spatial information and is glossed ‘DEM.here’. They also often translate to ‘this’ and ‘that’, due to the lack of equivalent items in English.

The two demonstrative sets discussed in this section differ in the nature of their referent. Whereas lexemes of Set I (*edo/odo*) refer to a referent itself (‘**this** book’, ‘**that** apple’), those of Set II (*ege/ogo*) rather refer to the location occupied by the referent (‘this book **here**’, ‘that apple **there**’). This difference is reflected in a slightly differing syntactic distribution. The distributional features to distinguish Set I from Set II are summarised in Table 5.3. It is important to note, however, that Set II demonstratives do not refer to a location *per se*. This means that they are not used as locational adverbs ‘here’ or ‘there’ but always depend on an entity that is at the location. It will become more clear in the examples below.

As shown in Table 5.3, both sets are used as determiners and pronouns for subjects and direct objects as well as relative markers. Furthermore, elements of both sets are incompatible with adverbial functions. The differences between the two sets are that only Set I demonstratives can function as identificational pronouns and only Set II demonstratives can function as

in this study.

Function	Set I (<i>edo/odo</i>)	Set II (<i>ege/ogo</i>)
determiner of subject/direct object	yes	yes
pronominal subject/direct object	yes	yes
identificational pronoun	yes	no
determiner of indirect object	no	yes
determiner of adjunct phrase	no	yes
relative marker	yes	yes
adverbial function ('here', 'there')	no	no

Table 5.3: Features to distinguish basic demonstratives of Set I (*edo/odo*) and Set II (*ege/ogo*).

determiners of indirect objects and determiners of adjunct phrases, respectively. The following paragraphs discuss each feature presented in Table 5.3 in turn.

Determiner of subject/direct object

First, we examine the function of these demonstratives as determiners. They occur in the determiner slot, which is the last slot of the noun phrase (see Section 6.6). The following pair of examples uses *edo/odo*:

- (2) “[*Ton edo*] *b-e kan-e kampung*
 fish DEM.this take:PL.O-SM take:SG.O-SM village
enamba (a)ip weno-gul-up=ket=o
 mother.father there.is go-SS.SEQ-1PL=and.then.SS=QUOT
engg-an.
 say-1SG
 ‘ “We take these fish to (our) parents first”, I said.’
 [muyu038:094]
- (3) [*Keranjang odo*] *alopmim aip yal-o-den onet,*
 basket(BI) DEM three there.is put:PL.O-3SG.M-PFV but
 ‘He had put three baskets there but ...’ [muyu011:043]
- (4) [*Ne odo*] *wen-e nong ambon=mo wan-an-e kem-an=o,*
 1SG DEM go-SM rope look.for=ADV go-IRR-SM do-1SG=QUOT

‘I want to go to check some traps (he said)’ [muyu054:004]

The demonstrative *edo* in (2) determines *ton* ‘fish’. In the story being told, the fish are close to the speaker who just took them from a trap. In (3), the demonstrative *odo* modifies the Indonesian word *keranjang* ‘basket’.² The baskets are neither close to the speaker nor to the main protagonist of the narrative being told, hence the neutral *odo* is used. In both cases, the plural number of referents is expressed via verbal number rather than on the demonstratives. While (2) and (3) have shown demonstratives in object position, *odo* in (4) determines the subject. This example also shows that demonstratives are compatible with bare pronouns. In this combination, the demonstrative indicates the right edge of the noun phrase. Besides that, we have not been able to find any semantic effect. Furthermore, there is no difference between the *e-* and *o-*forms on bare pronouns. Hence, *nup odo* is the same as *nup edo*.

Similarly, *ege/ogo* is found in this function:

- (5) *Kep=ko* [nup tana~tana **ege**] ketmengg-e
 2SG:M=PTC 1PL child~RED DEM.here teach-SM
bal-an-ep *nea?*
 AUX.CONT-IRR-2SG Q
 ‘Can you continue to teach our children?’ [muyu030:008]
- (6) [Ton **ogo**] *bi-up=ko*,
 fish DEM take:PL.OBJ-1PL=PTC
 ‘We caught those fish and ...’ [muyu038:075]
- (7) [On **ege**] *kalapa embi yinim=bet*
 bird DEM.here coconut(BI) leaf on=OBL
tio-n-e=get
 sit-SS-3SG.M=and.then.SS
 ‘This bird was sitting on the leaves of the coconut tree and then it ...’ [muyu031:062]

The examples above show that Set II demonstratives are also used as determiners of NPs. In (5) and (6), the demonstratives *ege* and *ogo* determine

²The syntactic structure in (3) is complex and not easy to represent in the English translation. Literally, it would be something like ‘Those baskets, there were three, he put down.’

direct objects, while *ege* in (7) determines a clausal subject.

To sum up, both Set I and Set II are compatible with subjects and direct objects and are used as determiners of NPs.

Pronominal subject/direct object

Next, basic demonstratives can also stand as pronouns, i.e. instead of determining a NP, they replace it. Note, however, that this function is quite rare in natural speech, since NPs can be dropped without any remaining overt element.

The following examples show *edo/odo* in pronominal function:

- (8) *Ah, edo wun-ip-ten!*
 INTJ DEM.this enter-2/3PL-PFV
 [Finding shrimps in a trap:]
 ‘Oh, they have been caught by this (trap)! (lit. They entered this)’
[muyu038:062]
- (9) *Aih, odo komb-e kolongg-ime, ketbon*
 INTJ DEM put:SG.O-SM leave-2PL.IMP sacral.place
ketbon=a bida-y-un bida-y-on,
 sacral.place=LNK donate-PL.RCV-3SG.F donate-PL.RCV-3SG.M
odo kolongg-ime.
 DEM leave-2PL.IMP
 [Advice from the first missionaries:]
 ‘Oh, leave that (habit), making sacrifices at your sacral places, you
 (should) stop that.’
[muyu019:024]

In both examples above, a demonstrative pronoun represents the direct object of the clause. *Edo* in (8) refers to a previously mentioned trap the protagonist was approaching. In contrast, the situation is more complex in (9). The first occurrence of *odo* refers cataphorically to the succeeding clause (*ketbon ketbon a bidayun bidayon*), while the second occurrence of *odo* is an anapher, referring to the exact same clause.

Similarly, *ege/ogo* can have a pronominal function. These cases are even rarer than Set I pronominals. Here are two elicited examples:

- (10) *Ege kan-e.*
 DEM.here take:SG-2SG.IMP

- [Handing someone a pack of cigarettes:]
 ‘Take this!’ [Fieldnotes]
- (11) *Mok, ogo kok-on.*
 INTJ DEM fall:SG.S-3SG.M
 [Witnessing a coconut falling from a tree:]
 ‘Oh, that is falling.’ [Fieldnotes]

In (10), *ege* is the object and refers deictically to a pack of cigarettes given in the speech situation. In contrast, *ogo* in (11) is the subject of the clause and refers to a coconut visible in the speech situation. Although these cases are accepted by our consultants, a more natural way would be to use the verbs only: *Kane!* ‘Take it!’ and *Kokon!* ‘It falls!’

Identificational pronouns

The distribution of Set I and Set II demonstratives differs in non-verbal clauses. Only Set I items can occur in this position. The term ‘identificational’ goes back to Diessel (1999:4-6), whose classification of demonstrative word classes has a separate category for demonstratives that occur as subjects in non-verbal clauses and copula clauses, e.g. Engl. *This is my dog*. Many languages have distinct demonstrative forms for this function, hence the need for a separate typological category. However, as in English, Muyu does not generally distinguish identificational demonstratives from pronominal or adnominal demonstratives. Nonetheless, this syntactic function has an important distributional restriction, since only elements from Set I can be used in this way and not elements from Set II. Here are some examples:

- (12) *Edo anggotmi yeman=an.*
 DEM.this friend for=COP
 ‘This is for a friend. [this=food]’ [muyu010:120]
- (13) *Odo kudok balin.*
 DEM good NEG
 ‘That is not good. [that=refusing to work hard]’ [muyu056:082]

Although Set II elements (*ege/ogo*) are compatible with pronominal and adnominal positions in verbal clauses, they are not used as identificational demonstratives:

- (14) **Ege*/**ogo* *kudok balin.*
 DEM.here/DEM good NEG
 ‘(Intended:) This/that is not good.’ [elicited]

The examples given so far have shown demonstratives of both sets in pronominal position. Additionally, the same restriction applies to demonstrative determiners in non-verbal clauses. Compare the following variants of a copula clause:

- (15) *Tana edo* *anggoyom kudok yanop=an.*
 child DEM.this cheek good there.is=COP
 ‘This child has beautiful cheeks.’ [Dictionary]
- (16) *Tana *ege* *anggoyom kudok yanop=an.*
 child DEM.here cheek good there.is=COP
 ‘(Intended:) This child has beautiful cheeks.’ [elicited]

This selectional restriction in identificational function, both in pronominal and adnominal position, is based on the semantic difference between the two sets of demonstratives. *Edo/odo* (Set I) refer to the entity itself and therefore felicitously identify the referent. In contrast, *ege/ogo* (Set II) refer to the location that is occupied by the entity. Since this location is not identical with the entity itself, the referent cannot be identified felicitously. Therefore, Set II demonstratives are ungrammatical in identificational function.

Determiners of indirect object NP

As seen above, both sets of demonstratives are compatible with the subject and direct object arguments. There is, however, a distributional difference for indirect objects, e.g. referents that represent receivers of giving events. This argument position is only compatible with Set II elements, whereas Set I elements are clearly rejected by our consultants. Compare the following elicited pair of examples:

- (17) *Amenon tonop odo/ogo [tana ege]* *kan-e*
 branch spoon DEM child DEM.here take:SG.O-SM
kon-e.
 give-2SG.IMP

‘Give that fork to this child!’ [elicited]

- (18) *Amenon tonop odo/ogo [tana *edo] kan-e*
 branch spoon DEM child DEM.this take:SG.O-SM
kon-e.
 give-2SG.IMP

‘Give that fork to this child!’ [elicited]

As seen in the examples above, the direct object is compatible with both *odo* and *ogo*. In contrast, the indirect object can only be marked by *ege* from Set II but not with *edo* from Set I. The reason for this distributional restriction is found in the semantic difference between the two sets of demonstratives and in the specific way GIVE-events are conceptualised in Muyu. A GIVE-event is semantically encoded as a transfer of a theme object from an agent to a receiver. This receiver is conceived of as the location where the theme object is transferred to. Therefore, Muyu speakers make use of Set II demonstratives here, which refer to the location of an entity.

Determiners of adjunct phrases

Similar to indirect objects, there is a restriction concerning modification of adjunct phrases with demonstratives: while demonstratives of Set II are compatible with adjuncts, those of Set I are fully ungrammatical in this position.

- (19) *Tana=go [meja talep tap *edo] tio-d-en.*
 child=PTC table(BI) big under DEM.this sit-DUR-3SG.M

‘(Intended:) This child is sitting under this big table.’ [elicited]

- (20) *Tana=go [meja talep tap ege] tio-d-en.*
 child=PTC table(BI) big under DEM.this sit-DUR-3SG.M

‘This child is sitting under this big table.’ [elicited]

As adjunct in the examples above, we find the postpositional phrase *meja talep tap*. It is compatible with *ege* but not with *edo*. Note that basic demonstratives do not refer to locations *per se*. It is the location of the entity ‘table’ that is determined with *ege* in (20). In contrast, a Set I demonstrative as in (19) would refer to the entity itself, which is not appropriate for the function of this phrase. It is a locational adjunct and selects a Set II demonstrative

accordingly.

Relative markers

Basic demonstratives can function as relative markers to integrate a relative clause into its matrix clause. This applies to postnominal RCs only (for prenominal RCs see Section 6.3.2). In the following examples, the RCs are marked with brackets:

- (21) [*Yu kaduk Awin ambip won-o-den* **odo**] *mon-on.*
 3SG.F man PN house go-3SG.M-PFV DEM come-3SG.M
 ‘Her husband who had gone to Awin region came back.’
 [muyu007:107]
- (22) [*Nekwa-ip* **ogo**] *kan-e yado*
 prepare-2/3PL DEM take:SG.O-SM up
komb-uk=get,
 put:SG.O-3SG.F.IMP=and.then.SS
 ‘She must bring (the money) which they have prepared and then she ...’
 [muyu018:095]
- (23) [*Kep wingga-ep* **edo**] *kudok=an.*
 2SG.M sing-2SG DEM.this good=COP
 ‘You sing well. (lit. that you sing is good)’ [Fieldnotes]

As can be seen from the examples above, both sets are used as relative markers: *odo* (Set I) occurs in (21) while *ogo* (Set II) stands in (22). Both examples have the relative clause in the argument position of the matrix clause. In contrast, relative clauses can also represent the subject of a non-verbal clause, as in (23). In this case, the demonstrative has an identificational function (see above) and can only be from Set I.

Incompatibility with adverbial functions (‘here’, ‘there’)

Our discussion of the two sets of demonstratives so far has revealed a semantic and distributional difference between *edo/odo* (Set I) on the one hand and *ege/ogo* (Set II) on the other. While Set I elements refer to the entity itself, Set II elements refer to the location of that entity. However, this does not mean that Set II elements can refer to locations generally. Neither

Set I nor Set II demonstratives can be used adverbially to indicate the event location of the clause as a whole. Compare the following examples:

- (24) *Omodom=ko *edo/*ege=go mangga kadap*
 long.time.ago=PTC DEM.this/DEM.here=PTC mango many
aip alendel-en.
 there.is stand:PL.SBJ-3SG.M
 ‘(Intended:) In the past, many mango trees grew here.’ [elicited]

- (25) *Omodom=ko eyani=go mangga kadap aip*
 long.time.ago=PTC here=PTC mango many there.is
alendel-en.
 stand:PL.SBJ-3sG.M
 ‘In the past, many mango trees grew here.’ [elicited]

In (24), the demonstratives *edo* and *ege* both fail to refer to the location where the mango trees are growing. The ungrammatical clause in (24) can be fixed by replacing *edo/ege* with the demonstrative adverb *eyani* ‘up here, here’ (see below) in (25).

In conclusion, basic demonstratives point deictically to a referent (Set I) or the location of a referent (II). However, they do not refer to locations *per se*. Instead, we find demonstrative adverbs to fulfil different adverbial functions in Muyu, as will be shown in the following sections.

5.3 Locationals: *eya*, *oya*

Muyu has two basic locational demonstratives: *eya* ‘here’ and *oya* ‘there’, derived from the bound deictic morphemes *e-/o-* and the postposition *ya* ‘at, to’. They have three syntactic functions: (a.) as independent adverbs meaning ‘here’ and ‘there’, (b.) as modifiers of NPs, (c.) with a clausal complement. All three functions are discussed in turn.

Firstly, *eya* ‘here’ and *oya* ‘there’ can constitute bare adverbials without any complement. In this function, they simply refer to a location and indicate if it is close to or remote from the speaker or the situational context. Here are a couple of examples with *eya* ‘here’:

- (26) ***Eya*** *edo, midin odo kadek-kadek adep kole,*
 here DEM.this kind.of.shrimp DEM difficult~RED like CONJ

‘Here, it is difficult (to catch) the little shrimps, so ...’

[muyu038:043]

(27) *Yene-komb-e* ***eya*** *bumb-e kem-en odo Bingtulun.*

3SG.F.O-fall-SM here break-SM do-3SG.M DEM PN

[Pointing at his right thigh:]

‘(When) we fall and break (a bone) here, (we use) a Bingtulun (plant) (as medicine).’

[muyu045:019]

In (26), the adverb is in the clause initial position and therefore delimited by an additional demonstrative *edo* from the following (non-verbal) clause. This syntactic structure is reproduced in the translation with a cleft and preceding adverb (‘here, it is...’). The adverb *eya* refers to an extended location, since the protagonist of the story refers to a site where they were trying to catch fish. In contrast, the adverb *eya* in (27) refers to a very particular spot on the speaker’s body. The utterance is accompanied by a gesture pointing at the right thigh of the speaker.

Similarly, the adverb *oya* ‘there’ is used adverbially:

(28) *Om=ko* ***oya*** *oyen.*

sago=PTC there there.is

‘It is the sago tree over there.’

[muyu013:007]

(29) *Wen-e* ***oya***=*bet*, “*ko eya al-in eyen*”, *engg-un.*

go-SM there=OBL PTC here stand-1SG here.is say-3SG.F

[Getting ready to catch something that will be thrown from a tree:]

‘She went there and said, “Alright, here is where I stand.” ’

[muyu007:087]

The adverb in (28) is the predicate of a copula clause. Clause-finally, we find a demonstrative copula *oyen* ‘there.is’ (see below). *Oya* in this clause indicates that the sago is not at the location of the speaker but ‘over there’. The example in (29) shows the contrast between *oya* ‘there’ and *eya* ‘here’. The protagonist moves to another location (*oya*) and then indicates that she arrived where she is standing now, i.e. *eya* ‘here’. The adverb *oya* ‘there’ in (29) is marked as oblique.

Secondly, basic locational demonstratives can occur adnominally. In the following examples, the noun phrase determined by the demonstrative is highlighted with brackets:

- (30) *Okune=ko [ata bon eya] telep-i yeman.*
 like.that=PTC party place here gather-INF for
 [People are urged to bring bags to the party:]
 ‘Do it like that to attend this party here.’ [muyu065:016]
- (31) *[Ambulok oya] wen-e ambulok nekwa-e,*
 midrib.of.palm there go-SM midrib.of.palm prepare-SM
 ‘Go to prepare the midrib of a palm leaf there, ...’ [muyu013:010]

Furthermore, postpositional phrases are also found with locationals:

- (32) *Kep epkat=ko [nong yinim eya] yimingg-e.*
 2SG.M clothe=PTC string on here hang-2SG.IMP
 ‘Hang your clothes on this string here!’ [Dictionary]

Thirdly, locational demonstratives also occur with clausal complements, relating to the location of the event denoted by the complement clause:

- (33) *Aton oto [wan-e kupun-i=mo kum-un*
 sun DEM finish-SM descend-INF=always do-3SG.M
eya]=bet=an.
 here=OBL=COP
 [Waking up in the late afternoon:]
 ‘The sun was (in the direction) where it usually sets.’
 [muyu066:044]
- (34) *Olal-i=go, [opkon-e min-ip oya] mo olal-an-ip*
 talk-INF=PTC think-SM come-2/3PL there just talk-IRR-2/3PL
balin.
 NEG
 [Bargaining for dowry is a sensitive business:]
 ‘When they talk, they will not talk straight (but metaphorically).
 (lit. will not talk just where they come to think)’ [muyu018:025]

In (33), the setting of the sun is expressed with a habitual construction. To embed this habitual in the matrix clause, *eya* is used. Similarly, the embedded clause in (34) is accompanied by *oya* in the superordinate clause. The latter example is a more metaphorical use of the location. The place where they ‘come to think’ denotes their secret thoughts that must not be revealed too

frankly.

5.4 Elevationals

Besides the locational demonstratives *eya* ‘here’ and *oya* ‘there’ outlined above, Muyu has locational demonstratives that add elevational information. We simply call them elevationals here. Some of these elevationals also denote remoteness from the reference location. This group contains the following items:

- (35) *eyani* ‘here, down here’
eyadi ‘up here’
wonggo ‘there’
wadi ‘up there’
wani ‘down there’
onggani ‘down there far’
onggadi ‘up there far’

None of these forms are fully analysable, but the proximal forms probably include the locational *eya*, while the distal forms begin with /w/, and the remote distal forms probably fuse *wonggo* ‘there (specific)’ (see Section 5.5) and *wadi/wani* ‘up there/down there’. According to elevation, we find a segmental opposition of /d/ for ‘up’ and /n/ for ‘down’ in all pairs.

Semantically, these forms encode elevational features: *eyani* ‘down here’, *wani* ‘down there’ and *onggani* ‘down there far’ refer to locations lower than a reference point, while *eyadi* ‘up here’, *wadi* ‘up there’ and *onggadi* ‘up there far’ refer to locations higher than a reference point. There is one important characteristic to notice. The distal forms have a separate item *wonggo* that refers to locations that are either at the same level as the reference point (i.e. ‘across there’) or of which the speaker is agnostic relative to their elevation (can be up or down). In contrast, the proximal forms do not have a separate item for this meaning but *eyani* is polysemous, meaning either ‘here’ or ‘down here’. It seems that Muyu encourages the speaker to be more specific about elevations of places that are not at the deictic center. Remote distal does not include locations at the same level at all.

Syntactically, all demonstrative adverbs listed in (35) are compatible with the same positions as *eya* ‘here’ and *oya* ‘there’. Compare the examples in (36) and (37). For reasons of space, we will therefore not further exemplify

all items in all positions.

- (36) a. *Awop odo eya nangga-en.*
 fire DEM here burn-3SG.M
 ‘He made that fire here.’ [Fieldnotes]
- b. *Awop odo eyadi nangga-en.*
 fire DEM up.here burn-3SG.M
 ‘He made that fire up here.’ [elicited]
- c. *Awop odo onggani nangga-en.*
 fire DEM down.there.far burn-3SG.M
 ‘He made that fire far down there.’ [elicited]
- (37) a. *Kip=ko oya alab-i=go man-a.*
 2PL=PTC there wait-INF=PTC come-1SG.IMP
 ‘Wait there, I will come.’ [Fieldnotes]
- b. *Kip=ko wonggo alab-i=go man-a.*
 2PL=PTC there wait-INF=PTC come-1SG.IMP
 ‘Wait there, I will come.’ [elicited]
- c. *Kip=ko wani alab-i=go man-a.*
 2PL=PTC down.there wait-INF=PTC come-1sG.IMP
 ‘Wait down there, I will come.’ [elicited]

The remote distal forms have to be interpreted in context. They can mean that a location is objectively far away from the reference point. However, remote distal can also refer to locations that are not far away in absolute terms but too far away to perform some kind of action, as in the following example:

- (38) *Tabuk=ko amtalang yinim onggadi oyen.*
 tobacco=PTC shelf on up.there.far there.is
 ‘The cigarette is too far up there on the shelf. (I can’t reach it.)’
 [Dictionary]

5.5 Semantically complex locationals

The previous subsections 5.3 and 5.4 have discussed demonstratives that encode uniquely spatial information, be it distance from the reference point

or relative position on a vertical level. Besides that, there are demonstratives encoding non-spatial information. These items are not only more complex but also less frequent in the corpus. Therefore, further research is needed to definitively explain their functions. For the sake of completeness, we will outline them here. However, the reader should keep in mind that this is a tentative approach to their semantics and needs more elaboration in future fieldwork.

The items in question are:

- (39) onggo ‘there (specific)’
wangga ‘there (out of sight)’
eyangga ‘here (out of sight)’
eyonggo ‘hither (from different directions)’

In the following paragraphs, each of these items will be outlined in contrast to a better known demonstrative. Note that this does not mean that we propose binary semantic features in a structuralist fashion. The opposition shall be understood as mere heuristics to gain a better understanding of the items in question.

Wonggo vs. *onggo*: There seems to be an epistemic distinction between these lexical items. *Wonggo* is for unspecific locations, i.e. the location is not known exactly to the speaker or the speaker does not want to specify it.³ In contrast, *onggo* is for specific locations, i.e. the speaker knows the location and intends to refer exactly to it. Compare the following examples:

- (40) Where is the book?
 - a. *Wonggo*. ‘Somewhere around there.’
 - b. *Onggo*. ‘Over there.’ [elicited]
- (41) “*Wonggo* odo wen-e amtobon yen-i
there.UNSPC DEM go-SM hut build.house:SG.O-INF
yanop=an=o”, *engg-on*.
there.is=COP=QUOT say-3SG.M
[The rubber trees are far from the village:]
‘ “We must go there to build a hut”, he said.’ [muyu027:019]

³To illustrate the contrast, we gloss *wonggo* as ‘there.UNSPC’ in this subsection. However, unless the semantic contrast with *onggo* ‘there.SPC’ is understood better, we will default to glossing *wonggo* as ‘there’ in all other parts of this study as well as the corpus.

- (42) *Baat kedo Awin ambip **onggo** won-o-den.*
 brother.in.law out PN village there.SPC go-3SG.M-PFV
 ‘(Your) brother-in-law went to Awin.’ [muyu007:027]

In (41), the exact location is of no importance. The protagonists will go to build a hut somewhere in the vicinity of the rubber trees to facilitate their work there. In contrast, the location in (42) is specified via the name of the village. It is exactly where the addressees brother-in-law went.

Although our consultants explain the difference between *wonggo* and *onggo* in terms of ‘knowing’ the exact location (hence epistemic), there are alternative interpretations for which category is really involved. Maybe specific vs. unspecific is a matter of boundness, in the sense that a specific ‘there’ is bound to a point in space, whereas a unspecific ‘there’ is unbound and rather covers an area than an exact spot. We leave this to future research.

Onggo vs. wangga: There seems to be a visibility distinction between *onggo* and *wangga*, with the latter marking locations that are not visible at the time of utterance. Compare the examples in (43) and (44) below. Although these examples show a binary distinction (visible vs. invisible), we have reason to assume that the opposition is asymmetric. As has been seen from its opposition with *wonggo*, *onggo* denotes a known specific location. Known specific locations tend to be visible in the speech situation. It is likely that the contrast with *wangga* is an effect of implicature, hence visibility not a proper part of the semantics of *onggo*.

- (43) a. *Kaduk=ko **onggo** mon-on.*
 man=PTC there.SPC come-3SG.M
 [I see him:]
 ‘A man is coming over there.’
- b. *Kaduk=ko **wangga** won-on.*
 man=PTC there.INV go-3SG.M
 [My view is blocked by trees:]
 ‘A man is walking over there (but I can’t see him).’
 [both elicited]
- (44) a. *Kaduk=ko ambip=tem **onggo** tio-d-en.*
 man=PTC house=in there.SPC sit-DUR-3SG.M
 [I see him:]

‘A man is sitting in the house over there.’

- b. *Kaduk=ko ambip=tem wangga tio-d-en.*
 man=PTC house=in there.INV sit-DUR-3SG.M
 [My view is blocked by trees:]

‘A man is sitting in the house over there (but I can’t see him).’
 [both elicited]

The examples were constructed in elicitation sessions in such a way that the (a.) and (b.) cases do not differ in distance or any other feature than mere visibility. Invisibility is achieved by adding some trees that block the view. In the invisible cases, *wangga* was used by our consultants, while the visible cases elicited *onggo*, as expected.⁴

Example (45) is from a hunting story. The protagonist of the story is in a tricky situation after fleeing from an attacking pig. The location where he will hide is referred to with *wangga* to indicate that it is invisible to the pig:

- (45) *Ap kobi wangga angg-an-an.*
 tree on there.INV sleep-IRR-1SG
 [Fleeing from an attacking pig:]
 ‘I will sleep there (hidden) on the tree.’ [muyu004:056]

Finally, I overheard the following example, when asking about the whereabouts of one of my consultants:

- (46) *PNG wangga win-ip.*
 PNG there.INV go-2/3PL
 [Where is Mr. Pati?]
 ‘They went to PNG.’ [overheard]

It turned out that the consultant and his family emigrated and moved to Papua New Guinea (PNG). In (46), the demonstrative used is *wangga* which highlights that they went “out of sight”, not only in a literal sense but also figuratively since the whole village lost contact with them.

⁴Note also the different verbs in (43). The original *monon* ‘he came’ was replaced with *wonon* ‘he went’. Our consultant commented on this variation: “If we don’t see him, how can we know that he is coming to our place?” Therefore, the ‘come’ verb seemed less applicable in the elicited context.

eya ‘here’ vs. *eyangga* ‘here (out of sight)’: Proximal demonstratives, represented by *eya* ‘here’, usually implicate that the referred location or referent is visible from the deictic center’s point of view. In contrast, invisibility can be expressed with *eyangga* ‘here (out of sight)’. As this concept of invisibility is less clear than distal invisibility, we tried to elicit situations to use this demonstrative. Note, however, that there are some doubts whether this demonstrative really encodes visibility in a strict sense or rather has to do with directions and spatial configurations (see below).

The following situation exemplifies a typical situation for the use of *eyangga*. The speaker is sitting in his house with the door at his back. When someone knocks at the door, he can say:

- (47) *Kaduk eyangga mon-on*
 person here.INV come-3SG.M
 ‘Someone is coming hither. (I can’t see him)’ [elicited]

The demonstrative *eyangga* in (47) denotes that the person is approaching the deictic centre. However, the annotation ‘INV’ might not be fully adequate since it is unclear if the demonstrative is triggered by the sheer invisibility of the visitor or the fact that the speaker is facing the other direction. In explaining the meaning of this demonstrative, our consultant on several occasions insisted that the relevant entity is “in the back or at the side” and therefore not seen. However, we were unable to elicit more evidence for this. When we alter the situation outlined above in such a way that the speaker is facing the front door, *eyangga* is constantly replaced with *wonggo* ‘there’, independent of the door being open (hence visible) or closed (hence invisible). *Eya* ‘here’ is rejected for this situation.

There are some examples of *eyangga* in the corpus. The following two examples are from a conversation. The speaker made a trip the other day:

- (48) a. *Tanipya weno-n-up=ket, eyangga odo*
 day.before.yesterday go-SS-1PL=and.then.SS here.INV DEM
Nongyap=an.
 PN=COP
 ‘We went there the day before yesterday, here, this is (land of)
 Nongyap.’

- b. ***Eyangga*** *odo* *Mana Budumtan=an.*
 here.INV DEM PN PN=COP

‘Here is (the land of) Mana Budumtan (=name of a clan).’

[muyu010:091]

My consultant for transcribing this recording explained the use of *eyangga* here as follows: The speaker was also the protagonist in the story, i.e. the one who made the trip. He went on the road by motorbike. In (48), the speaker imagines that he is at the place again, therefore, the deictic center shifts to the imagined location. The speaker himself is facing in the direction of the road. From this point of view, the location referred to (*Nonggyap*) is at the left or right side. It is also not visible since the road is surrounded by dense forest. Later on that road, he passed *Mana Budumtan* which is also at the side of the road and not visible. As we have seen with the example above, it is also not possible in (48) to discern invisibility as a consequence of blocking trees from the direction the speaker is facing. All attempts to elicit a difference here only led to confusion on the side of our consultant.

To sum up, *eyangga* ‘here (out of sight)’ refers to locations that are close to the speaker but cannot be seen by him. It is unclear, however, if the demonstrative encodes mere invisibility or a specific spatial configuration including the direction in which the deictic center is facing.

eyangga ‘here (out of sight)’ vs. *eyonggo* ‘hither (from different directions)’:

The meaning we can give here for *eyonggo* is even more tentative than for the elements listed so far. First, we need to highlight the formal resemblance with *eyangga* ‘here (out of sight)’. However, according to our consultant, *eyonggo* does not contrast with *eyangga* in visibility but denotes that the deictic center is approached from different directions:

- (49) *Kaduk=ko eyonggo min-ip.*
 person=PTC hither come-2/3PL

‘People are coming hither. (From different directions.)’

[Fieldnotes]

Due to a lack of data, we can not give a satisfying account of *eyonggo* yet.

5.6 Comitatives: éyom, oyom

Another pair of demonstratives is *éyom* ‘COM.DEM.this’ and *oyom* ‘COM.DEM’. Both are composed of a bound deictic morpheme and the postposition *yom* ‘and, with’, and they roughly translate to English ‘together with this/that’. Note that *éyom* must not be confused with *eyóm* ‘in here’ (see Section 5.7), two near-homophonous lexemes which are only distinguished by placement of lexical stress (marked with accent over the vowel here). No such lexical contrast occurs for *oyom* which only exists as ‘together with that’, regardless whether stress is placed on the first or second syllable.⁵

- (50) *Ye=go tana oyom win-ip.*
 3SG.M=PTC child COM.DEM go-2/3PL
 ‘He went together with that child.’ [Fieldnotes]

- (51) *Kep=ko kaduk éyom win-ime.*
 2SG.M=PTC man COM.DEM.this go-2PL.IMP
 ‘Go together with this man!’ [Fieldnotes]

In both (50) and (51), the comitative demonstratives occur adnominally, such that it is the complement NP that is determined by the demonstrative. It is unknown yet if these forms can also occur pronominally.

5.7 Inessive: eyóm

The demonstrative *eyóm* ‘in here’ is unique since there seems to be no counterpart **oyóm*. As discussed in Section 5.6, *eyóm* must not be confused with the demonstrative comitative form *éyom*. Furthermore, the origin of this

⁵In an elicitation session, I tried to vary accent by producing European-style lexical accent on these items, i.e.: *éyom* vs. *eyóm*. Although the phonetics of lexical stress in Muyu is not fully clear yet, the consultant could clearly differentiate these items in meaning. When asked to reproduce the Muyu items from my English translations on a different occasion, the same stress patterns were reproduced. In contrast, this test failed with *oyom*, i.e. both *óyom* and *oyóm* result in ‘together with that’. The logically missing lexical item ‘in there’ could not be translated. The consultant asserted that **oyóm* ‘in there’ does not exist. Note, however, that these judgements stem from one single consultant and are based on lexical stress which is generally not well understood yet. Corpus examples of these items are particularly rare.

item is obscure, since there is no lexeme *yom* with a related meaning.⁶ *Eyóm* ‘in here’ can be used pronominally as in (52) and (53) or adnominally as in (54) and (55) below.

Semantically, *eyóm* conveys that an entity is located inside a container or location of some kind. Such containers can be of various sizes, like houses, a hole in the ground, a box - but also locations such as villages and larger areas.

- (52) *Tana, eyóm edo=e?*
 child in.here DEM.this=Q
 [Approaching the house:]
 ‘Children, are you in here?’ [muyu032:080]
- (53) *Eyóm edo tinggan yanop=an engg-e yem*
 in.here DEM.this mouse there.is=COP say-SM quiet
opko-gol-i,
 think-SS.SEQ-1SG
 [Recognising a hole in the ground:]
 ‘There must be a rat in here, I thought like that and then I ...’
 [muyu040:030]

The examples above show *eyóm* in its pronominal use. In (52), the inessive refers to the inside of a house, while in (53), this location is a hole in the ground. The following examples show the adnominal use of *eyóm*:

- (54) *ta kampung eyóm al-up=ko kodolok yanop=an.*
 and village in.here live-1PL=PTC head there.is=COP
 ‘and in the village we are living in, there is a leader.’
 [muyu012:067]
- (55) *Nup kampung eyóm edo nup guru edo*
 1PL village in.here DEM.this 1PL teacher(BI) DEM.this
nowan.
 NEG

⁶The conjunction/comitative marker *yom* is found in *éyom* ‘DEM.COM.this’ but does not fit for *eyóm* ‘in here’. Appropriate meanings are conveyed by *wom* ‘inside’ and *tem* ‘in, inside’. While the latter is formally too distinct, there is certainly a similarity between *wom* and *eyóm*, which could point to a diachronic relation. More evidence for this lexical source comes from Drabbe (1954:203). In Metomka, he finds *ewum* and *owum* for ‘in’.

‘There were no more teachers in our village here.’ [muyu041:006]

5.8 Limitationals: eyamin, oyamin

The demonstratives *eyamin* ‘until here’ and *oyamin* ‘until there’ are not easily analysable but most likely contain the demonstrative adverbs *eya* ‘here’ and *oya* ‘there’ and some other element(s).⁷ Semantically, these demonstratives denote that a certain location is conceived as a boundary or limit of some event or entity.

Here are two examples:

(56) *Ne ambikin=ko eyamin mo=on.*
 1SG land=PTC until.here only=COP
 ‘My land is only until here (yours is next to it).’ [elicited]

(57) *Kedek=ko wangg-e oyamin mo kel-e.*
 grass=PTC cut.down-SM until.there only become-2SG.IMP
 ‘Cut the grass only until there!’ [elicited]

In the examples above, the boundary implicated by *eyamin/oyamin* is a physical boundary of some stretch of land. However, it can also be more abstract as in the following example:

(58) *Enamba=bet kimmingga-n-ip=ko men-e eyamin.*
 parents=OBL count-SS-2/3PL=PTC come-SM until.here
 [His parents could only count to 10:]
 ‘When parents counted, it was only up to here.’ [muyu044:168]

⁷A conceivable diachronic source for the lexicalisation of *eyamin/oyamin* would be *eya/oya* ‘here/here’ + *mo* ‘only’ + *on* ‘COP’, i.e. it could have been a non-verbal clause: ‘it is here/there only’. However, in this scenario the vowel /i/ in the present forms needs explanation. In any case, the present forms are clearly lexicalised and do not constitute a clause on their own. This can also be seen by the fact that a clause like above can still be expressed: *eyamin mo on* ‘It is only until here.’

5.9 Contrastive/causal demonstratives: *eyot*, *oyot*

The demonstratives *eyot* and *oyot* are formally unanalysable, as there is no corresponding element **(y)ot*. Their functions are either contrastive or causal, depending on their syntactic position:

- (NP *eyot/oyot*) = contrastive, glossed as ‘CONTR.DEM(.this)’. The referent of the marked NP is contrasted with a referent in a preceding or succeeding clause. The other referent can also be left implicit. In this function, the translations often do not have a corresponding English demonstrative, but rather elements like ‘yet’, ‘whereas’, etc.
- (CL1 (*eyot/oyot*) CL2) = causal, glossed as ‘CAUS.DEM(.this)’. The proposition of CL1 denotes the cause for the proposition of CL2. Either of the two clauses can be left implicit. In this function, the demonstratives translate roughly to Engl. ‘this/that is why’. In the corpus, only *oyot* is attested for this function. It is unclear yet, if *eyot* can be used here as well.

Semantically, the co-existence of such diverse meanings as contrastive and causal seems somewhat unusual. We will present some hypotheses about their diachronic relation at the end of this section.

The following examples illustrate the contrastive function of *eyot/oyot*:

- (59) Comparing prices in Java and Papua:
- Yi odo menggani mo=on.*
3PL DEM down only=COP
‘They are cheap. (lit. they are low)’
 - Nop-nop, nup eyot nop-nop=an.*
high~RED 1PL CONTR.DEM.this high~RED=COP
‘Yet we are expensive. (lit. we are high)’ [muyu030:179]
- (60) *Kacang oyot ambangg-i kol-up-ten, ma yongbon*
peanut(BI) CONTR.DEM work-INF stop-1PL-PFV but garden
odo ambangga-d-up.
DEM work-DUR-1PL

‘Although we stopped growing those peanuts, we are still cultivating the garden.’ [elicited]

In (59), two copula clauses create a parallelism with contrasting pronouns and predicates. The demonstrative *eyot* occurs at the non-verbal clause subject of the second clause (*nup*) and establishes an anaphoric contrast with *yi* in the preceding clause. In contrast, the demonstrative *oyot* in (60) marks the object (*kacang*) of the first clause and contrasts cataphorically with the object (*yongbon*) of the second clause. This order of marking is reflected in the translation by adding the conjunction ‘although’ to the first clause. Note, however, that the original has a clause conjunction *ma* at the second clause.

Next, the following examples show the causal clause conjoining function of (*eyot*)/*oyot*:

- (61) *kibik ogan kel-o-den oyot (...) Nowan=an,*
 now foreign become-3SG.M-PFV CAUS.DEM ... NEG=COP
wen-e momb-e kan-e man-an-ip.
 go-SM shoot-SM take:SG.O-SM come-IRR-2/3PL
 [Hunting bats used to be a difficult business, but ...]
 ‘It is the modern era now, that’s why it is easy, they can just go, shoot and bring it.’ [muyu032:121]

- (62) *hanya nup katuk=bet b-anwanggambo-t-up*
 only(BI) 1PL person=OBL take:PL.O-destroy-DUR-1PL
oyot kutok tek-m-o ka-y-o-ten.
 DEM.CAUS good talk-SM give-PL.RCV-3SG.M-PFV
 [When the first missionary arrived:]

‘Our people were only destructive, that’s why he taught us well.’ [muyu056:037]

In (61), we see two clauses conjoined causally by *oyot*. The first clause is verbal, the second is a non-verbal copula clause. The clauses in (62) are both verbal clauses and have a clear causal relationship. Both examples show causal relations that are in some way contrastive with the circumstances or previous conditions. First, hunting bats was difficult, nowadays it is not. First, indigenous people were destructive, then they were taught by the missionaries. However, this is not a strict rule and in general, the causal

semantics prevails. Therefore, we prefer to gloss clause conjoining (*eyot*)/*oyot* as ‘CAUS.DEM(.this)’ whereas the NP marker seems to have lost its causal semantics and highlights the contrast more directly.

At first glance, the two functions of *eyot/oyot*, i.e. contrastive and causal, seem to be not only unrelated to each other but even contradictory. However, we would like to offer a tentative explanation for the co-grammaticalisation of two such diverse functions. Imagine the following situation: Someone has to choose between a glass of water and a cup of coffee which are both placed right in front of him. Eventually, he decides for the coffee. His interlocutor can describe the situation with one of the following two sentences:

(63) *Ok eyot kolepten.* - ‘You refused this water.’

(64) *Ok tap eyot kolepten.* - ‘You refused this bad water.’ or ‘The water is bad, this is why you refused it.’

Synchronically, the structure of the sentences above can be distinguished as follows. In (63), *eyot* is a contrastive demonstrative, marking the NP *ok* ‘water’. The contrasting referent, i.e. the coffee, is not expressed overtly but left implicit, since it is given in the speech situation. The sentence in (64), however, is ambiguous. The first reading is ‘You refused this bad water’ and has the exact same structure as (63) but with an additional adjective in the NP. In contrast, the second reading recognises a clause boundary within the sentence. Here, *ok tap* is interpreted as a non-verbal clause ‘the water is bad’. Consequently, *eyot* acts as a clause conjunction rather than an NP marker, resulting in: ‘[The water is bad]_{CL1} [this is why you refused it]_{CL2}.’

Diachronically, we hypothesise that the contrastive marker as in (63) was grammaticalised from the causal conjunction as in the second reading of (64). If speakers regularly express negative causal relations with a conjunction and drop explicit markers for clause boundaries (e.g. a copula clitic), then the whole structure will eventually be interpreted as monoclausal and the clause conjunction reinterpreted as marking the NP. One objection to this hypothesis could be that negative causal relations are far less frequent than positive ones. According to this view, it is difficult to explain why the contrastive meaning from negative causal relations has grammaticalised, rather than some other meaning from positive causal relations. However, positive causal relations in the synchronic state of the language virtually never employ *eyot/oyot* as conjunctions but rather rely on the conjunction *kole*, which is clearly a clause conjunction and has not (yet) grammaticalised to mark

NPs. Therefore, the grammaticalisation of *eyot/oyot* as NP markers uses the meaning from the most frequent structure, which is the negative causal relation. Note, that this explanation for the diverse functions of *eyot/oyot* is a hypothesis and needs further investigation.

5.10 Copulas: eyen and oyen

The demonstrative copula consists of a bound demonstrative morpheme *e-* or *o-* and the copula particle *=an*, whose vowel rises to */e/*, and an epenthetic intervocalic glide */j/*.

Like simple copulas, demonstrative copulas are used to form non-verbal clauses. They differ, however, in that the non-verbal clause subject⁸ is integrated into the copula via the bound demonstrative morphemes *e-* and *o-*. Such copulas are used for all functions that are also found with the non-demonstrative copula *=an* (see Section 9.4). Two short examples are provided in (65) and (66). Additionally, demonstrative copulas can also form cleft-sentences, as in (67). For details on clefts see Section 12.8.

- (65) *Onggo oyen.*
 there.SPC that.is
 ‘There he/she/it is.’ [Fieldnotes]
- (66) *“kayabak modenen ye otbop=ko oyen”, engga-ip.*
 big.man ancestor 3SG.M language=PTC that.is say-2/3PL
 ‘ “It was a story of the ancestors”, they said.’ [muyu007:149]
- (67) *Eyuk, kibik olal-up oyen.*
 yes now talk-1PL that.is
 ‘Yes, that’s what we were just talking about.’ [muyu010:010]

As can be seen from the examples above, demonstrative copulas have to be in clause-final position. Example (65) is a common answer to the question ‘Where is he/she/it?’ Copula clauses can be embedded in complex sentences as in the quotative construction in (66). Finally, clauses can be embedded under the copula as in the cleft sentence in (67).

The examples shown so far have a binary structure with *eyen/oyen* on the one side and a complement, be it clause or noun phrase, on the other.

⁸The term ‘non-verbal clause subject’ is explained in Section 9.4.

However, non-verbal clauses with demonstrative copula are also compatible with the identificational pronouns *edo/odo* (see Section 5.2 above). Here are some examples:

- (68) ***Odo*** *b-e* *mun-up* ***oyen.***
 DEM take:PL.O-SM come-1PL that.is
 [Unloading fish from a canoe:]
 ‘That is what we brought.’ [muyu038:146]
- (69) ***edo*** *kalapa engga-ip* ***eyen***
 DEM.this coconut say-2/3PL this.is
 ‘this is what they call coconut tree’ [muyu031:050]
- (70) ***Odo*** *Tanah Merah ti-en* ***oyen.***
 DEM PN PN live-3SG.M that.is
 ‘That’s (the one) who lived in Tanah Merah.’ [muyu010:218]

Note that the identificational pronouns and the copula in examples like (68)-(70) need to match. *Edo* co-occurs with *eyen* while *odo* stands with *oyen*.

5.11 Obliques: *embet*, *ombet*

The oblique demonstratives *embet* and *ombet* occur in non-core argument positions. They are composed of the bound demonstrative morphemes *e-/o-* and the oblique marker *=bet*.⁹ They have the same functions as ordinary oblique NPs, which are discussed in detail in Section 9.3.4.

These forms can occur pronominally, as shown in the following examples:

- (71) ***Ombet*** *olal-an-un=got* *wedambel-e kem-in.*
 OBL.DEM tell-IRR-3SG.F=and.then.DS listen-SM do-1SG
 ‘I usually listen when she tells one of that (stories).’ [muyu031:107]
- (72) *kodolok odo* ***embet*** *womb-a-den.*
 head DEM OBL.DEM.this cut:SG.OBJ-1SG-PFV
 [Pointing at his own neck:]

⁹Orthographically, our consultants prefer to write the <m> that occurs as prenasalisation in this phonological context. Hence, it is also included in the orthography of this study and the corpus.

‘I cut the head from here.’ [muyu004:077]

The oblique in (71) has a partitive function, whereas in (72), it points deictically to a location demonstrated on the speaker’s own body.

Furthermore, oblique demonstratives occur adnominally with full NPs, as shown in the following examples:

(73) *Ihh, [am embet] yokmom yanop=an.*
 INTJ rain OBL.DEM.this afraid there.is=COP
 ‘Oh, this rain is scary.’ [muyu029:156]

(74) *Tanipya=bet weno-n-i=t, wen-e [Yom*
 day.before.yesterday=OBL go-SS-1SG=and.then.SS go-SM PN
kubun ombet].
 shelter OBL.DEM
 ‘I went there the day before yesterday, to the shelter underneath the yom tree.’ [muyu010:068]

The oblique demonstrative in (73) marks the *am* ‘rain’ as a non-canonical agent, whereas in (74), we find *Yom kubun* marked for location (for details on both functions of the oblique see Section 9.3.4).

5.12 Possessives: eye, oye

The possessive demonstratives *eye* and *oye* consist of the deictic bound morphemes *e-/o-* and the third person singular pronoun *ye*, which also occurs as a general linker in possessive constructions (see Section 6.3.1). They function as possessors in NPs: *eye* ‘of this’ and *oye* ‘of that’. These forms display two syntactic peculiarities: (1.) They are the only demonstratives that precede the noun; this is due to the syntax of possessive constructions, in which possessors always precede the possessed. (2.) They are strictly pronominal and cannot occur adnominally, i.e. their is no possessor noun next to it. It should be noticed that these forms are quite rare in natural speech.

(75) *Kibiyon kok-a-den, [oye yewulu] yeman*
 yesterday fall:SG.SBJ-1SG-PFV POSS.DEM pain for
anggo-d-in.
 lie-DUR-1SG

‘Yesterday I fell down, I am still lying down from the pain of it.’
[elicited]

- (76) *Ne taman Yakop edo, (2sec) [oye*
1SG younger.brother PN DEM.this (2sec) POSS.DEM.this
emba]=bet olal-i=mo kem-en.
father=OBL tell-INF=always do-3SG.M

‘My brother Yakob, (2sec) that one’s father used to tell this (story).’
[muyu032:130]

The examples above show that possessive demonstratives are mostly used anaphorically. In (75), *oye* refers to the whole preceding proposition (‘yesterday I fell down’). The ‘pain of it’ is expressed here as a possessive construction with the head noun *yewulu* ‘fever, pain’. In contrast, *oye* in (76) refers to a previously mentioned referent. During this utterance, the speaker changes his mind from speaking about his brother Yakop (*ne taman Yakop edo*) to speaking about Yakop’s father (*oye emba*). Evidence for this comes from two sources: First, the initial noun phrase and *oye* are separated by a pause of around two seconds. Second, the initial noun phrase is delimited with the demonstrative *edo*. Had the speaker conceptualised *ne taman Yakop* as a possessor in the first place, then this would be ungrammatical since *edo* cannot stand inside possessive constructions. To sum up, *oye* is used to refer anaphorically to a previously mentioned referent or proposition.

Possessive demonstratives also occur in the idiomatic forms *eye kaduk* ‘about this’ and *oye kaduk* ‘about that’. The head noun *kaduk* ‘man, person’ has to be interpreted here more broadly, meaning something like ‘topic’. Hence, these idiomatic forms probably mean something like ‘its topic’. Here is an example:

- (77) *jadi kibikti=bet, (...) oye kaduk odo*
so(BI) currently=OBL (...) POSS.DEM person DEM
kolongg-ime=ye engga-ip
leave-2PL.IMP=QUOT say-2/3PL
[Health advice from the government stated that cigarettes should
not be passed on while smoking:]
‘so currently they forbade that practice (lit. about that they said
“leave it”)’ [muyu019:047]

Adding a demonstrative copula, speakers express emphatic agreement:

- (78) *Oye kaduk oyen.*
 POSS.DEM person DEM.COP
 ‘Yeah, that’s it!’ [muyu010:085]

5.13 Verbs: okuni, ekuni, ekemi, okemi

Demonstrative verbs are verbs with deictic or anaphoric function. Their semantics does not include any event description of its own. The common forms in Muyu are *ekuni* ‘do like this’ and *okuni* ‘do like that’. Occasionally, one also finds the variants *ekemi* ‘do this’ and *okemi* ‘do that’. All of these forms inflect like ordinary verbs and are compatible with most aspect and mood categories described in Chapter 7.

Demonstrative verbs are highly frequent in our corpus, since they have various functions:

1. To ‘point’ deictically at extra-linguistic events (i.e. exophoric use). For example, while demonstrating an action in procedural texts (e.g. splitting a coconut - ‘you do like this’).
2. In demonstrative constructions (a type of multi-verb construction), to relate an event to another (previously mentioned) event (see Section 11.3.6).
3. As bridging constructions to connect previous discourse to the current clause.
4. As a discourse marker to highlight the end of a discourse topic, e.g. *okune adep* ‘That’s it.’.
5. As a cataphoric reference to draw attention to what comes next (see below).

Demonstrative verbs often refer to actions with some kind of agent. However, they can also refer to overall situations or incidents without clear agents. In (79), two interlocutors (a.) and (b.) lament the prospective death of the language. In (b.), the second interlocutor agrees with the prediction from (a.) and uses the demonstrative verb *okuni* to refer to the predicted situation

in general. Similarly, the demonstrative *ekuni* in (80) refers to a longer plan explicated in the immediately preceding discourse. In contrast to (79), (80) indeed refers anaphorically to an action with a clearly identifiable agent, i.e. the speaker and the addressees.

- (79) a. *Wen-e amaen tana wadi ta kolo wen-e it=ma*
 go-SM another.time child up and back go-SM foreign=other
ye kaduk adep kel-an-on.
 3SG.M person like become-IRR-3SG.M
 ‘The next generation will become like children of another people.’ [muyu010:140]
- b. *Kolem okun-an-on.*
 MOD like.that-IRR-3SG.M
 ‘It will happen exactly like that.’ [muyu010:140]
- (80) *Kip=ko ekun-an-up nea ko?*
 2PL=PTC like.this-IRR-1PL Q Q
 [After explaining his plans of recording a video of dances to some local women:]
 ‘Do you agree that we do this?’ [muyu012:055]

Demonstrative verbs sometimes have cataphoric reference to the subsequent discourse. The speaker tries to draw attention to what s/he will be saying next. For example in (81), the speaker introduces the recording, which contains the description of a video stimulus. The discourse referred to by the demonstrative verb is the whole subsequent description.

- (81) *Kuduyap ege wal-ip=ko tem-an odo*
 shadow DEM.here turn.on-2/3PL=PTC see-1SG DEM
okun-en.
 like.that-3SG.M
 ‘They turned on this video and what I saw was like that: ...’ [muyu008:032]

Furthermore, we need to mention the formulaic utterance *okunedep* ‘it is like this’. This form is lexicalised from the demonstrative verb *okuni* ‘like that’ and the postposition *adep* ‘like’. In the corpus, it is often used to indicate the end of the story, i.e. to signal the principal investigator to stop

the recording. In conversations, *okunedep* is regularly used when a topic is discussed sufficiently, e.g. to request a change of topic or initiate the end of a conversation.

For more information on these verbs, the reader is referred to the discussion of the respective functions indicated above.

5.14 Some remarks on the asymmetry of e- and o-

Throughout this chapter, we have advocated an asymmetrical view on Muyu demonstratives. This means that in contrasting lexical pairs (e.g. *edo* - *odo*), the items are not treated as semantically equivalent based on opposing features. Rather, one item is more general, while the other is semantically more specific. As mentioned in the introduction of this chapter, such an asymmetrical account was recently suggested by Enfield (2003) for demonstratives in Lao. Muyu demonstratives allow for a similar analysis, with the forms based on the bound morpheme *o-* (henceforth: o-forms) as semantically neutral and forms based on the bound morpheme *e-* (henceforth: e-forms) as semantically marked. The e-forms add further spatial information, indicating that the referent is at a location close to the speaker or a situationally specified reference point. In many contexts, this contrast leads to an opposition in proximity, with e-forms being proximal and o-forms distal. However, our analysis suggests that the proximity distinction stems from the paradigmatic distinction of the lexical items rather than the sheer semantics of the lexemes involved, since the o-forms lack a semantic feature DISTAL. In the remainder of this section, we offer evidence for this analysis.

The first piece of evidence is frequency. Absolute numbers of token frequencies for the three most important demonstrative pairs are given in Table 5.4. Generally, the o-forms outnumber the e-forms by far. A large discrepancy is in the Set I basic demonstratives, since *odo* occurs 803 times but *edo* only 120 times in our corpus. A similar gap is found with locationals (*oya* = 130x; *eya* = 38x), whereas Set II basic demonstratives are slightly more balanced but, nonetheless, the o-form occurs almost twice as often as the e-form (*ogo* = 226x; *ege* = 139x). Finally, demonstrative verbs are highly skewed towards the o-form (*okuni* = 598x; *ekuni* = 50x). To sum up, o-forms have a much higher token frequency than e-forms. If we interpret the o-forms to be

the semantically more general items, this frequency pattern is exactly what we would expect.

	e-	o-
Set I	edo: 120	odo: 803
Set II	ege: 139	ogo: 226
locationals	eya: 38	oya: 130
verbs	ekuni: 50	okuni: 598

Table 5.4: Token frequency of several demonstratives. Comparing e-forms and o-forms.

Secondly, besides token frequency, we need to take a look at type frequency. Not all kinds of demonstratives come in the kind of lexical pairing seen in basic demonstratives (*edo-odo*, *ege-ogo*) or the locationals (*eya-oya*). Elevationals and the semantically complex items presented in Section 5.5 seem to have less e-forms than neutral forms. Interestingly, the neutral forms of these kinds are not easily interpreted as o-forms but differ from the pattern found in other groups of demonstratives. For example, the e-forms *eyani* ‘here, down here’ and *eyadi* ‘up here’ pair with *wani* ‘down there’ and *wadi* ‘up there’ instead of **oyadi* and **oyani* which we would expect.¹⁰ Two further differentiations must be considered: (1.) the e-forms lack an elevationally neutral item that denotes the same level as the reference points, whereas this meaning is conveyed by the neutral form *wonggo*, (2.) the neutral forms distinguish the category of specificity (*wonggo* ‘there (unspecific)’ vs. *onggo* ‘there (specific)’). A similar distinction is not found for the e-forms. To sum up, the neutral forms have more distinguishable types and less regularity in their formal patterns. This is exactly what we would expect, if we interpret these forms to be more general and e-forms to be specialised cases with further information.

A similar case is found with the inessive. While the e-form *eyóm* seems to be quite regular, its neutral counterpart *wom* is not a regular o-form (since **oyom* is expected) and it is not even a demonstrative. *Wom* ‘inside’

¹⁰The neutral forms *wani* and *wadi* actually do allow for an interpretation as o-forms. In this case, the syllable-initial segment /w/ would be analysed as deriving from /o/ which is realised as a consonant in syllable-initial position. However, this pattern does not arise in the forms *oya* and *oyen*, where such a syllabification would also make sense (i.e. to **wa* and **wan*). Therefore, we do not analyse the onset /w/ in forms like *wadi* and *wani* as /o/.

is analysed as an adverb in this study, since it lacks deictic reference (see Section 4.2.1 for details). The addition of deixis via the bound morpheme *e-* is evidence that the non-deictic form *wom* is more general.

Thirdly, e-forms and o-forms differ in their degree of compatibility with other deictic elements. When a clause begins with an adjunct phrase, this phrase is usually delimited from the rest of the clause with either the particle *=ko* or a basic demonstrative. Here are two examples:

- (82) *Eya edo, midin odo kadek-kadek adep kole,*
 here DEM.this kind.of.shrimp DEM hard~RED like so
 ‘Here, it is somewhat difficult (catching) the little shrimps, so ...’
 [muyu038:043]

- (83) *wot kibik odo tit aip kan-an-up balin.*
 month now DEM product there.is take:SG.O-IRR-1PL NEG
 [Caterpillars ruined the harvest:]
 ‘this month, we will not get any results.’ [muyu029:100]

In (82), the adjunct phrase at the beginning of the clause combines two demonstratives: *eya* ‘here’ as the head of the phrase and the basic demonstrative *edo* as its determiner. In contrast, the adjunct phrase in (83) does not include a genuine demonstrative but, nonetheless, the adverb *kibik* has deictic reference as well. The whole phrase is determined by the basic demonstrative *odo*. Now, if we look at combinations of such elements in clause-initial adjunct phrases, we find that e-forms cannot determine elements with a distal interpretation, whereas *odo* is compatible with any element:

- (84) *eyani edo, eyani odo, eyani=go* ‘down here’
*wonggo *edo, wonggo odo, wonggo=go* ‘over there’ [elicited]

As we see from (84), mismatches between head and determiner differ in their acceptability. The e-form head *eyani* ‘down here’ is compatible with the o-form determiner *odo*, whereas the o-form head *wonggo* ‘down there’ is incompatible with the e-form determiner *edo*. However, all heads are compatible with *odo*. This means that *odo* is more general than *edo*, since its compatibility with other demonstratives is not restricted.

The same restriction is at work with demonstrative copulas:

- (85) *Wonggo oyen.* ‘There it is.’

Eyani eyen. 'Here it is.'

But:

*Wonggo *eyen.*

*Eyani *oyen.* [elicited]

Just as *odo* is more general than *edo*, the copula *oyen* is more general than *eyen*. We conclude that the semantic contribution must lie in the bound morphemes *-e*

Fourthly, another piece of evidence comes from the dictionary and the offered Indonesian translations.¹¹ Indonesian offers two determiners *ini* 'this' and *itu* 'that'. In the Muyu dictionary, we find the Indonesian translation *ini* for the entry *edo*, whereas *odo* contains both *ini* and *itu*. This suggests that *odo* has a wider range than *edo*, fitting cases in which both *ini* and *itu* would be used in Indonesian. In other words, *odo* is more general than *edo*. Of course, such evidence from translational equivalents must be taken very cautiously. Nonetheless, it fits with the other evidence given in this section.

Finally, the formulaic utterance *okunedep* 'it is like that' is almost exclusively used with the o-form as is a simple *okune* 'like that'. These forms are used to initiate the end of a conversation or a recording or to request a change of discourse topic during a conversation. Sometimes, these forms also seem to act as mere fillers.¹² Although the e-forms *ekunedep* and *ekune* are attested in the corpus, they are much less frequent. Furthermore, while learning the language during fieldwork, the principal investigator did not witness any case where his interlocutor would use an e-form. The o-forms *okunedep* and *okune*, in contrast, were ubiquitous and regular part of any conversation. Therefore, we judge them as being more general.

To sum up, we showed evidence for the asymmetric analysis of Muyu demonstratives that come from five sources: token frequency, type frequency, compatibility between deictic elements, dictionary translations and formulaic utterances. All these areas point towards the fact that o-forms are more general and semantically more neutral, whereas e-forms are derived and add information about the location of the referent, which is seen as close to the speaker or another situationally specified reference point. This means that

¹¹The initial version of the dictionary was Muyu-Indonesian. English translations were added in the course of the principle investigators fieldwork.

¹²Keep in mind, though, that demonstrative verbs have more variagated functions. This section focuses on the discourse pragmatic function only.

e-forms encode information about location (i.e. 'here') rather than distance.

Chapter 6

The noun phrase

6.1 Introduction

Noun phrases fulfil various functions in Muyu, but they most notably are the arguments of the clause predicate. Noun phrase syntax is rigid and all noun phrases must conform to the structural template outlined in Figure 6.1. This template describes a maximal form which is rarely encountered in natural data.

The core of the noun phrase is its **head** which is filled with a nominal element - including nouns, pronouns and also infinitive verbs. The distribution of all other slots is skewed to the right. While there are three slots following the head slot, there is only one slot preceding it. Hence the template allows for a maximum phrase with five elements. However, a noun phrase may be embedded in the pre-head slot of another noun phrase, enabling more complex nested structures.

A noun phrase minimally consists of one element. This single element does not have to be necessarily in the head slot. If the head is empty, adjectives, numerals or determiners can constitute noun phrases on their own. This is allowed only if the head is recoverable from context. Noun phrases may be omitted altogether in which case argument indexing on the verb may be the only information about the argument of a given clause.

Considering the positions of the elements, we can state the following generalisations: (1.) possession is marked to the left of the head, (2.) modification is marked to the right of the head. Under modification we subsume here attributive adjectives as well as quantification. There is one remarkable

exception to this rule: relative clauses are compatible with both the pre-head slot and the modifier slot. Hence we can distinguish prenominal and postnominal relative clauses. Both types of relative clauses not only differ in their position but also in the choice of the relativisation marker.

This chapter is organised along the lines of the NP template in Figure 6.1. We will start with the head slot (§6.2) as the core of the template and then discuss each non-head slot in turn: the pre-head slot (§6.3), the modifier slot (§6.4), the quantifier slot (§6.5), and finally the determiner slot (§6.6). Then we will point out some limitations in the incorporation of adverbials and obliques into the NP (§6.7). After this, the chapter will end with an outline of noun phrase coordination (§6.8).

pre-head slot	head slot	modifier slot	quantifier slot	determiner slot
nominal possessor pronominal possessor prenominal RC	noun pronoun infinitive verb \emptyset	adjective postnominal RC	numeral quantifier <i>ma</i> 'other, another'	demonstrative <i>mo</i> 'only'

Figure 6.1: The structure of the noun phrase.

6.2 The head slot

The head slot is the syntactic and semantic core of the noun phrase. It is filled by a noun, a pronoun or an infinitive verb.¹ The typical case, i.e. the head noun, gives the name to the whole structure. The minimal noun phrase consists of a bare noun:

- (1) [Awop] nowan.
fire NEG
'There is no light.' [Fieldnotes]
- (2) [Anggotmi] teleb-ip=e.
friend gather-2/3PL=DS.SEQ
[On a journey. After the car got stuck in the mud:]
'(Some) friends gathered and then ...' [muyu036:024]

Bare nouns may imply that the noun is non-referential as in (1) where *awop* does not refer to a specific entity. However, this is not necessarily the case. Due to the lack of a marker for specificity or definiteness, bare nouns can refer to specific entities as well. Compare (1) and (2). The latter employs *anggotmi* 'friend' to refer to specific persons in the story.

Muyu has one set of pronouns only, which means that the same pronoun forms are used for possessors and personal pronouns. Thus the position within the noun phrase is crucial for determining their function. Pronouns in the head slot are always used as personal pronouns. In contrast, pronominal possessors stand in the pre-head slot (see Section 6.3).

Noun phrases with pronouns as head occur as subjects of the clause. In such cases the pronoun is often accompanied by a demonstrative as in (3) or a phrase clitic as in (4) to delimit the phrase from the subsequent constituent.

- (3) [Ne edo] Muyu-man kel-a-den.
1SG DEM Muyu-person become-1SG-PFV
[Hypothetically. A non-native after adopting Muyu customs and language:]
'I have become a Muyu person.' [Dictionary]
- (4) [Kup]=ko inwal-ep-ten neya, inwal-ok balin=go?
2SG.F=PTC wear-2SG-PFV or wear-SBJV NEG=Q

¹Besides other functions, infinitives are used as verbal nouns.

[A woman was about to go out. Someone asking her:]

‘Have you put on your clothes or not yet?’ [muyu023:043]

The question in (4) is expressed as a clausal disjunction of two opposite questions (‘wear or not wear?’). Only the former clause has an overt NP. The subject referent of the latter clause is entirely reconstructable from the first disjunctive element. In many other cases, pronouns are omitted altogether.

Noun phrases with pronominal heads are available for non-subject arguments as well. *Ne* ‘I’ in (5) is an argument of *kadi* ‘give to me’ in the semantic role of the receiver. The final verb of the clause bears an object suffix *-d* that agrees with the pronoun. Thus we find the receiver redundantly marked in (5). The object suffix on *kadi* ‘give to me’ is obligatory while the pronoun may be omitted. Similarly, *yi* in (6) refers to the experiencer of *kumunggi* ‘tell’. In both examples the pronoun is the sole element of a noun phrase.

- (5) *Kedam ogo [ne] kan-e ka-d-e.*
 knife DEM 1SG take:SG.O-SM give-1SG.RCV-2SG.IMP
 ‘Take that knife and give it to me!’ [elicited]

- (6) *Ege angg-en=go, kedo tebe-n-i, [yi] kumungg-an.*
 here lie-3SG.M=PTC then move-SS-1SG 3PL tell-1SG
 [Diving for a fish while friends are waiting at the shore:]
 ‘It (=fish) stayed here, so I came out and told them (=my friends).’
 [muyu035:042]

Finally, we find infinitives as verbal nouns occupying the head slot. An example is (7) where *ani* ‘eat’ can be employed like ‘food’. Note that with *animan* ‘food’ a noun would be actually available. Still, speakers may use an infinitive instead. Such infinitives are heads of a noun phrases as can be seen by the fact that they can be accompanied by elements from other slots: The infinitives in (8) have a pronominal possessor (see Section 6.3 below).

- (7) *tana=bet [an-i]=go b-e mun-un.*
 child=OBL eat-INF=PTC take:PL.O-SM come-3SG.F
 [While working in the garden:]
 ‘A child brought (something) to eat.’ [muyu026:015]

- (8) *Odo yi=bet mo, ta yika [yi opkon-i], [yi*
 that 3PL=OBL only and 3PL.REFL 3PL think-INF 3PL

ambangg-i].

work-INF

‘It depends on them, their ideas, their works.’ [muyu012:092]

The verbs *opkoni* ‘think’ and *ambanggi* ‘work’ fulfil nominal functions in (8). The speaker refers to the outcomes of these actions rather than the events themselves.

Examples like (7) and (8) are the main evidence that the infinitive is a verbal noun in Muyu. For more information about infinitives as verbal nouns, see Section 3.2.8. Notice, however, that cases of infinitival NP heads are quite rare in the corpus.

6.3 The pre-head slot

The pre-head slot is the only slot that precedes the head while all other slots follow the head. It is filled by either a possessor or a prenominal relative clause. Possessors are either pronominal or nominal, as will be shown in 6.3.1. Relative clauses in the pre-head slot are the topic of 6.3.2. Prenominal RCs must be distinguished from postnominal RCs which stand in the modifier slot (see Section 6.4 below).

6.3.1 Possession

This section deals with two types of possessive structures, i.e. pronominal possession and nominal possession, both standing in the pre-head slot. Pronominal possessors immediately precede the noun that refers to the possessed entity. Pronominal possession does not distinguish between alienable and inalienable possession in Muyu. Some examples follow:

- | | | |
|-----|--------------------|-------------------------------|
| (9) | <i>ne tana</i> | - ‘my child’ |
| | <i>nup otbop</i> | - ‘our language’ |
| | <i>kep kodolok</i> | - ‘your (m.) head’ |
| | <i>kup taman</i> | - ‘your (f.) younger brother’ |
| | <i>kip ambikin</i> | - ‘your (pl.) land’ |
| | <i>ye ambip</i> | - ‘his house’ |
| | <i>yu tinggi</i> | - ‘her hand’ |

Infinitive verbs are used as verbal nouns and can be possessed as well:

- (10) *yi opkon-i*
 3PL think-INF
 ‘their idea(s)’

Nominal possessors are realised as nouns rather than pronouns. This type of possessor is not a single noun but a whole noun phrase on its own as will be discussed below. Pronouns can optionally occur as linking elements between possessor and possessed. Thus a phrase like *Yeni yu alambon* in (11) is literally ‘Yeni her laughter’.

- (11) [*Yeni yu alambon*] *weda-in*.
 PN 3SG.F laughter hear-1SG
 ‘I heard Yeni’s laughter.’ [Dictionary]
- (12) [*Yeni alambon*] *weda-in*.
 PN laughter head-1SG
 ‘I heard Yeni’s laughter.’ [Dictionary]

Due to the nature of nominal possession, only third person pronouns can function as linkers. As can be seen in (12), the linking pronoun agrees with the possessor in number and gender. However, such agreement is found mostly in dictionary examples and elicitation. Natural discourse data tends to use *ye* ‘3SG.M’ as a linker regardless of the possessor’s number or gender.

- (13) [*Ena ye tinggi anggo*] *nine-gol-i*,
 mother 3SG.M hand thumb hold:SG.O-SS.SEQ-1SG
 ‘I held (my) mother’s thumb and then I ...’ [muyu039:032]
- (14) [*Ena emba ye otbop*] *aip weda-ip*.
 mother father 3SG.M language there.is hear-2/3PL
 ‘They listen to their parent’s advice.’ [muyu044:032]

Ena ‘mother’ in (13) is female and would in a strict sense require *yu* ‘3SG.F’, while *ena emba* ‘parents’ is plural and should trigger *yi* ‘3PL’. Nonetheless, the intervening form is *ye* in both cases. We take this discrepancy between elicited data and natural discourse as evidence that this element is of pronominal origin and gradually developing to a linking element of the form *ye*.

It was mentioned earlier that the nominal possessor in the pre-head slot is structurally an entire NP rather than simply a noun. Evidence comes from

examples in which one or more post-head slots of the embedded NP is/are filled. Thus, we find modified nouns (15), quantified nouns (16), and NPs with determiner *mo* (17) in the corpus.

- (15) *[[Kayabak talep] ye kinkin]*
 big.man big 3SG.M spirit
 ‘the (Holy) spirit of the Great Father’ [muyu019:199]
- (16) *[[kaduk mim] ye kodolok]*
 man one 3SG.M head
 ‘one man’s head’ [muyu036:014]
- (17) *Edo [[mim mo] ye ambangg-i] balin.*
 DEM one only 3SG.M work-INF NEG
 ‘this is not only someone’s job’ [muyu012:043]

The elements attaching to the pre-head NPs in examples above still represent relatively simple structures. Besides that, we also find more complicated structures. Firstly, an NP in the pre-head slot can have a postnominal relative clause (see example (26) in Section 6.4 below). Secondly, the NP in the pre-head slot can be a coordinated noun phrase and thus contain more than a single head noun. Noun phrase coordination is discussed in Section 6.8.

Finally, possession can be applied recursively, embedding possessed NPs into possessed NPs. Natural occurrences rarely exceed two possessors, as in the following example:

- (18) *[[Ye anggotmi] ye ambip ege] kawen-e om kelega-en*
 3SG.M friend 3SG.M house DEM climb-SM sago look-3SG.M
got
 and.then.DS
 ‘He went into his friend’s house and looked for the sago and then ...’ [muyu006:030]

The head noun *ambip* ‘house’ in (18) is possessed by *anggotmi* ‘friend’ which itself has a pronominal possessor *ye* ‘his’. Note that the pronoun *ye* occurs two times in the phrase *ye anggotmi ye ambip* ‘his friend’s house’. However, the status is different between the first and the second *ye*. They are clearly not co-referential. The former refers to the possessor of *anggotmi* ‘friend’ whereas the latter is simply an element linking the embedded NP to the

head noun.

6.3.2 Prenominal relative clauses

Muyu has two types of relative clauses: one preceding the head noun it attaches to, the other following it. Only the former is of relevance for this section since it stands in the pre-head slot of an NP. For postnominal RCs see Section 6.4.

Relative clauses are similar to independent clauses in that they end in a final verb. A prenominal RC is attached to its head noun via the linking element *ye* ‘3SG.M’ just like possessor NPs (see Section 6.3.1). The linking element *ye* is of pronominal origin and still glossed as such. Notice, however, that its referential function has been lost entirely.

Here are two examples:

- (19) [*Ambip yen-e kem-en ye kaduk*] *adep*
 house build.house:SG.O-SM do-3SG.M 3SG.M man like
 ‘like a man who builds houses’ [muyu019:264]

- (20) *Odo [wot aip kel-o-den ye otbop]*.
 DEM moon there.is become-3SG.M-PFV 3SG.M language
 [Introducing a myth about the origin of the moon. A man became
 the moon.]

‘That is the story (about) how he became the moon.’
 [muyu007:148]

The prenominal RCs in (19) and (20) are both similar in structure. They are transitive and express their object NP overtly while the subject is only present as argument suffix on the verb. However, they differ in the relation of their subject to the superordinated head noun. In (19) the subject of the RC is co-referential with the head of the NP (i.e. *kaduk* ‘man, person’). Such a relationship is not present in (20) where the noun *otbop* ‘language’ plays no role inside the relative clause.

Nested structures can become even more complicated since embedding is (hypothetically) not restricted. In (21), the NP with the prenominal RC is itself the possessor of another head noun. (For the same core meaning expressed with a postnominal RC see example (26) below.)

- (21) *[[Wip ya ti-ip ye kaduk] ye aninggo]=go*
 middle at live-2/3PL 3SG.M person 3SG.M name=PTC
Kawip=an.
 PN=COP
 ‘The name of the people who live in the middle is Kawip.’
 [elicited]

The RC *wip ya tiip* ‘they live in the middle’ is attached to the head noun *kaduk* to form an NP. *Kaduk* is itself the nominal possessor of *aninggo* ‘name’. Hence the top-level noun phrase has a nested structure with three levels of embedding.

6.3.3 Pronominal linker *ye*

This subsection briefly summarises our findings concerning the pronominal linker in the pre-head slot. The relevant examples were given in the previous two subsections §6.3.1 and §6.3.2.

The pronominal linker in the pre-head slot has the form *ye* and stems from the homophonous third person singular pronoun. Evidence for this origin comes from the fact that in nominal possession the linker can still agree in gender and number with the possessor. However, the preponderance of *ye* for all gender/number values is taken as evidence that *ye* is grammaticalising to a general linker in this position.

The pronominal linker *ye* occurs in two functions: (1.) to link a nominal possessor to the head of the NP, (2.) to link a pronominal relative clause to the head of the NP. Firstly, *ye* is usually optional when linking nominal possessors, e.g. *Lukas ye ambip* and *Lukas ambip* ‘the house of Lukas’ are both grammatical and there is no semantic difference. There is one condition under which the pronominal linker is obligatory in nominal possession, namely when the possessor is a kinship term: *emba ye awon* ‘father’s pig’ but **emba awon*, *emba ye minggi* ‘father’s son’ but **emba minggi*, *emba ye kursi* ‘father’s chair’ but **emba kursi*. Secondly, *ye* is obligatory with pronominal relative clauses, but there seems to be no semantic contribution of the linker.

6.4 The modifier slot

The modifier slot is structurally placed directly succeeding the head slot. It is filled by either adjectives or postnominal relative clauses (RC).

This slot works as a diagnostic for adjectives as a separate word class. Adjectives do not differ morphologically from nouns so the NP template is the only way to distinguish these two classes. While the head is the referring element that determines the reference of the whole phrase, the elements in the modifier slot only contribute further attributes to the meaning, i.e. they modify it. For details on the word class distinction, the reader is referred to Section 3.4.

Two examples for noun phrases modified with adjectives are given in (22) and (23). In the former example, the noun phrase is host to the phrase clitic =*bet* which marks the phrase as actor in the clause (see Section 9.3.4.7 for details). Phrase clitics are analysed as outside the boundaries of a noun phrase. The noun phrase in (23) is modified by two subsequent adjectives. (23) is a dictionary example while natural occurrences of more than one verb have not been found yet. Even single adjectives are not very frequent.

- (22) [*Amb* ***talep***]=*bet ka-y-o-den*.
 father big=OBL give-PL.RCV-3SG.M-PFV
 [Having caught a monitor lizard:]
 ‘The lord gave it to us. (lit. the big father)’ [muyu049:008]
- (23) *Maria=go [kon ***ayapkat kudok***]=*an*.
 PN=PTC woman slim good=COP
 ‘Maria is a slim and beautiful woman.’ [Dictionary]*

Since multiple adjectives rarely occur in natural speech, we do not know yet if a sequence of adjectives has to follow a specific order. Neither is it clear if juxtaposed adjectives are on the same level. Consider the noun phrase in (23). Is a *kon ayapkat kudok* a slim woman that is beautiful? Or are the attributes *ayapkat* ‘slim’ and *kudok* ‘good, beautiful’ equally modifying *kon* ‘woman’? We leave these questions open for further research.

As seen so far, adjectives modify the head noun, which stands in the head slot of the noun phrase. However, head nouns can be elided, in which case the adjective becomes the leftmost element.

- (24) [*Yumu mo*] *b-ip*.
 red only take:PL.O-2/3PL
 [Fruits of different colours lying on a table. Some people came in:]
 ‘They took only the red ones.’ [elicited]

An adjective as the leftmost element of a noun phrase is only permissible if the elided head noun is recoverable from context. In (24), a hypothetical head noun *apyop* ‘fruit’ is recoverable because its referent (i.e. the fruit) is present in the situational context.

Leaving adjectives now, we find the modifier slot also occupied by relative clauses. Such relative clauses are labeled postnominal RCs in contrast to prenominal RCs in the pre-head slot (for the latter, see Section 6.3.2 above). A postnominal RC is always followed by a demonstrative in the determiner slot. This demonstrative serves as a relative marker and at the same time delimits the whole noun phrase as its right boundary.

- (25) [*Yu kaduk Awin ambip won-o-den odo*] *mon-on*.
 3SG.F man PN region go-3SG.M-PFV DEM come-3SG.M
 ‘Her husband who had gone to the Awin region came back.’
 [muyu007:107]

As was discussed in Section 6.3, the pre-head slot is free to take whole noun phrases and thereby gives rise to nested structures. Since postnominal RCs are inside the boundaries of the NP, they can stand in the pre-head of a superordinate NP together with their head noun. Consider example (26). The relative clause *wip ya tiip odo* ‘who live in the middle’ attaches to the preceding noun *kaduk* ‘man, person’. Together these elements form an NP and fill the pre-head slot of another NP. The head of the superordinate NP is *aninggo* ‘name’.

- (26) [[*Kaduk wip ya ti-ip odo*] *aninggo*]=*go Kawip=an*.
 person middle at live-2/3PL DEM name=PTC PN=COP
 [Geographically, the Kawip inhabit the centre of the Muyu speaking area:]
 ‘The name of the people who live in the middle is Kawip.’
 [elicited]

However, the relative clause in (26) does not need to nest within the pre-

head slot of the superordinate phrase. Alternatively, the relative clause may occupy the modifier slot of the superordinate NP although semantically modifying the noun in the subordinate phrase. The result is a kind of extraposed relative clause, which is exemplified in (27), a variant of (26), that is completely equivalent in meaning.

- (27) [[*Kaduk*]_i [*aninggo*]_j [*wip ya ti-ip odo*]_i] *Kawip=an*.
 person name middle at live-2/3PL DEM PN=COP

‘The name of the people who live in the middle is Kawip.’

[elicited]

The postnominal RC in (27) clearly attaches to *kaduk* ‘man, person’ rather than *aninggo* ‘name’, which is indexed with subscripts. Names do not live anywhere, but people do. This attachment is purely semantic. Syntactically, the phrase in (27) is a flat NP with a single noun in the pre-head slot and a postnominal RC in the modifier slot. Additional data is needed to study the phenomenon of relative clause extraposition in Muyu more thoroughly.

6.5 The quantifier slot

The quantifier slot of a noun phrase is placed between the modifier slot and the determiner slot. It is occupied by numerals, quantifiers or *ma* ‘other, another’. The first two are mutually exclusive while *ma* ‘other, another’ can co-occur with numerals in the quantifier slot, as will be shown below.

Numerals commonly occur together with a determiner as in the following examples:

- (28) [*Kambing alop odo*] *odan-e=go kawut=mo nangm-ip*.
 goat(BI) two DEM quarrel-SM=PTC direct=ADV fight-2/3PL
 [Picture story. Two goats fighting.]

‘The two goats got angry at each other and they fought.’

[muyu003:011]

- (29) [*Ambip mim mo*]=*n*.
 house one only=COP

[The ancestors lived together in a single house:]

‘It was just one house.’

[muyu010:134]

In contrast to numerals, quantifiers are usually the rightmost element of the noun phrase, as the following examples show:

- (30) *Ne, ena, ambo Yamuk, [anggotmi **kumun**].*
 1SG mother older.brother PN friend all
 [Listing the protagonists of a story:]
 ‘I, mother, brother Yamuk, and all our friends.’ [muyu039:002]
- (31) *[Umkan **koyap koyap**] yanop.*
 blood a.little RED there.is
 [Tracing an injured animal in the forrest:]
 ‘There was a little blood.’ [muyu005:020]

All the examples shown so far have the quantifying element directly juxtaposed to the head noun. This is due to the fact that natural speech tends to avoid complex noun phrases. Hence adjectives and quantifiers/numerals rarely occur together. Nonetheless, the quantifier slot is to be distinguished from both the modifier slot and the determiner slot based on elicited examples like the following:

- (32) *[nin kidit **niki** edo]*
 snake long six DEM
 ‘these six long snakes’ [elicited]
- (33) *[bot midikono **kadap** odo]*
 stone black many DEM
 ‘those many black stones’ [elicited]

The examples in (32) and (33) represent a maximal noun phrase (except for the empty pre-head slots). As can be seen, quantifiers and demonstratives are not mutually exclusive, although they typically do not occur together in naturalistic data as mentioned above.

In the previous section we have seen that adjectives can become the leftmost element when the head slot is empty. The same is true for the elements in the quantifier slot:

- (34) *[Alop] okun-e meno-n-ip.*
 two like.that-SM come-SS-2/3PL
 [Picture story. Two goats approaching a narrow bridge from two

- different directions:]
 ‘Both of them came and then they ...’ [muyu014:009]
- (35) [Alopmim] aip.
 three there.is
 [She handed some fruits to the boys:]
 ‘There were three of them (i.e. fruits).’ [elicited]
- (36) Midin=*ko* [kadap]=*an*.
 kind.of.shrimp=PTC many=COP
 ‘There were many little shrimps. (lit. shrimps were many)’
 [muyu038:068]

The quantifier *kadap* ‘many’ is used predicatively in (36). It is the sole element of a separate noun phrase rather than a quantifier to the head noun *midin*. This is indicated by the phrase clitic =*ko* which delimits the noun phrase at its right edge.

Muyu numerals and quantifiers are also used to quantify pronominal heads. Examples like the following are quite common in the corpus:

- (37) [Yi *alop*] odan-*ip-ten*.
 3PL two fight-2/3PL-PFV
 [Two goats meeting on a bridge:]
 ‘The two of them quarreled.’ [muyu003:010]
- (38) “Ambangg-em, [nup *kumun*]”, engg-*ip=kot*
 work-1PL.IMP 1PL all say-2/3PL=and.then.DS
 [Asking the chiefs of the village for permission to record a music
 video. The chiefs answer:]
 “‘Let’s do it together”, they said and then ...’ [muyu012:076]

Both the numeral *alop* ‘two’ in (37) and the quantifier *kumun* ‘all’ in (38) specify how many referents are implied by the pronouns. Contrary to other Ok languages, Muyu does not distinguishclusivity in its pronouns.² Therefore, in (38), the quoted speakers (i.e. the chiefs) added *kumun* ‘all’ to clarify the inclusivity of the pronoun.

²A distinction inclusive vs. exclusive 1PL is found in Mian *n̄ibo* ‘1PL.INCL’ vs. *n̄i* ‘1PL.EXCL’ (Fedden 2011:125) as well as in Ngalum *nup* ‘1PL.INCL’ vs. *nu* ‘1PL.EXCL’ (personal fieldnotes A.Z.).

Finally, the quantifier slot can be occupied by *ma* ‘other, another’:

- (39) *Ta [ambangg-i **ma**] nowan.*
 and work-INF **other** NEG
 ‘But there was no other work.’ [muyu017:022]
- (40) *ta [ap **ma** ege] kawen-e al-in.*
 and tree other DEM climb-SM stand-1SG
 ‘and I climbed on another tree.’ [muyu004:070]

The exact position of *ma* deserves further examination. As seen in (40), it precedes a demonstrative and is thus not a part of the determiner slot. In the quantifier slot, however, we find that *ma* lacks the property of mutual exclusivity with other potential elements of this slot. For *ma* can co-occur with numerals. Although instances in natural discourse have not been found yet, we can easily come up with contexts to elicit examples like the following:

- (41) *[apyop alop **ma**]*
 fruit two other
 [Two pairs of fruit. First pointing at one pair, then pointing at the other pair:]
 ‘the other two fruit’ [elicited]

Examples like (41) pose a problem on our strictly distributional analysis of the NP template. Since numerals and *ma* ‘other’ can co-occur, they seem to inhabit two separate (but adjacent) slots. There is evidence, however, against such an analysis. Firstly, if we pose a separate slot for *ma*, this element would be the only item that can inhabit this slot, which is possible but rather inelegant. Secondly, although *ma* can co-occur with numerals it cannot co-occur with quantifiers like *kadap* ‘many’ or *kumun* ‘all’ which also inhabit the quantifier slot. If we propose a separate slot for *ma*, we would need to account for this incompatibility across two slots. To sum up, *ma* is better analysed as standing in the quantifier slot. It can be the only element or share its slot with a preceding numeral.

6.6 The determiner slot

The determiner slot concludes the NP template on the right edge. It is filled by either a demonstrative or the element *mo* ‘only, just’.

As stated repeatedly throughout this chapter, NPs with all slots filled are quite rare in natural discourse. There are two typical cases in which the determiner slot is used: (1.) a demonstrative is juxtaposed to a head noun as in (42), and (2.) a demonstrative is the sole element of the phrase as in (43).

- (42) [Awon **odo**] *kido al-en*.
 pig DEM down stand-3SG.M
 ‘That pig stood down there.’ [muyu004:014]

- (43) [**Edo**] *kon konombon=an*.
 DEM woman grave=COP
 ‘This is a woman’s grave.’ [Dictionary]

Note that the determiner slot rigidly concludes the phrase. If a noun follows the determiner as in (43), this noun is part of a different phrase.

Like quantifiers, demonstratives are also compatible with pronominal heads. Both a quantifier and a demonstrative are present in the following example:

- (44) *Lukas Audet ye emba, Frans Nanawot ye emba,*
 PN PN 3SG.M father PN PN 3SG.M father
kaman-a engg-e [nup alop mim odo] yen-ban-ip-ten.
 climb-1SG.IMP say-SM 1PL three DEM PL.O-hit-2/3PL-PFV

[Story. When they were children, they once refused to work in the garden:]

‘Lukas Audet’s father and Frans Nanawot’s father came up to hit the three of us.’ [muyu044:041]

The NP in (44) has a pronominal head *nup* ‘we’, followed by the numeral *alop mim* ‘three’ in the quantifier slot. Finally, the NP is concluded by *odo* ‘that’ in the determiner slot.

Turning now to *mo* ‘only, just’, we find this element in the determiner

slot. It is not compatible with demonstratives in the same phrase and always concludes the noun phrase. The following examples illustrate *mo* following an adjective (45) and a quantifier (46).

- (45) *[Talep -talep mo] b-e men-e kem-ip.*
 big~RED only take:PL.O-SM come-SM do-2/3PL
 [Conversation about gardening. A long time ago the taro crop was better:]
 ‘They used to bring the big ones only.’ [muyu017:060]
- (46) *[Nup alop mo] gole.*
 1PL two only CONJ
 [For several days on a fishing trip. Not worrying about having brought too little tobacco:]
 ‘Because there were only two of us.’ [muyu038:172]

The examples in (45) and (46) illustrate the function of *mo* ‘only, just’ quite well. A subgroup of referents is singled out from a larger group. This larger group may be real like the sum of all fruits in (45) or only hypothetical like assumed further smokers in (46). In any case, *mo* ‘only, just’ occurs after the relevant modifier or quantifier. Furthermore, it can attach to a nominal or pronominal head: e.g. *kep mo* ‘only you’, *awon mo* ‘only a pig’.

Mo ‘only, just’ is also attested as the sole element of a phrase:

- (47) *Aih, ne=bet [mo] balin.*
 INTJ, 1SG=OBL only NEG
 ‘Oh, I must not be alone. (lit. at me is not loneliness)’
 [muyu023:050]

In (47), *mo* is used in predicative position of a non-verbal clause. The phrase clitic *=bet* ‘OBL’ demarcates *mo* from the preceding pronoun which is a noun phrase on its own.

6.7 Some remarks on oblique and adverbial elements inside NPs

This section deals with certain limitations in the structure of NPs. As described in the previous sections, Muyu noun phrases are compatible with a

broad range of modifying elements: adjectives, relative clauses and quantifiers. The question arises, whether further elements like adverbials or oblique phrases can also be part of the NP, as in the English examples: *a fiddler on the roof*, *the lesson from Sunday*, *the house with the pool*. Ultimately, such structures are ungrammatical in Muyu. However, the situation is more complex since such elements can nonetheless be included via relativisation. In the following, we give a short outline.

At first glance, examples like the following look like having complex NP structures. In (48), we could interpret *ambip alop wani* as the Muyu equivalent for Engl. ‘two houses down there’, whereas *kaleng meja tap odo* in (49) is simply a ‘can beneath the table’.

- (48) *Ambip alop wani tem-a-den.*
 hosue two down see-1SG-PFV
 ‘I see the two houses down there.’ [Fieldnotes]

- (49) *Kaleng meja tap odo tem-a-den.*
 can(BI) table(BI) under DEM see-1SG-PFV
 ‘I have found the can (from) beneath the table (but in a different place).’ [Fieldnotes]

However, the complex NP interpretation in both examples above fail when applying further grammatical testing. First of all, the adverb *wani* in (48) is ambiguous and may either belong to the NP or simply modify the predicate. In the latter case, the clause would rather mean something like ‘Looking down, I saw two houses’.

Secondly, postpositional phrases do not have a separate slot in the NP. A suitable test for this is to put a head noun and a postpositional phrase in the clause initial position. The following example is a variation of (49), replacing *odo* with *=ko*:

- (50) **Kaleng meja tap=ko tem-a-den.*
 can(BI) table(BI) under=PTC see-1SG-PFV
 ‘(Intended:) I have found the can (from) beneath the table (but in a different place).’ [elicited]

If *meja tap* ‘beneath the table’ was part of the NP in (50), it should be grammatical to put it left of the phrase delimiting particle *=ko* together with the head noun *kaleng* ‘can (BI)’. Since this is not the case, the noun

and the postpositional phrase are not one but two separate constituents. The same effect can be seen in examples with oblique phrases:

- (51) *[Tana kon=ko] Mindiptana=bet Merauke win-un.*
 child woman=PTC PN=OBL PN go-3SG.F
 ‘The girl moved from Mindiptana to Merauke.’ [Fieldnotes]
- (52) **Tana kon Mindiptana=bet=ko Merauke win-un.*
 child woman PN=OBL=PTC PN go-3SG.F
 ‘(Intended:) The girl from Mindiptana moved to Merauke.’
 [elicited]

However, as was the case in (49) above, such constructions become grammatical when replacing *=ko* with *odo*:

- (53) *[Tana kon Mindiptana=bet odo] Merauke win-un.*
 child woman PN=OBL DEM PN go-3SG.F
 ‘The girl from Mindiptana moved to Merauke.’ [elicited]

So the key question is, why do obliques and postpositional phrases become grammatical inside NPs with *odo*? The answer is that *odo* in such structures is not a mere demonstrative but is used as a relative marker. As seen above, *odo* is attached to verbal clauses to form postnominal relative clauses. The same strategy can apply to non-verbal clauses and is used to incorporate obliques and postpositional phrases into NPs. In fact, *Mindiptana=bet odo* is a non-verbal relative clause: ‘which is from Mindiptana’. Similarly, *meja tap odo* means ‘which is beneath the table’. In both cases, the subject is the head noun of the NP. Since no copula occurs, its clause status is overlooked easily.

Non-verbal relative clauses as in the examples above really are part of the NP they attach to rather than just another constituent of the clause. This can be shown by the fact that adverbs cannot intervene:

- (54) **[Nimbin alop] keyap=mo [Mindiptana=bet odo] Merauke*
 women two quick=ADV PN=OBL DEM PN
win-ip.
 go-2/3PL
 ‘(Intended:) The two women from Mindiptana moved quickly to Merauke.’
 [elicited]

- (55) **Keyap=mo** [*nimbin alop Mindiptana=bet odo*] *Merauke*
 quick=ADV women two PN=OBL DEM PN
win-ip.
 go-2/3PL

‘The two women from Mindiptana moved quickly to Merauke.’

[elicited]

Any adverb that modifies the predicate must be outside the NP (as in (55)) and cannot split up the phrase (as intended in (54)). This is evidence that the relativised postpositional phrase is indeed inside the NP.

Finally, we find examples, where the non-verbal relative clause is external to the NP:

- (56) *Kole* [*ton odo*], [*ok Widi=bet odo*] *ane-ngga-up.*
 CONJ fish DEM river PN=OBL DEM eat-PL-1PL

‘So we ate the fish, those from Widi river.’

[muyu038:036]

Example (56) is similar to (49) and (53) above, except that an additional *odo* occurs next to the head noun. Therefore, we cannot analyse the relative clause within the same NP. Two NPs are juxtaposed, of which the second is elliptical since it does not include a head noun. However, they are co-referential and both denote the clause object.

To sum up, noun phrases in Muyu do not provide slots for adverbial, postpositional or oblique modification. However, such elements can be included nonetheless by adding them in a postnominal non-verbal relative clause. That way, Muyu is capable of rather complex NP structures even though natural speech tends to form simple NPs.

6.8 Noun phrase coordination

Noun phrases are coordinated by the employment of three strategies: conjunctive coordination with *yom* ‘and, with’ (§6.8.1), coordination with the existential particle *yanop* ‘there is’ (§6.8.2) and asyndetic coordination, i.e. mere juxtaposition (§6.8.3). There is a distributional difference between those strategies: *yanop* and asyndetic coordination are only found in object arguments, whereas *yom* is found in all argument positions.

It is important to note that noun phrase coordination shares no simi-

larities with coordination of other syntactic elements in Muyu. Most importantly, the conjunction *yom* ‘and, with’ is restricted to NPs and cannot extend its function to coordinate verbs or whole clauses. The same holds true for the particle *yanop*, which is more commonly found in non-verbal clauses (see Section 9.4.6).

Muyu NPs allow for conjunctive coordination (‘and’) only. Disjunctive NP coordination (‘or’) is not found in our data.

6.8.1 Coordination with *yom* ‘and, with’

This section deals with *yom* ‘and, with’ as a noun phrase coordinator. Besides that, *yom* is also used as a comitative marker. These functions are in some cases hard to distinguish. For a tentative distinction as well as some typological remarks on the relationship between noun phrase coordination and comitative marking, the reader is referred to Section 9.3.5.

Noun phrases are coordinated with the postposition *yom* ‘and, with’ and can include all kinds of conjuncts: humans, animate non-humans and inanimates (57). Besides that, also mixed referents are possible as in (58).

- | | | |
|------|------------------------------------|------------------------------|
| (57) | <i>Agus yom Maria yom</i> | ‘Agus and Maria’ |
| | <i>kaduk tana yom kon tana yom</i> | ‘the boy and the girl’ |
| | <i>Ton yom niyap yom</i> | ‘the fish and the cassowary’ |
| | <i>Meja yom kursi yom</i> | ‘the table and the chair’ |
| (58) | <i>tana yom awon yom</i> | ‘the child and the pig’ |
| | <i>kon tana yom meja yom</i> | ‘the girl and the table’ |

Noun phrase coordination with *yom* is possible in all argument positions, be it subject (59), direct object (60) or indirect object (61).

- | | | |
|------|---|---------------|
| (59) | <i>Nup=ko, [ne yom ambo Teo Mulop yom]=ko ok</i> | |
| | 1PL=PTC 1SG and older.brother PN PN and=PTC river | |
| | <i>tikap wun-up.</i> | |
| | downstream go-1PL | |
| | ‘We, I and brother Teo Mulop, went downstream.’ | |
| | | [muyu006:048] |
| (60) | <i>[Kaduk tana yom kon tana yom] tem-a-den.</i> | |
| | man child and woman child and see-1SG-PFV | |

- ‘I saw the boy and the girl.’ [elicited]
- (61) *Yu=go [Jack yom Alex yom] ton ka-y-u-den.*
 3SG=PTC PN and PN and fish give-PL.RCV-3SG.F-PFV
 ‘She gave fish to Jack and Alex.’ [elicited]

The coordinated noun phrase occurs as the subject in (59) including apposition to the pronoun *nup* ‘we’. Coordinated NPs are more frequent in the subject position than in the other two argument positions. In (60), the coordinated NP is the object of seeing, both referents were seen simultaneously. Finally, the coordinated NP in (61) is the receiver of the giving event and the object suffix on the verb, *-y* ‘PL.RCV’, agrees with it. Fish was given to both Jack and Alex.

Yom ‘and, with’ in noun phrase coordination usually marks both coordinated elements. This structure is sometimes called **bisyndetic coordination** in the literature (Haspelmath 2007). As can be seen in the examples given so far, the conjunction is attached to each coordinated element. However, this is not necessarily the case. Although marking of both elements is judged by my consultants as the proper way of coordination, single marking (i.e. **monosyndetic coordination**) is also found frequently in natural discourse as in (62). For asyndetic coordination, i.e. coordination without any overt marker, see the next section.

- (62) *Adon mim=ko, [kon, yu kawupki yom], yi alop mo*
 sun one=PTC woman 3SG.F brother and 3PL two only
tio-d-o-n-ip.
 live-DUR-EP-SS-2/3PL
 ‘Once upon a time, there lived a lady and her brother. (lit. a woman and her brother, the two of them only)’ [muyu007:003]

In (62), only the second element of the coordination, *yu kawupki* ‘her brother’, is marked with *yom*. The first element *kon* ‘woman’ is set off with an intonational break. Otherwise, it could be misunderstood as the possessor of *kawupki* (see Section 6.3 for nominal possession).

Monosyndetic *yom* in (62) can be analysed alternatively as a comitative. Hence *kon, yu kawupki yom* can be translated to ‘a woman with her brother’. Still, we prefer the coordinative interpretation, since both elements *kon* ‘woman’ and *yu kawupki* ‘her brother’ are overt and no separating elements intervene. For details on comitatives see Section 9.3.5.

Coordination of more than two elements is possible. However, the conjunction *yom* ‘and, with’ can maximally occur twice. This means that the conjunction of more than two elements needs to employ different strategies, like enumeration as in (63) or a comitative with embedded coordination as in (64).

- (63) *[Jack, Alex, Lukas, Paul yom]=ko Mindiptana win-ip.*
 PN, PN, PN, PN and=PTC PN go-2/3PL
 ‘Jack, Alex, Lukas and Paul go to Mindiptana.’ [elicited]
- (64) *Jack=ko [Paul (yom) Alex yom] Miniptana win-ip.*
 PN=PTC PN (and) PN and PN go-2/3PL
 ‘Jack, Paul and Alex go to Mindiptana. (lit. Jack goes to Mindiptana with Paul and Alex)’ [elicited]
- (65) **Jack yom Paul yom Alex yom Mindiptana win-ip.*
 PN and PN and PN and PN go-2/3PL
 ‘(Intended:) Jack and Paul and Alex go to Mindiptana.’ [elicited]

The enumerative NP in (63) is strikingly similar to its English translation, in which the conjunction *and* occurs before the final conjunct only. However, we find such constructions in natural corpus data and do not have to suspect an artefact of elicitation. In (64), the first referent, i.e. *Jack*, is separated from the other two referents. Information structurally, this construction singles out *Jack* as more prominent than the other two. A possible context would be after questions like ‘Where is Jack?’ or ‘What is Jack doing?’ Finally, we can compare these strategies to the unacceptable use of three conjunctions in (65).

Elements of the coordination are NPs rather than single nouns:

- (66) *Mimtot=ko okun-e [kaduk mim, amban yom] tut*
 once=PTC like.that-SM man one wife and forest
win-ip.
 go-2/3PL
 ‘Once upon a time, a man and his wife went to the forest.’
 [muyu054:001]

- (67) *Yu=go ton [nimbin kumun yom kaduk alop yom]*
 3SG.F=PTC fish women all and man two and
ka-y-un.
 give-PL.RCV-3SG.F
 ‘She gave the fish to all women and two men.’ [Fieldnotes]

The first element of the coordination in (66) has the numeral *mim* ‘one’ in the quantifier slot. We take this as evidence that the post-head slots are available to the elements of NP coordination. Although the numeral would suffice to demarcate the two NPs, we find a prosodic break as is normal in monosyndetic coordination. Similarly, we find quantifiers in both elements of a bisyndetical coordination in (67).

The result of NP coordination is an NP itself. Hence a coordinated NP can fill the pre-head slot as a nominal possessor:

- (68) *[[ambi amban yom] yi tana belon odo]*
 husband wife CONJ 3PL child small DEM
 ‘that married couple’s young child’ [Dictionary]

The coordinated NP in (68) is the possessor to *tana belon* ‘young child’. This is evidence that a coordinated NP can be embedded in another NP, although this does not occur frequently in naturalistic speech.

Noun phrases that include postnominal relative clauses (see Section 6.4 above) in the modifier slot can be coordinate with *yom* as well:

- (69) *[Kon tana Mindiptana=bet mun-un yom kaduk tana*
 woman child PN=OBL come-3SG.F and man child
Woropko=bet mon-on yom] tem-a-den.
 PN=OBL come-3SG.M and see-1SG-PFV
 ‘I saw the girl who came from Mindiptana and the boy who came from Waropko.’ [elicited]
- (70) *Emba Lukas [niyap ambikin angg-un yom on ap kobi*
 father PN cassowary floor lie-3SG.F and bird tree on
ti-un yom] momb-o-den.
 sit-3SG.F and shoot-3SG.M-PFV
 ‘Mr. Lukas shot the cassowary that lied on the floor and the bird that sat on the tree.’ [elicited]

Both examples, (69) and (70), have coordinated NPs in their clause object. All conjuncts in these examples contain postnominal relative clauses. Note that the conjunction *yom* replaces the demonstrative *odo* that serves as a relative marker in postnominal RCs that are not coordinated. Obviously, coordination suffices to identify the clause as belonging to a noun phrase and no further relative marker is needed.

Finally, we need to highlight that the elements of bi- and monosyndetic coordination are whole NPs. It is not possible to coordinate subparts of NPs with *yom*. This has important ramifications for the elements in the modifier slot. While adjectives are only coordinated asyndetically (see Section 6.8.3), relative clauses cannot be coordinated at all. Phrases like Engl. *the boy who came in and looked awfully sick* have no Muyu equivalent. Each noun can have one RC maximum. Of course this does not exclude the possibility to coordinate multiple NPs with one RC each, as was in fact seen in the examples (69) and (70) above.

To sum up, one strategy of NP coordination makes use of the conjunction *yom* ‘and, with’. This conjunction can be used for bisyndetic coordination (marked twice) or for monosyndetic coordination (marked once). More than two conjuncts are possible, but *yom* appears twice maximally. Coordinated NPs are compatible with all argument functions and can be embedded in other NPs. Furthermore, NP coordination with *yom* is sometimes hard to distinguish from comitatives which also make use of *yom*. Another strategy of NP coordination is asyndetic, which is discussed below.

6.8.2 Coordination with *yanop* ‘there is’

Nouns are sometimes coordinated by use of the existential particle *yanop*. This strategy is restricted to object arguments and seems to imply that the given referent represents new information in discourse. Some examples are the following:

- (71) *[alup yanop nasi yanop kumun] nengga-un=e*
 vegetable there.is rice(BI) there.is all cook-3SG.F=DS.SEQ
 ‘She cooked them all, the vegetables and the rice.’ [muyu026:036]
- (72) *[katuk yanop, bit ambip yanop eto] kip ambip=an*
 person there.is area are there.is DEM 2PL house=COP
 ‘(as for) people and land, this is your place’ [muyu056:040]

In (71) the two conjuncts *alup* ‘vegetable’ and *nasi* ‘rice (BI)’ are not only coordinated with *yanop* but also complemented with *kumun* ‘all’. Similarly, the nouns *katuk* ‘person’ and *bit ambip* ‘area’ in (72) have the demonstrative *eto* with them. Both examples suggest that *kumun* and *eto* are the actual arguments to the verbs, having anaphoric reference to previously mentioned referents. Such an interpretation would mean that the conjuncts are not part of a NP but clauses themselves, leading to something like ‘there were vegetables, there was rice, she cooked all (of it)’ for (71) and ‘there are people, there is land, this is your home’ for (72). Indeed, such an interpretation seems reasonable for the two examples given above. However, we also find structures with no additional anaphoric element:

- (73) *Om yanop ton yanop an-up.*
 sago there.is fish there.is eat-1PL
 ‘We eat sago and fish.’ [elicited]

The two nouns and the two *yanop* elements in (73) directly precede the predicate. We prefer the analysis that they represent a coordinated NP that is the object argument of the final verb.

As a noun coordinator, *yanop* is always bisyndetic which means that it occurs on each element of the coordination.

6.8.3 Asyndetic coordination

Another strategy to coordinate noun phrases does not make use of any conjunction. The conjuncts are merely juxtaposed. Sometimes, asyndetic coordination is understood as a tighter coordination than the strategy relying on a conjunction (see below). Although no conjunction separates the conjuncts, asyndetic coordination is often accompanied by a short intonational break between them (indicated by a comma in the examples).

- (74) *[Ton, om] an-in.*
 fish sago
 ‘I ate fish and sago.’ [elicited]
- (75) *[Meja, kursi] tem-a-den.*
 table chair see-1SG-PFV
 ‘I saw the table and the chair.’ [elicited]

Asyndetic coordination can also include more than two elements, and hence result in an enumeration. All the elements of such a construction are juxtaposed with an intonational break between them:

- (76) *[Yum, om, ton, but] an-in.*
 banana sago fish shrimp eat-1SG
 ‘I ate bananas, sago, fish and shrimps.’ [elicited]

It seems, that most asyndetically coordinated NPs constitute object arguments, whereas subjects mostly include the conjunction *yom* (see Section 6.8.1). At the present state of knowledge, we do not know the reason for this.³ However, asyndetic coordination actually is sometimes found with indirect objects:

- (77) *Yu=go animan [niyap, on ayam] ka-y-un.*
 3SG.F=PTC food cassowary bird chicken give-PL.RCV-3SG.F
 ‘She gives food to the cassowary and chicken.’ [Fieldnotes]

The examples in (77) contains an asyndetically coordinated NP in the indirect object argument that has the semantic role of receiver. The cassowary and the chicken are fed by the subject.

In Section 6.8.1, we stated that coordination with *yom* has NPs as conjuncts. However, asyndetic coordination works with adjectives as well:

- (78) *kon [ayapkat kudok]*
 woman slim good
 ‘a slim and beautiful woman’ [Fieldnotes]
- (79) **kon [ayapkat yom kudok yom]*
 woman slim and good and
 ‘(Intended:) a slim and beautiful woman’ [elicited]
- (80) *ambip belon tap*
 house small bad

³One reason could be that *yom* is more frequently found with human referents which again tend to be clause subject. Another explanation might depend on the comitative function of *yom*. If the conjunction grammaticalised from a comitative marker, it would be more natural to find it associated with subjects, according to a gramaticalisation path: *Marcus ate rice with Peter* -> *Marcus with/and Peter ate rice*. Of course, both factors may have applied and interacted in complex ways.

- ‘a small and ugly house’ [Fieldnotes]
- (81) **ambip belon yom tap yom*
house small and bad and
‘(Intended:) a small and ugly house’ [elicited]

As can be seen in the examples above, adjective coordination is only possible asyndetically. The conjunction *yom* ‘and, with’ coordinates NPs and hence needs a head noun for each conjunct. Compare the ungrammatical (81) with (82). The latter does not convey the intended meaning of (81), since the two occurrences of *ambip* ‘house’ are not co-referential:

- (82) *ambip_i belon yom ambip_j tap yom*
house small and house bad and
‘a small house_i and a ugly house_j’ [elicited]

More than two adjectives per NP are not attested in the corpus yet but theoretically possible. The following examples are elicited:

- (83) *kaduk talep kamena kudokman* ‘a big strong and beautiful man’
omani belon yumu kudok ‘a small, ripe and good banana’

Quantifiers or numbers cannot be coordinated in Muyu:

- (84) **kaduk alop alop_{mim} tem-a-den.*
man two three see-1SG-PFV
‘(Intended:) (First) I saw two and (then) three men.’ [elicited]
- (85) **Yi=go ton mim kumun ka-y-ip.*
3PL=PTC fish one all give-PL.RCV-2/3PL
‘(Intended:) (First) they gave them one and (then) all fish.’ [elicited]

To sum up, asyndetic coordination is a strategy that consists of the mere juxtaposition of its elements. Nonetheless, the conjuncts are set off prosodically. The asyndetic coordination strategy is available for whole NPs as well as adjectives. In both cases, more than two coordinated elements are allowed but instances are rarely found in the corpus. As for the argument functions, asyndetic coordination is found with objects (direct and indirect) but not with subjects.

6.8.4 Some remarks on scope of coordination

Coordinated NPs result in a complex NP. Elements that are attached to them (e.g. phrase clitics, postpositions) usually have scope over all conjuncts of the coordinated NP. This section gives some examples of this phenomenon.

Imagine a situation where a table and a chair are next to each other. One can put a long stick under them such that it is partly under the table and partly under the chair. To describe this state of affairs, a postposition can take scope over both coordinated elements:

- (86) *Adotbok=ko [meja yom kursi yom] tap*
 stick=PTC table(BI) and chair(BI) and under
komb-a-den.
 put:SG.O-1SG-PFV
 ‘I put the stick under the table and the chair.’ [elicited]

In (86), the postposition *tap* ‘under’ has scope over the whole coordinated NP: *meja yom kursi yom*.

Semantically, scope over coordinated NPs denotes that both elements intimately belong together. For example, two means of transport can only be coordinated if a group of people follow the same route simultaneously, as in the example (87) where some women are in the boat and some women are in the car. This also means that the event is conceptualised as one trip rather than some people going coincidentally in the same direction. In contrast, such a coordination can never denote a temporal distribution over the conjuncts, in the sense that all women first go by boat then by car. If such a meaning is intended, a multi verb construction (MVC) must be used rather than a coordinated NP, as in (88). For details on MVCs and complex predicates see Chapter 11.

- (87) *Nimbin=ko [kono yom ambomkono yom]=bet Woropko*
 women=PTC boat and car and=OBL PN
weno-d-ip.
 go-DUR-2/3PL
 ‘The women are (simultaneously) going by boat and by car to Woropko.’
 [elicited]
- (88) *Nimbin=ko kono=bet wen-e takol-e ambomkono=bet*
 women=PTC boat=OBL go-SM leave-SM car=OBL

Woropko weno-d-ip.
 PN go-DUR-2/3PL

‘The women are going (first) by boat and (then) by car to Woropko.’
 [elicited]

As can be seen from the examples above, NP coordination links the referents tightly together. This effect is not always intended, for example, when two referents generally belong to the same event but are nonetheless separately conceptualised. One case in point would be different origins of a movement to the same location. Sources of motion verbs are generally expressed as obliques (see Section 9.3.4.1). Coordinated sources require separate oblique marking for every conjunct (as in (89)), rather than one oblique marked with scope over a coordinated NP (as in the ungrammatical (90)).

(89) *Kebega-y-i-man=ko* *Mindiptana=**bet**, Woropko=**bet***
 show-PL.RCV-INF-person=PTC PN=OBL PN=OBL
Upyetetko min-ip.
 PN come-2/3PL

‘Teachers came from Waropko and Mindiptana to Upyetetko.’
 [elicited]

(90) **Kebega-y-i-man=ko* [*Mindiptana yom Woropko*
 show-PL.RCV-INF-person=PTC PN and PN
*yom]=**bet** Upyetetko min-ip.*
 and=OBL PN come-2/3PL

‘(Intended:) Teachers came from Mindiptana and Waropko to Upyetetko.’
 [elicited]

6.9 NP Appositions

Noun phrases sometimes form appositions. NP appositions often look like asyndetic coordination. The criterial difference is that the elements of asyndetic coordination belong to one and the same noun phrase, whereas NP appositions are juxtaposed separate noun phrases. NP appositions are generally rare in our corpus.

Two juxtaposed noun phrases must fulfil two criteria to form an NP apposition: (a.) they are **co-referential**, and (b.) they have the **same**

syntactic function in the clause. As a consequence, each of the elements can be omitted without impairing the meaning of the clause.

Here is an example:

- (91) *[Kaduk tana alop_{mim}]_i, [kip]_i=ko yongbon mit*
 man child three 2PL=PTC garden prepared
embet b-e wene-n-e
 OBL.DEM.this take:PL.O-SM go-EP-SM
bil-ip=a
 AUX.CONT-2/3PL=LNK

‘You three men, please take away these prepared foods and then ...’
 [muyu023:009]

In (91), both *kaduk tana alop_{mim}* and *kip* refer to the same referents and are in the subject position. Each of them can be omitted any time. The apposition here is probably used to disambiguate the person of the subject since the verb suffix *-ip* is ambiguous between 2PL and 3PL. The first NP suggests a third person subject. Only the apposition of *kip* renders it second person plural.

Chapter 7

Verb morphology

7.1 Introduction

The Muyu verb is the morphologically most complex word class in the language. Almost all morphemes are suffixed to the verb stem, filling one of the five different slots. The morphological template with specification for each slot is given in Table 7.1. The template applies to finite verbs only, whereas non-finite verbs are confined to slot 1 + one of several non-finite verb endings (not in the template). It is important to note that the full range of the verbal template is a theoretical construct and there is no single conjugated verb form for which all slots are filled at the same time. For example, S/R markers of slot 3 can never co-occur with the aspect marker of slot 5.

Further morphological restrictions come from the position of the verb. Muyu is a clause chaining language that distinguishes between medial and final verbs, i.e. verbs in non-final clauses and verbs in final clauses. Independent clauses behave like final clauses. For the details of clause chaining, the reader is referred to Chapter 12. Morphologically, the distinction has impact on three of the five slots: S/R marking (slot 3) is restricted to medial verbs, subject suffixes (slot 4) have allomorphic variation depending on whether the verb is medial or final; and the aspect marker *-ten* ‘PFV’ (slot 5) is restricted to final verbs.

This chapter is organised along the lines of the verbal template. First, we discuss the verb stem (§7.2), which is the lexical core of all verb forms. The verb stem is in itself complex and follows a basic pattern for stem formation. All stems in accordance with this pattern are treated as regular, while

Base	Slot 1	Slot 2	Slot 3	Slot 4	Slot 5
Verb stem	Object	Asp., Mood	S/R marking	Subject	Aspect
	<i>-d</i> ‘1SG’			<i>-an</i> ‘1SG’	
[STEM]	<i>-ngg</i> ‘2/3SG’	<i>-d</i> ‘DUR’	<i>-n</i> ‘SS’	<i>-ep</i> ‘2SG’	<i>-ten</i> ‘PFV’
	<i>-y</i> ‘PL’	<i>-an</i> ‘IRR’	<i>-gVl</i> ‘SS.SEQ’	...	

Table 7.1: Verbal template: Morphological slots for finite verbs.

several types of irregular verbs are distinguished and discussed separately. Furthermore, verb stems are categorised into three conjugation classes which have further ramifications for verbal morphology and semantics.

Argument indexing (§7.3) is realised in slot 1 for object suffixes and slot 4 for subject suffixes. The latter are crucial in the sense that a finite verb per definition needs a subject suffix. As mentioned earlier, subject suffixes display different allomorphic variants with medial and final verbs. Object suffixes, on the other hand, are only required by certain kinds of verbs which we call ‘object verbs’ in this thesis. They are available, however, as an optional suffix of most transitive verbs. A final group of argument indexes are object prefixes which are not included in the verbal template in Table 7.1. The reason for not including them is that object prefixes are restricted to a minuscule closed class of verbs and do not interact with the rest of the verb morphology.

In §7.4 we discuss Muyu verbs that are inflected for aspect and mood. Suffixes of these categories are in slots 2 and 5. Aspectual suffixes are durative *-d* and perfective *-ten*. The former marks the event as ongoing for a certain period of time. Such events often represent the background for suddenly interrupting events. Verbs suffixed with perfective *-ten* mostly highlight the completion of the denoted event, although the exact functions of the suffix are a matter of further research. Finally, irrealis *-an* has many functions of which the most important is future reference. Nonetheless, verbs in irrealis mood may also refer to events in the past and present. Further aspectual and modal categories are expressed periphrastically and will be presented in Chapter 11.

Our discussion continues with switch reference (S/R) marking in §7.5. Medial verbs are inflected with S/R markers that indicate the continuation of the subject referent in the following clause of a clause chain. These markers are in slot 3, and thus immediately precede the subject suffix. Contrary to other languages with markers for switch reference, Muyu explicitly marks

only the same subject condition, but not different subject. Two temporal conditions are distinguished: a temporally unspecified marker *-n* ‘SS’ and a marker for sequential events *-gVl* ‘SS.SEQ’, which denotes events that happen one after another.

After these sections dedicated to the slots of the verbal template, our discussion proceeds with non-finite verb forms in §7.6. Our definition of finiteness depends upon the presence of a subject suffix. Consequently, all verb forms lacking a subject suffix are considered non-finite. Of the aforementioned suffix possibilities for finite verbs, only object suffixes can also be used with non-finite verbs. Additionally, one of five different non-finite endings is attached. These are discussed in turn at the end of the chapter.

Two topics related to verbs are excluded from this chapter and discussed elsewhere. Firstly, many verb stems in Muyu are specified for the number value of their subject or object argument. Thus, verb stems contrasting in number of a participant can be arranged pairwise if their descriptive meanings are largely equal, e.g. *kali* ‘throw one object’ / *nami* ‘throw multiple objects’. A similar number encoding is related to the number of event occurrences. This mechanism is discussed under the heading ‘verbal number’ in Chapter 8.

Secondly, Muyu verbs productively form various types of multi-verb constructions and auxiliary constructions. Both are discussed in Chapter 11.

7.2 Verb stems

The verbal template, as presented in the introduction to this chapter, starts with a verb stem to which affixes in several slots are attached. This verb stem is in itself complex and classifiable into several types with certain morphological and semantic properties. This section first examines the basic structure of verb stems for regular verbs. Another subsection then discusses how irregular verbs deviate from the basic pattern.

7.2.1 Regular verbs

The basic pattern of verb stem formation is given in Figure 7.1. It consists of two binary splits in hierarchical order. Verb stems branch out into **root** and **stem vowel**. As the term ‘root’ suggests, there is no way to further split up this unit on a morphological basis. The verb root carries the lexical

meaning and occurs in its entirety throughout all cells of an inflectional paradigm. However, it makes sense to further subdivide the root in terms of its phonological makeup for reasons explicated below. Resulting from such a division we get **root nucleus** and **root consonant**. The nucleus is simply any segment except the final consonant. The root consonant constitutes the right edge of the verb root. Verb stems complying to this pattern are referred to as regular verbs. Several types of irregular verbs, which all deviate from the pattern in Figure 7.1, are discussed in Section 7.2.2.

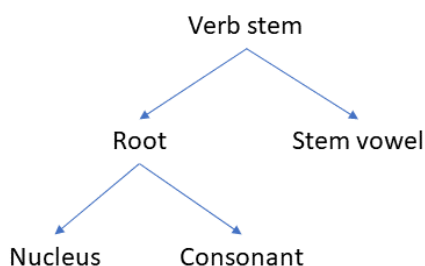


Figure 7.1: Basic verb stem pattern.

Verb stem formation is best illustrated with some examples. Table 7.2 analyses six verb stems according to the pattern outlined above.

Verb stem	Gloss	Nucleus	Consonant	Stem vowel
<i>nengga</i>	‘cook’	ne	ngg	a
<i>aliga</i>	‘straighten’	ali	g	a
<i>kobomo</i>	‘knock’	kobo	m	o
<i>wolobo</i>	‘cut, break (pl.o.)’	wolo	b	o
<i>nakole</i>	‘free, release’	nako	l	e
<i>kamone</i>	‘insert, put in’	kamo	n	e

Table 7.2: Stem patterns of 6 exemplary verb stems.

The example stems in Table 7.2 were chosen to illustrate a formal pattern. Whereas the given roots vary quite randomly, we find three pairs of matching stem vowels: /a, o, e/. These are the only vowels available as stem vowels, the other two existing vowel phonemes /i, u/ never occur in this position. Furthermore, the quality of the stem vowel correlates with certain morphological and semantic features. Therefore, we can classify verbs

into three **conjugation classes** according to their stem vowel: a-stems, o-stems, e-stems. These classes are not equally sized. Although we do not have exact numbers yet, the trends are such that a-stems represent the smallest class, followed by o-stems; e-stems seem to have roughly as much lexemes as the other two classes combined. Features associated with these classes are outlined in the following list:

- *A-stems* are transitive. Only this class retains its stem vowel in most inflectional forms.¹ Semantically, a-stems show a high transitivity in the sense that actions denoted by them affect their object with a high intensity. In verbal number pairs, a-stems always form the plural part.
- *O-stems* can be transitive or intransitive. Most inflectional forms drop the stem vowel before vowel-initial suffixes. In verbal number pairs, o-stems always form the plural part.
- *E-stems* can also be transitive and intransitive. Like o-stems, these verbs drop the stem vowel if a vowel-initial suffix is attached. Verbs of this class are the only ones morphologically compatible with the perfective marker *-ten*. In verbal number pairs, e-stems regularly form the singular part.

Additionally, the conjugation class affects the choice of allomorphs of the subject suffix (see Section 7.3.1). Each of the features in the list above will be elaborated on in the course of this chapter.

An aspect of the stem structure in need of explanation is the division of roots into a nucleus and consonant. This division is not morphologically motivated which means that neither nucleus nor consonant have morpheme status. The rationale behind this analysis is the non-arbitrary relationship between root consonants and stem vowels. A-stems can only have /ŋg/, /k/ or /g/ as root consonants. Roots of o-stems end in /m/, /n/ or /b/, while e-stems end in /n/, /ŋg/, /k/, /b/, /mb/ or /l/. This distribution leads to several interesting conclusions: (1.) each root consonant is found in maximally two conjugation classes, (2.) the root consonants of a-stems and o-stems are in complementary distribution², and (3.) if a consonant is

¹The retention of the stem vowel /a/ is in some cases optional and leads to varying forms like *nenggaun* vs. *nenggun* both: ‘she cooks’. It is not clear yet if there are conditioning factors involved. However, semantic distinctions have not been found.

²i.e. root consonants of o-stems do not show up in a-stems and vice versa.

represented in two classes, one of them has to be an e-stem. Thus, with respect to the root consonant distribution, a- and o-stems cluster together in opposition to e-stems. At least two other phenomena are worth mentioning: Firstly, e-stems always form the singular part of a verbal number pair, whereas the plural part is either an a-stem or o-stem. Secondly, the number of lexemes in each conjugation class seems to be such that e-stems are as numerous as a- and o-stems combined. These are some striking correlations in the distribution of root consonants and conjugation classes. Given the present state of knowledge, it is not possible to connect these correlations with a coherent semantic effect. Our best candidate - verbal number - only applies to a fraction of the verb lexicon.³ Diachronic explanations are also conceivable but not yet tangible. So for the moment, the best we can do is to give a short illustration of several formal groupings of verbs. In the remainder of this section, we will discuss verbs for each root consonant in turn. After that, a final subsection gives some remarks on the status of stem vowels.

7.2.1.1 Root consonants

According to the basic stem formation pattern, verb roots always end in a consonant. The root consonant delimits the root from the stem vowel and the subsequent suffixes. As discussed above, the type of root consonant in a verb is not without consequences. Interdependences exist between root consonant and stem vowel and, by extension, with the conjugation class of the respective lexeme. Moreover, there is an interaction with transitivity since intransitive verbs mostly cluster around two root consonants: /n/ and /k/. The paragraphs of this subsection are dedicated to root consonants and will provide exemplary roots and further information for each consonant.

Throughout this subsection, we will adhere to two formal conventions that are not followed in other parts of this work. Firstly, the roots will be labelled according to their root consonant. For example, all verb roots ending on /n/ are called N-roots. Secondly, we will cite verb roots here in their bare root form (*angg* ‘sleep’), whereas in all other parts of this work the infinitive

³Another candidate to explain conjugation classes and root consonant distribution semantically would be verbal aspect. After all, e-stems form the only conjugation class that is compatible with the perfective marker *-ten*. Moreover, the verbal lexicon of Mian, a related Ok language, is structured largely according to aspectual pairs of perfective and imperfective stems. We will discuss these issues in 7.4.5.

is the citation form of verbs (*anggi* ‘sleep’).

Note that there are some roots that lack a root consonant. These are treated as irregular and will be the topic of Section 7.2.2 among other types of irregular verbs.

N-roots

There are three groups of roots ending in /n/. One of them is irregular and will not be considered in this paragraph (for these *floating-/n/ roots* see Section 7.2.2.2). The remaining two groups differ in transitivity. Both groups belong to the same conjugation class, i.e. e-stems. As a rule, transitive and intransitive verbs with the same root consonant do not belong to the same conjugation class, but N-roots are an exception to this, since both transitive and intransitive verbs belong to e-stems (compare this e.g. with K-roots, where transitives are a-stems and intransitives are e-stems).

N-roots that form transitive verbs are illustrated by the following selected examples:

- | | | |
|-----|--------------|-----------------------|
| (1) | <i>awan</i> | ‘marry’ |
| | <i>badan</i> | ‘pull out (sg. obj.)’ |
| | <i>ban</i> | ‘call so. (once)’ |
| | <i>ban</i> | ‘open (e.g. door)’ |
| | <i>bodon</i> | ‘bind, tie’ |
| | <i>ipmon</i> | ‘smell sth.’ |
| | <i>kan</i> | ‘take (sg. obj.)’ |
| | <i>kubun</i> | ‘descend’ |
| | <i>mon</i> | ‘buy’ |
| | <i>telen</i> | ‘insert, connect’ |
| | <i>wun</i> | ‘enter’ |
| | <i>yopn</i> | ‘swallow’ |

Intransitive N-roots are mostly statives referring to physical or emotional states. In particular, most of them seem to designate the process that gradually leads to that state⁴, hence the gloss ‘become X’:

- | | | |
|-----|----------------|-------------------------|
| (2) | <i>bukn</i> | ‘become rotten, go bad’ |
| | <i>bulun</i> | ‘become cool’ |
| | <i>kalungn</i> | ‘be stubborn’ |
| | <i>kelemn</i> | ‘become wild’ |

<i>mopn</i>	‘be shocked’
<i>yitn</i>	‘become cold’
<i>yumun-</i>	‘ripen, become ripe’

Some N-roots belong to o-stems rather than e-stems. These are neglectable in number and treated as exceptions here until more N-roots from the class of o-stems are found. The attested roots are: *an* ‘eat’ and *yen* ‘build a house (sg.obj.)’.

Finally, the basic motion verbs *wVn* ‘go’ and *mVn* ‘come’ and derivations thereof have N-roots as well. However, as was the case with floating-/n/ roots, they are regarded as irregular, due to their harmonising root vowel (see Section 7.2.2.4 for details).

NGG-roots

Roots ending on /ŋg/ are either a-stems or e-stems, with both groups forming transitive verbs. Some example for NGG-roots from the class of e-stems are the following:

- (3)
- | | |
|----------------|--|
| <i>amangg</i> | ‘make a mistake by doing X’ ⁵ |
| <i>badangg</i> | ‘shoot (with arrow)’ |
| <i>idangg</i> | ‘straddle sth.’ |
| <i>kabangg</i> | ‘stare at’ |
| <i>kumungg</i> | ‘tell’ |
| <i>mangg</i> | ‘stab, pierce’ |
| <i>nangg</i> | ‘arrive at’ |

NGG-roots that are a-stems contain, inter alia, the following examples:

- (4)
- | | |
|----------------|--------------------------|
| <i>adangg</i> | ‘lick’ |
| <i>ambangg</i> | ‘work’ |
| <i>bangg</i> | ‘chop, split (pl. obj.)’ |
| <i>bengg</i> | ‘grind, break’ |
| <i>kilingg</i> | ‘pierce, puncture’ |

⁴It is not clear yet if all statives behave like that. For most lexemes of this group, the only data available are short dictionary examples. The exact semantics of these verbs is a matter of future research.

⁵This verb denotes that an action should not have been done. The action, occurring here as ‘X’, is expressed as a complement clause. Thus *amanggi* is really transitive.

<i>nengg</i>	‘cook’
<i>nimingg</i>	‘carry (pl. obj.)’
<i>ningg</i>	‘dig’
<i>tolongg</i>	‘warm up’
<i>yenengg</i>	‘bind, tie’

NGG-roots are among the largest group of stem types in the Muyu lexicon.⁶

G-roots

Roots ending in the consonant /g/ have to be distinguished from NGG-roots. The G-roots form a small group with only five items attested. All of them form transitive verbs and are a-stems. This makes /g/ the only root consonant that is restricted to a-stems, while the other velar consonants (i.e. /ŋg/ and /k/) are also attested in e-stems.

(5)	<i>alig</i>	‘straighten’
	<i>enkog</i>	‘swing’
	<i>keleg</i>	‘watch’
	<i>kebeg</i>	‘show’
	<i>nig</i>	‘hold (pl. obj.)’

Usually /g/ undergoes lenition to [y] in /VgV/ contexts (see Section 2.3.1). However, for a root consonant /g/, this lenition does not take place.

K-roots

Roots with the consonant /k/ are distributed over a- and e-stems. This distribution goes hand in hand with two features. Firstly, transitivity correlates with conjugation class. While K-roots in a-stems are transitive, those in e-stems are intransitive. Secondly, the conjugation class division is accompanied by a divergence of segmental configuration. In e-stems, the root consonant /k/ is always preceded by a vowel, whereas in a-stems, the /k/ is preceded by a voiceless obstruent /t/ or /p/. The latter phonotactic structure is peculiar since Muyu verb roots tend to avoid consonant clashes. Perhaps

⁶There is a group of verbs that are easy to confound with NGG-roots. Some irregular verbs are obligatorily marked with object suffixes (see Section 7.2.2.3) of which the second/third person singular marker is *-ngg*. This object index is formally equal to the root consonant of NGG-roots. They must not be confused.

K-roots with the /Ck/ pattern were originally derivations with a derivational morpheme -k (for a similar pattern in M-roots see below). However, evidence for this hypothesis is scarce. Neither is -k synchronically productive nor are counterparts without /k/ attested as independent lexemes.

The following roots of transitive a-stems follow the pattern /Ck/, where /C/ is either /t/ or /p/. The list is exhaustive:

- (6)
- | | |
|---------------|---|
| <i>ayopk</i> | ‘squeeze, knead’ |
| <i>nitk</i> | ‘dig’ |
| <i>nolotk</i> | ‘touch something several times’ |
| <i>tabatk</i> | ‘wash’ |
| <i>totk</i> | ‘perch (pl. subj.); step on sth. several times’ |
| <i>tutk</i> | ‘lean several object against other objects’ |
| <i>yubutk</i> | ‘clean’ |

Roots following the pattern /Vk/, all of them intransitive e-stems, are more numerous. Here are some examples:

- (7)
- | | |
|--------------|-----------------------------------|
| <i>ayak</i> | ‘be happy’ |
| <i>balak</i> | ‘disappear’ |
| <i>buk</i> | ‘be broken’ |
| <i>kok</i> | ‘fall (sg. subj.)’ |
| <i>monek</i> | ‘separate oneself (from a group)’ |
| <i>nok</i> | ‘fall (sg. subj.)’ |
| <i>ok</i> | ‘be broken’ |
| <i>tabok</i> | ‘mix, join’ |
| <i>tebek</i> | ‘come out’ |

As a root consonant, /k/ withstands lenition to [g] which is often witnessed in /VkV/ contexts.

B-roots

Roots ending in /b/ have to be distinguished from roots with /mb/ which are discussed below. B-roots are either o- or e-stems, but all of them form transitive verbs, with the exception of *teb* ‘get up, grow, move’. The two conjugation classes are unequal in size. Only four items of o-stems are attested so far:

- (8) *teleb* 'gather, attend'
wolob 'cut, break (pl.obj.)'
anggob 'forgive, hug'
bolob 'rock, move'

B-roots of e-stems are more numerous. Here are some examples:

- (9) *kolob* 'show'
teb 'get up, grow, move'
tokb 'split (sg.obj.)'
anggokb 'bend'
kilib 'put, keep (pl.obj)'

M-roots

Roots ending in /m/ mostly form transitive verbs and, with some exceptions, belong to o-stems. Note that, unlike other consonantic roots, M-roots are not distributed over two conjugation classes. Here are some examples:

- (10) *alum* 'seed, plant'
amtom 'ruin, break'
bim 'tie, attach rope'
kobom 'knock'
nam 'throw, throw away (pl.obj.)'
otwam 'seduce'
tam 'erase, wipe off, clean sth.'
wanam 'pick several fruits (pl.obj.)'

All the roots given in (10) have the stem vowel /o/. However, a few exceptional M-roots belong to different conjugation classes: *tem* 'see' and *nung-guluknam* 'pour liquid, spill' are e-stems, whereas *wum* 'blow, smoke', *bom* 'walk, travel' and the obligatorily object prefixed root *-bom* 'drive out, expell' are a-stems.

There is a group of M-roots that may have a diachronic origin in other word classes, as evidenced by their unusual phonological structure. While the roots given in (10) exhibit the sequence /Vm/ at their right edge, some other roots have the root consonant /m/ preceded by either a voiceless obstruent or /ŋ/. These roots are phonotactically unusual since Muyu verb roots tend to avoid consonant clusters. Some examples are:

- (11)
- | | |
|-----------------|--|
| <i>alikhm</i> | ‘apply’ |
| <i>anggingm</i> | ‘deny’ |
| <i>ayetm</i> | ‘wrap’ |
| <i>bekm</i> | ‘wait’ |
| <i>kadekm</i> | ‘confuse so., be confused’ |
| <i>nikm</i> | ‘tossing and winding in bed (especially babies)’ |
| <i>onongm</i> | ‘make’ |

The segmental structure of roots like those in (11) is probably the result of a morphological process that derives verbs from other word classes with a verbalising suffix *-m*. Evidence comes from two verb roots that still have a non-verbal counterpart: *ayet* ‘wrapping’ → *ayetm* ‘to wrap’, *nik* ‘earthworm’ → *nikm* ‘toss and wind in bed (especially babies)’, where the latter is a metaphorical derivation. Besides these transparent cases, the process is not productive anymore and most non-verbal forms have been lost. Furthermore, the presumably derived M-roots in (11) have a stem vowel /o/ like any other M-root. Hence there is no reason to distinguish “proper M-roots” from “derived M-roots” on a synchronic level of description.

L-roots

Roots ending in /l/ form transitive verbs and are e-stems without exception. Like M-roots, they do not extend to more than one conjugation class. The class of L-roots is rather large and does not display any observable irregularities. A few examples shall suffice:

- (12)
- | | |
|--------------|-----------------------------|
| <i>al</i> | ‘sweep, clean’ |
| <i>anal</i> | ‘cut down a tree (sg.obj.)’ |
| <i>nakol</i> | ‘loose, release, let’ |
| <i>nalil</i> | ‘drop (flowers, leaves)’ |
| <i>nil</i> | ‘dig’ |
| <i>talil</i> | ‘disperse’ |
| <i>wal</i> | ‘pierce’ |
| <i>yal</i> | ‘put (pl.obj.)’ |

MB-roots

Roots with /mb/ are all e-stems and, with the exception of *kambumb* ‘fall’, they all form transitive verbs. Similar to L-roots, MB-roots are rather

uniform, so a few examples shall suffice:

- (13) *bumb* 'break'
kambumb 'fall'
komb 'put (sg.obj.)'
kumb 'extinguish (e.g. fire), put out'
momb 'hit, shoot'
omb 'break'
womb 'cut off (sg.obj.)'
yomb 'try sth., turn on (device)'

7.2.1.2 Some remarks on stem vowels

Many verb forms do not contain stem vowels at all but append suffixes directly to the root. Throughout this study, this is most obviously seen in the standard citation form - the infinitive. As an example, the citation forms of the lexemes given in Table 7.2 are: *nenggi* 'cook', *aligi* 'straighten', *kobomi* 'knock', *wolobi* 'cut, break (pl.o.)', *nakoli* 'free, release' and *kamoni* 'insert, put in' - none of which carry the respective /a/, /o/ or /e/. Thus, the need for an additional vowel in the verb stem is not immediately obvious. In this short subsection, I will defend the analytical decision to interpret the additional vowel as part of the verb stem. My argumentation depends on evidence from all areas of verb morphology, so readers unfamiliar with the other parts of this chapter may skip this subsection and come back at a later point.

Reconsidering the basic stem formation pattern at the beginning of 7.2.1, we find that the verb stem is composed of a root and a stem vowel. While the root is not further divisible morphologically, the stem vowel is in fact omitted in many inflected forms. Hence, the stem vowel is not part of the root itself but, on the other hand, does not have morpheme status since it lacks semantic content and its presence is triggered phonologically. Therefore, we posit an intermediate level 'verb stem' between the verb root and the fully inflected word form.

The presence of the stem vowel in an inflected verb form depends on which morpheme is suffixed to the verb stem. The vowel is kept with *-d* 'DUR', *-n* 'SS' and *-gVl* 'SS.SEQ'. In contrast, the vowel is dropped with *-i* 'INF', *-e* 'SM', *-an* 'IRR', *-ok* 'SBJV', *-o* 'SM', *-en* 'N', all subject suffixes⁷

⁷An exception would be a-stems which may retain the /a/ in final verbs if the subject

(*-an/-ep/-on/etc.*) and all imperative subject suffixes (*-a/-e/-ok/-uk/etc.*). Some examples are given in (14). As indicated above, stem vowels do not occur before vowel-initial suffixes. If, on the other hand, the suffix consists of a consonant or a syllable with consonant onset (*-gVl*), the stem vowel is kept.

- (14) a. *An-up*.
eat-1PL
'We eat/ate.'
- b. *An-em*.
eat-1PL.IMP
'Let's eat'
- c. *Ano-d-up*.
eat-DUR-1PL
'We are/were eating.'

Furthermore, in some contexts the stem vowel disambiguates between two possible morphological structures, namely between same subject forms and irrealis. Compare the following examples:

- (15) a. *Anonup*
an \mathbf{o} -n-up
eat-SS-1PL
'We ate and then we ...'
- b. *Ananup*
an-an-up
eat-IRR-1PL
'We will eat.'

The vowels /o/ and /a/ distinguish between the SS form in (15-a) and the IRR form in (15-b). Both suffixes have a consonant /n/ at their core. Obviously, this disambiguation does not work if the stem vowel is /a/:

suffix is directly suffixed to the stem.

- (16) a. *Nengganup*
 nengga-n-up
 cook-SS-1PL
 ‘We cooked and then we ...’
- b. *Nengganup*
 nengg-an-up
 cook-IRR-1PL
 ‘We will cook.’

The forms in (16) are homophonous since *nenggi* ‘cook’ has the stem vowel /a/ which is identical to the /a/ in *-an* ‘IRR’.

Interpreting the facts given above, there are at least three possible ways to determine the function of the stem vowel. Firstly, the stem vowel is an epenthetic vowel whose quality is lexically specified according to three conjugation classes. Its main function is to maintain the phonotactical structure of the verb in order to avoid consonant clusters if consonant-initial suffixes are attached. This is the preferred interpretation in this study.

Secondly, the stem vowel could be interpreted as a morpheme that is suffixed to the root but deleted before vowel-initial suffixes. However, given the present state of knowledge, there is no meaning we could attribute to the vowel. Since morphemes are per definition meaning bearing units, the vowel is excluded from a morphemic interpretation.

The third possible interpretation of the stem vowel deserves more attention here. It is possible to attribute the vowel directly to the suffixes it appears with. Since the vowel occurs with three morphemes only, the descriptive effort is not overly costly. The resulting suffixes would be *-ad/-od/-ed* ‘DUR’, *-an/-on/-en* ‘SS’ and *-agVl/-ogVl/-egVl* ‘SS.SEQ’. Thus each suffix would have three allomorphs. Selecting the correct allomorph would depend on the respective root, i.e. via lexical specification. Such an analysis has the advantage that verb forms consist of roots and suffixes only without the need to posit an additional level ‘verb stem’.

However, the disadvantages of this analysis are considerable. We refuse it for the following three reasons: First, we would have to explain why exactly these three morphemes have developed allomorphy but not e.g. *-an* ‘IRR’ or *-i* ‘INF’. Second, a-stems sometimes retain their /a/ when a subject index is directly suffixed to the stem of a final verb, leading to forms like *nenggaup* ‘we

cooked'. This means that we would also need to posit allomorphy for subject suffixes, e.g. *-up/-aup* '1PL'. Contrary to the other allegedly allomorphic suffixes, there would be only two allomorphs /a/ and non-/a/. This would call for an explanation for the missing /e/ and /o/ forms, e.g. **-eup/-oup*. Besides that, there is strong evidence that /a/ does not belong to the suffix in forms like *nenggaup* 'we cooked'. Otherwise, we would expect an irrealis form like in (16-b) to be **nengg-an-aup*. Since this is not the case, we would need to posit a rule that the /a/ allomorph of the subject suffix is blocked if an irrealis morpheme intervenes in order to obtain the correct form *nengg-an-up*. It is easier to attribute the /a/ to the verb stem in the first place.

Third, attributing the vowel to the suffix, the SS.SEQ morpheme would have two vowels which are both sensitive to their environment but in different ways. The general form *-VgVl* would select the first vowel according to the lexical specification of the root (/a/, /o/ or /e/), whereas the second vowel would harmonise with the vowel of the subsequent morpheme, e.g. in *nenggagulup* 'We cooked and then we ...'. Of course, this is not impossible. However, a more parsimonious approach with one harmonising vowel (i.e. *-gVl*) seems more elegant.

To conclude, taking these three points into consideration, we decide against an analysis based on allomorphs. Rather, we analyse the stem vowel as an epenthetic vowel whose quality is lexically specified by the root. The presence or absence of the vowel is triggered by a phonological criterion: the stem vowel occurs before vowel-initial suffixes only. Its main function is to avoid consonant clusters in the inflected verb form.

7.2.2 Irregular verbs

The regular verbs discussed so far conform to the basic stem formation pattern illustrated in Figure 7.1 above. To remind the reader: A verb stem is composed of a root and a stem vowel. The root is segmentally (but not morphologically) analysable into a root nucleus and a root consonant. Verb stems of this pattern are further suffixed to form finite verbs. Suffixes are attached according to the template outlined in the introductory section.

Irregular verbs are those verbs that deviate from the basic stem formation pattern. Deviations may be of five different kinds: vowel roots, roots with floating /n/, object verb roots, roots with harmonising vowel and defective verbs. Each kind will be discussed in turn in the following sections. As we will see, most irregularities pertain to the absence of structural elements such

as root consonants or stem vowels.

7.2.2.1 Vowel roots

Quite a few roots of the Muyu verb lexicon belong to a group that shall be designated ‘vowel roots’ in this chapter. Such roots do not comply to the basic pattern insofar as they do not possess a final consonant and do not combine with a stem vowel. Vowel roots always end in /a/; other vowels are not attested. Table 7.3 illustrates some examples of vowel stems. The last two rows of the table show regular roots for comparison.

Vowel roots	FT	Nucleus	Cons.	St. vowel
aka	‘pile up’	aka	-	-
bada	‘pull out (pl.o.)’	bada	-	-
bamba	‘call so. several times’	bamba	-	-
belewa	‘fight’	belewa	-	-
bida	‘donate’	bida	-	-
moneka	‘deceive’	moneka	-	-
tanda	‘search’	tanda	-	-
Regular roots				
nengga	‘cook’	ne	ngg	a
kobomo	‘knock’	kobo	m	o
kamone	‘insert, put in’	kamo	n	e

Table 7.3: Stem patterns of 7 exemplary verbs with vowel roots compared with 3 regular roots.

Unlike regular verbs, we cannot analyse vowel stems into a root nucleus, a root consonant and a stem vowel - mainly for two reasons: Firstly, vowel roots keep the final /a/ throughout the entire inflectional paradigm. For instance, the infinitive forms of the verbs in Table 7.3 are: *akai*, *badai*, *bambai*, *belewai*, *bidai*, *monekai*, *tandai*. In contrast, regular a-stems never keep their stem vowel in the infinitive, e.g. *nengga* [STEM] > *nenggi* [INF] ‘cook’. Hence the motivation to interpret /a/ as outside of the root is not present in verbs like *belewai*. Secondly, the consonant preceding /a/ in vowel stems deviates from root consonants in regular verbs. As seen in 7.2.1 above, verbs with a stem vowel /a/ must have either /ŋg/, /k/ or /g/ as a root consonant. Vowel stems, on the other hand, are not subject to such a restriction. To sum up,

neither the final vowel nor the penultimate consonant follow the basic verb stem pattern outlined in Section 7.2.1.

A small group of vowel roots shall be mentioned separately here. These roots are monosyllabic and exhibit the segmental structure /Ca/. Apart from their minimal form, they resemble the more complex vowel stems seen above. They always end in /a/, which is kept throughout the whole inflectional paradigm. The following is an exhaustive listing of all the lexemes in this group:

- (17) *ba* - ‘make a hut’
 ka - ‘put (pl.o.)’
 na - ‘fill in (solid objects)’
 ta - ‘shave’
 wa - ‘pick (pl.o.)’

Vowel roots must not be confused with object verbs as discussed in 7.2.2.3. Both are irregular in that they lack a root consonant and a stem vowel. However, roots from object verbs cannot stand without an object suffix and thus differ from proper vowel roots.

7.2.2.2 Roots with floating /n/

Another group of irregular verbs have a root consonant /n/ that is absent in some parts of the inflectional paradigm. This segment will be named *floating /n/* in what follows. Roots with floating /n/ must be distinguished from regular verb roots with a root consonant /n/ which always keep their /n/ throughout the whole inflectional paradigm.

A selection of forms of the verb *ambeni* ‘swim’ illustrate the pattern:

- (18) a. *amben-i*
 swim-INF
 ‘swim’
 b. *ambe-up*
 swim-1PL
 ‘We swim.’
 c. *ambeo-d-up*
 swim-DUR-1Pl

‘We are/were swimming.’

- d. *amben-an-up*
swim-IRR-1PL
‘We will swim.’

- e. *amben-em*
swim-1PL.IMP
‘Let’s swim!’

All other person/number combinations of the conjugation of *ambeni* behave like the example forms given in (18). The pattern can be summarised as follows: the floating /n/ is present before the irrealis suffix *-an*, all imperatives and the infinitive *-i*. It is deleted before a plain subject suffix, i.e. the realis forms and the durative *-d*. A possible explanation for this distribution could be an underlying realis/irrealis distinction. All forms dropping the floating /n/ designate an event that is realised at the time of utterance, whereas the presence of a floating /n/ is associated with designations of a non-realised event. However, the number of lexical items in this group is very limited and we leave this as a question for future research.

One peculiarity of roots with floating /n/ is the presence of the stem vowel. As seen in (18-c), the durative exhibits /o/ between the root and the durative suffix *-d*. This /o/ is the regular stem vowel. It keeps its place despite the absence of the root consonant. This phenomenon is another argument to analyse the stem vowel as being outside of the root as discussed in 7.2.1.2.

Further verbs with floating /n/ are: *alini* ‘sit, live (pl.sbj.)’, *amini* ‘plait (sg.o.)’ and *opkoni* ‘think’. As was the case with *ambeni* ‘swim’ above, all these roots combine with the stem vowel /o/, i.e. they are o-stems according to conjugation class.

7.2.2.3 Object verb roots

Some verbs obligatorily take a suffix that agrees with the clausal object in person, number and gender. Object indexing suffixes will be discussed in 7.3.2. Most transitive verbs of Muyu can take such a suffix optionally but object verbs can never be formed without them. The term ‘object verbs’ refers to a small subclass of verbs that obligatorily takes object indexes and

will be explained more thoroughly in Section 7.3.

Object verb roots are irregular inasmuch as they do not contain a root consonant or a stem vowel. In this respect, they resemble verbs with vowel roots. In contrast to vowel roots, object verb roots always take an object indexing suffix which is basically a consonant. It is as if the object suffix takes the place of the root consonant.⁸ However, since roots are morphologically simple, we cannot analyse object suffixes as part of the root. Some examples:

- (19) *Ka-y-un*
give-PL.RCV-3SG.F
'She gave (something) to us/you(pl)/them.'
- (20) *Nimi-d-ep*
hate-1SG.EXP-2SG
'You hate me.'
- (21) *Ola-ngg-up*
advise-2/3SG.RCV-1PL
'We advise you/him/her.'

Further examples for object verb roots are: *bele-* 'cure', *bulu-* 'meet', *kabaka-* 'be angry at', *kili-* 'confuse', *kolo-* 'leave someone'.

A second difference from vowel roots is that the final vowel of an object verb is not restricted to /a/ but can be any vowel phonologically available. The examples just given end in /a/, /e/, /i/, /o/ and /u/. In this respect, object verb roots behave more like regular roots than vowel roots.

Finally, a phenomenon worth mentioning is that some object verbs are related to regular verbs with similar meanings. The counterpart of the object verb *ola-* 'advise' as seen in (21) is the regular verb root *olal* 'talk'. The regular verb root has a (non-morphemic) segment /l/ exactly at the place where the object suffix goes in the object verb. It seems likely that a diachronic process has affected this variation. Further research is needed.

⁸This is why Drabbe (1954) analysed verbs with object suffixes as *secondary stems*. These are built from *primary stems* which are basically all verb roots before the attachment of an object suffix regardless if the object suffigation is optional or obligatory. Due to Drabbe's focus on morphology and the lack of texts in his description, the reader gets the impression that secondary stems are abundant. This is not confirmed by our data. Object suffixes rarely occur with verbs unless they are obligatory.

7.2.2.4 Roots with a harmonising vowel

A small group of verbs are irregular concerning the root nucleus. The regular stem formation pattern presupposes an invariant nucleus, and even the irregular types discussed so far were mostly irregular in regard to the root consonant or the stem vowel but not the nucleus. However, it is the root nucleus that is irregular in verbs like *wini* ‘go’ and *mini* ‘come’ since the quality of the central vowel depends on the suffix immediately following the root.

The nucleus vowel of certain verbs harmonises in quality to the immediately following suffix. This pattern is illustrated in the following forms of *wini* ‘go’:

- (22) a. *Won-on*
go-3SG.M
‘He goes.’
- b. *Wun-un*
go-3SG.F
‘She goes.’
- c. *Wan-an-un.*
go-IRR-3SG.F
‘She will go.’
- d. *Won-ok.*
go-3SG.M.IMP
‘Let him go!’

The forms in (22) together with the already cited infinitive form *wini* illustrate the pattern quite well. The root vowel does not inflect with the subject suffix but rather harmonises with the following vowel. This is demonstrated by the irrealis form in (22-c) in which the root vowel becomes /a/ in accordance with irrealis *-an*, whereas the more distant subject index *-un* has no influence.

Verbs belonging to this group are only a few in number and are mostly derived from *wini* and *mini*: *kawini* ‘go up, climb’ and *kamini* ‘come up, rise’, *kolo wini* ‘go back, go home’ and *kolo mini* ‘come back, come home’,

etc. Furthermore, we find the serialised continuative verb *bili* ‘AUX.CONT’ and a serialised verb with yet unclear semantics *dili* ‘?’. Except for these verbs, vowel harmony is not a prominent feature of Muyu.

7.2.2.5 Defective verb roots

The last group of irregular verbs to be mentioned here is a group of vowel roots which are defective in the sense that they cannot inflect for certain morphological forms directly but need an augmented allomorph. The roots in question are *al-* ‘stand’, *ti-* ‘sit’ and *weda-* ‘hear’. These roots occur as allomorphs *alebVl*, *timbVl* and *wedambVl* in certain forms. The attached element *-bVl* in these forms is lexicalised from an auxiliary with continuative meaning as will be explained below.⁹

Besides the defectiveness of the paradigms discussed presently, two of the three verbs from this group are also irregular in relation to the basic stem formation pattern of 7.2.1, i.e. the roots of *ti-* and *weda-* do not have a root consonant.

A couple of forms of the verb root *ti* ‘sit’ shall illustrate the pattern:

- (23) a. *timbil-i*
sit-INF
‘sit’
- b. *ti-en*
sit-3SG.M
‘He sits/sat.’
- c. *tio-d-en*
sit-DUR-3SG.M
‘He is/was sitting.’
- d. *timbal-an-on*
sit-IRR-3SG.M
‘He will sit.’

⁹The *m* in some orthographic forms is based on prenasalisation of /b/ and must not be seen as phonemic.

- e. *tim**bel**-em*
 sit-1PL.IMP
 ‘Let’s sit!’

As can be seen from the examples, the allomorphs including *-bVl* obligatorily occur before irrealis *-an*, all imperatives, and the infinitive *-i*. This is the same distribution as for /n/ in floating-/n/ roots discussed in 7.2.2.2.

The variants with *-bVl* have their origin in the auxiliary *bili* which marks the continuative aspect periphrastically (see Section 7.4.4). As in all auxiliary constructions, a serial marker *-e* is attached to the root of the main verb, e.g. *an* ‘eat’ becomes *ane bili* ‘keep on eating’. In contrast, the allomorphs discussed in this section have *-bVl* directly attached to the root.

Furthermore, the auxiliary is compatible with most verbs and can be added optionally to express continuative meaning. In contrast, *-bVl* is restricted to the three defective roots, which are marked obligatorily in the forms mentioned above. For example, the infinitive can never be based on the non-augmented root: **ti-i* [sit-INF].

Although the verbal origin of *-bVl* is transparent, there is evidence that this element is more or less lexicalised in defective verb roots. Firstly, the allomorphic variants including *-bVl* in (23) above do not exhibit “more” continuative meaning than those without it, e.g. the infinitive *timbili* ‘sit’ does not imply a longer sitting event than *tien* ‘he sits’. Secondly, to convey continuative meaning, the auxiliary *bili* is serialised to the augmented variant, which leads to double marking:

- (24) *Tim**bel**-e bal-an-an.*
 sit-SM AUX.CONT-IRR-1SG

‘I will keep sitting.’

[Fieldnotes]

The lexicalisation process of *-bVl* in defective verb roots is clearly not completed, as it is only present in certain inflectional forms. Nonetheless, in those allomorphs including *-bil*, it has lost its continuative meaning. Therefore, we do not analyse *-bVl* as a separate morpheme but rather propose allomorphic variation: *ale/alebVl*, *ti/timbVl* and *weda/wedambVl*. The auxiliary verb *bili* ‘AUX.CONT’ is still fully compatible with these verbs as seen in (24).¹⁰

¹⁰Muyu *bili* is a cognate to Mian *-bl* that is glossed ‘IPFV.AUX’, i.e. imperfective auxiliary, in Fedden (2011). Since Muyu does not distinguish imperfective and perfective verb stems (as Mian does), we opt for the term ‘continuative’ in this study. Mian also

The stem vowels of *al-* and *ti-* are /o/, while *weda-* behaves like a vowel root in /a/ and does not possess a stem vowel.

To sum up, defective verb roots are irregular in two respects. First, two of them do not contain a root consonant, so that they are similar to vowel roots. And second, all three of them have an augmented allomorph that is complemented by *-bVl* and will be applied in certain forms of the paradigm.

7.3 Argument indexing

The Muyu verb indexes its arguments with affixes. Subjects are indexed with suffixes, whereas objects can be marked by suffixes and prefixes. The use of object prefixes is lexically specified and applies to a small group of verbs only. Object suffixes are obligatory for a small class, but optionally possible for most verbs. Subject suffixes are necessary for every finite verb.

The phenomenon of object marking deserves special attention here, as it agrees with a general trend in some subbranches of TNG. In the following, we label verbs that obligatorily take object affixes *object verbs*. This term originally stems from Pilhofer (1928, 1933) for verbs with object prefixes in Kâte¹¹ and was subsequently used by Suter (2012) for the Finisterre-Huon subbranch of TNG. Suter compares object verbs across the subbranch and is able to reconstruct five proto Finisterre-Huon forms. Additionally, three of the reconstructed forms have cognates in other TNG subfamilies.

Ok languages also have object verbs. Fedden (2011:282) identifies 12 verbs with obligatory object suffixing, whereas prefixing is more complicated, since Mian has a distinction between pronominal and classificatory prefixes which is absent from Muyu. As for Muyu, we find around 20 verbs with obligatory object suffixing and five object verbs with prefixes. All these languages have

comprises verbs that require *-bl* for certain inflectional forms. These structures have been described convincingly and quite elegantly as ‘auxiliary-serialized verbs’ (Fedden 2011:303-309). However, we do not apply the same analysis to verbs like *timbVl* in Muyu for several reasons. Firstly, the phenomenon is very limited in Muyu. There are only three lexical items and one augmenting element *-bVl*. In contrast, Mian includes eight different auxiliaries attached to a large variety of verbs. Secondly, Mian auxiliaries have clear aspectual semantics whereas the continuative meaning in Muyu *-bVl* is no longer tangible. Thirdly, the Muyu auxiliary *bili* serialises to forms already including *-bVl* which leads to double-marking as seen in example (24). To our knowledge, no such cases have been reported from Mian.

¹¹Initially as German ‘Objektverben’.

in common that the majority of verbs does not belong to the group of object verbs.

7.3.1 Subject suffix

Finite verbs obligatorily have a subject suffix which indexes person, number and (only in the third person) gender of the subject referent. This suffix shows agreement with an overt subject NP if present. Otherwise, the subject suffix alone meets the requirement to identify the subject referent of the verb. Thus, a finite verb is a grammatically complete utterance in Muyu.

In accordance with the morphological template given in the introductory section of this chapter, a subject suffix is in slot 4, i.e. it is mostly the last morpheme with the exception of perfective *-ten*. All remaining verb suffixes stand between the stem and the subject suffix.

Subject suffixes are organised in three paradigmatic sets, illustrated in Table 7.4. The first set applies to final verbs, while the second set is associated with medial verbs. Suffix forms of this set are reduced forms of the first set, namely they lack a final /n/ in first and third person singular. The third set is used in imperative mood and is formally more divergent from the former two. Syntactically, imperative suffixes are also attached to final verbs.

Number	Person	Final	Medial	Imperative	(Pronoun)
SG	1	-in, -an, -a	-i	-a	(<i>ne</i>)
	2	-ep	-ep	-e	(<i>kep, kup</i>)
	3 masc	-en, -on, -o	-e	-ok	(<i>ye</i>)
	3 fem	-un, -u	-u	-uk	(<i>yu</i>)
PL	1 PL	-up	-up	-em	(<i>nup</i>)
	2 PL			-ime	(<i>kip</i>)
	3 PL	-ip	-ip	-imok	(<i>yi</i>)

Table 7.4: Three sets of subject suffixes for final verbs, medial verbs and imperative mood. Free pronouns (in brackets) are given for comparison.

As can be seen in Table 7.4, the three sets differ in the person distinctions they make. All three persons are distinguished in the singular forms only. The plural forms have a three-way distinction in imperative mood, whereas final and medial verbs show a contrast of first person vs. non-first person.

The final verb set has allomorphic variants in first and third person masculine that will be discussed below. As will be shown in the following paragraph, the subject suffixes of the final and medial sets formally resemble free pronouns. This is less so with regard to their paradigmatic distinctions, since the free pronouns distinguish second and third person plural as well as masculine and feminine gender in second person singular. From that point of view, the free pronoun paradigm has more distinctive force than the subject suffixes.

As to the forms of the suffixes, we notice a resemblance with free pronouns in the first two sets, whereas the imperative mood set is more divergent. For example, final and medial *-ep* ‘2SG’ is apparently related to the pronoun *kep* ‘you’, as is *-up* ‘1PL’ to *nup* ‘we’. In third person, the vowel distinction /e/ for masculine, /u/ for feminine and /i/ for plural is equal in subject suffixes and free pronouns (for the allomorphs of the singular see below). The medial verb set shows more similarity with free pronouns in the first and third person singular forms since they both lack the consonant coda /n/ that is characteristic for final verbs.¹² In contrast, the consonant coda /p/ of the remaining cells is present in forms of both the final verb set and the medial verb set.

The imperative mood set is rather dissimilar both to the first two sets and the free pronouns. For example, masculine gender is marked in the third person with /o/ instead of /e/ (but see the allomorphs in the final set). The third person singular forms of the imperative set are the only subject suffixes that contain the segment /k/. The plural forms all contain the segment /m/. Although /m/ is not morphologically separable, the pairs *-e* ‘2SG’ and *-ime* ‘2PL’ as well as *-ok* ‘3SG.M.IMP’ and *-imok* 3PL.IMP are obviously formally related. Besides all that, we need to mention here the fact, that *-ok* ‘3SG.IMP’ is homophonous with the subjunctive suffix *-ok* ‘SBJV’ and very likely its origin (see Section 7.6.2).

A peculiarity of the final verb set in Table 7.4 is the existence of allomorphs in first person singular (*-in*, *-an*, *-a*) and third person singular (*-en*, *-on*, *-o*). The choice is triggered by several conditions. If the subject suffix is directly attached to the stem, the high vowel alternatives (*-in* ‘1SG’, *-en* ‘3SG.M’) occur with roots that have the stem vowel /o/, while the low vowel alternatives (*-an* ‘1SG’, *-on* ‘3SG.M’) appear with roots with the stem vowel

¹²This is due to the Muyu tendency that non-finality is indicated by open syllables. For example, most non-finite verb forms end in an open syllable, as do clause clitics that indicate non-finality.

/e/. In both cases, the stem vowel itself is deleted. Example (25) illustrates the conjugation of the stem *kumungge* with the stem vowel /e/, while (26) shows the conjugation of *ano* with /o/.

- (25) a. *Kumungg-an.*
 speak-1SG
 ‘I spoke.’
- b. *Kumungg-on.*
 speak-3SG.M
 ‘He spoke.’
- (26) a. *An-in.*
 eat-1SG
 ‘I ate.’
- b. *An-en.*
 eat-3SG.M
 ‘He ate.’

As for stems with the stem vowel /a/, the situation is more complex. Unlike the verbs with e- and o-stems, the stem vowel /a/ is sometimes retained when a subject suffix is attached. The presence or absence of the stem vowel is a trigger for the allomorphy in the suffix: if /a/ is kept, the high vowel alternatives (*-in* ‘1SG’, *-en* ‘3SG.M’) occur. Otherwise, if the stem vowel is deleted, the low vowel alternatives (*-an* ‘1SG’, *-on*) are selected:

- (27) a. *Yenengga-in.*
 bind-1SG
 ‘I bound it.’
- b. *Yenengg-an.*
 bind-1SG
 ‘I bound it.’
- (28) a. *Yenengga-en.*
 bind-3SG
 ‘He bound it.’

- b. *Yenengg-on.*
 bind-3SG
 ‘He bound it.’

The same variation concerning the retention or deletion of /a/ appears with all other subject suffixes from the final verb set, regardless of whether they have allomorphy:

- (29) a. *Yenengga-up.*
 bind-1PL
 ‘We bound it.’
- b. *Yenengg-up.*
 bind-1PL
 ‘We bound it.’

It is yet unclear what causes the presence or absence of the stem vowel /a/. Both variants, with or without /a/, are well attested in the corpus for many verbs of this conjugation class and no obvious difference in syntactic context was found. Furthermore, elicitation did not yield any difference in meaning. Speakers use both forms interchangeably and lack any awareness of semantic variation.

The second factor that influences the choice of the allomorph has to do with morphemes intervening between the stem and the subject suffix. Here we find the high vowel alternatives (*-in* ‘1SG’, *-en* ‘3SG.M’) in the durative verb form (with *-d*), while the low vowel alternatives (*-an* ‘1SG’, *-on* ‘3SG.M’) attach to the irrealis verb form (with *-an*).¹³ This allomorphic choice is independent of the stem vowel. The following examples show the e-stem *kumungge*:

- (30) a. *Kumungge-d-in.*
 speak-DUR-1SG
 ‘I am/was speaking.’

¹³Durative *-d* and irrealis *-an* of slot 2 in the verbal template are the only morphemes affecting this allomorphy. The S/R markers of slot 3 are used in medial verbs and therefore trigger another subject suffix set altogether.

- (31) b. *Kumungge-d-en.*
 speak-DUR-3SG.M
 ‘He is/was speaking.’
- a. *Kumungg-an-an.*
 speak-IRR-1SG
 ‘I will speak.’
- b. *Kumungg-an-on.*
 speak-IRR-3SG.M
 ‘He will speak.’

The stems *ano* in (32) and *kelega* in (33) conjugate in this context just like *kumungge* in the examples above. For reasons of space we refrain from giving all possible combinations in the examples.

- (32) a. *Ano-d-in.*
 eat-DUR-1SG
 ‘I am/was eating.’
- b. *An-an-an.*
 eat-IRR-1SG
 ‘I will eat.’
- (33) a. *Kelega-d-en.*
 watch-DUR-3SG.M
 ‘He is/was watching.’
- b. *Keleg-an-on.*
 watch-IRR-3SG.M
 ‘He will watch.’

The third factor applies exclusively to verbs with the stem vowel /e/. As was discussed in 7.2.1, this is the only conjugation class that is compatible with the perfective marker *-ten*. This morpheme is attached after the subject suffix and, if present, triggers the short forms (i.e. without /n/) of the low vowel alternatives (*-a* ‘1SG’, *-o* ‘3SG.M’). The formal difference between the presence and absence of *-ten* is illustrated in (34) and (35). In both cases,

the stem vowel is absent, as expected. Note that the semantic differences between the (a) and (b) forms in (34) and (35) are not captured by the English translations.

- (34) a. *Kumungg-a-den*.
speak-1SG-PFV
'I spoke.'
- b. *Kumungg-an*.
speak-1SG
'I spoke.'
- (35) a. *Kumungg-o-den*
speak-3SG.M-PFV
'He spoke.'
- b. *Kumungg-on*.
speak-3SG.M
'He spoke.'

To sum up the conditions for the allomorphic variation in first and third person singular of the final verb set, we find the high vowel alternatives (*-in* '1SG', *-en* '3SG.M') (a.) directly suffixed to stems with the stem vowel /o/, or (b.) stems with /a/ if the vowel surfaces, or (c.) in durative verb forms of all conjugation classes. The low vowel alternatives (*-an* '1SG', *-on* '3SG.M') are (a.) directly suffixed to stems with the stem vowel /e/, or (b.) stems with /a/ if the vowel is deleted or (c.) in irrealis verb forms of all conjugation classes. Finally, the short low vowel alternatives (*-a* '1SG', *-o* '3SG.M') are used if the verb has a subsequent perfective marker *-ten*.

It is difficult to generalise these conditions of allomorphic choice. Neither phonology (stem vowels¹⁴) nor morphology (conjugation classes) nor semantics (realis/irrealis, imperfective/perfective) seem to fully explain the system. The exact mechanism of this choice is left to future research.

¹⁴A phonological process of dissimilation would be conceivable. High stem vowels trigger low vowel suffixes and vice versa. However, this hypothesis leaves open more questions than it answers. What do we need dissimilation for, if the stem vowel disappears anyway? How to account for the fact that /a/ can be retained? What about the variation with intervening morphemes?

7.3.2 Object suffix

The second type of argument index available for verbs is the object suffix. The grammatical relation of object will be defined in Section 9.3.2. As is the case with subject indexing, the object suffix can cross-reference an overt NP or stand as the sole index to the respective participant in the clause.

According to the morphological template given in the introductory section of this chapter, object suffixes are in slot 1. All other suffixes come after it. Thus, object suffixes are more closely tied to the verb stem than other suffixes; furthermore, object suffixes are the only morphemes (besides the stem) that are compatible with the infinitive: *awa-d-i* [follow-1SG.O-INF] ‘follow me’.

The object suffix paradigm is given in Table 7.5. It is simpler than each of the three paradigm sets of subject suffixes. The basic distinction in the object suffix set is between singular and plural. All plurals are marked with *-y*. In the singular, a split between first person and non-first person occurs. Gender is not indexed in this paradigm.

	Singular	Plural
1	<i>-d</i>	
2		<i>-y</i>
3	<i>-ngg</i>	

Table 7.5: Object suffixes directly attached to the verb stem.

Formally, the singular suffixes in Table 7.5 neither have resemblance with subject suffixes nor with free pronouns. The plural *-y*, however, is remotely similar to the third plural pronoun *yi* ‘they’. In contrast to many other suffixes, object suffixes comprise of consonants only.¹⁵

The following examples illustrate object suffixes with the verb *nimi* ‘hate’:

¹⁵In contrast to other argument indexes, high dialectal variance is associated with object suffixes. Drabbe (1954) reports the following suffixes: *-w* ‘1SG’, *-pt* ‘2SG’, *-n/-mb* ‘3SG.M/F’, *-nd* ‘PL’ for the Ninati dialect and *-md* ‘2SG/3SG.M’, *-mk* ‘3SG.F’, *-mj* ‘PL’ for the Metomka dialect. Christensen’s (2013) forms for Yonggom conform to the Ninati set. Comparing these sets with each other and with the set reported in this study, we do not only find high formal divergence but also different paradigmatic oppositions. The sets are probably not related diachronically. This finding is puzzling, since other bound morphology is relatively stable across the whole Ok family (Healey 1964).

- (36) a. *Markus=bet nup mom nimi-ngg-en.*
 Markus=OBL 1PL uncle hate-2/3SG.O-3SG.M
 ‘Markus hates our uncle.’
- b. *Kaduk (nup) nimi-y-ip.*
 person 1PL hate-PL.O-2/3PL
 ‘People hate us.’
- c. *Kip ko (ne) nimi-d-o-d-ip ko?*
 2PL PTC 1SG hate-1SG.O-EP-DUR-2/3PL Q
 ‘Do you hate me?’ [Dictionary]

With respect to object marking we can distinguish three types of verbs: (1.) Intransitives are barred from object indexing. (2.) **Object verbs** are a minor group of transitive and ditransitive verbs that obligatorily take an object suffix. (3.) The majority of transitive verbs can take an object suffix optionally. The latter two will be discussed in turn.

In the introduction to this section, the term ‘object verbs’ was introduced for verbs that always index their object. Table 7.6 lists all the verb stems that have to take an object suffix. So far 20 lexemes were found. The hyphen at the end of each form indicates the position where an object suffix must be attached. The third column identifies the semantic role of the referent.

Stem	Translation	Role of indexed referent
<i>ba-</i>	‘give only a piece of something’	Receiver
<i>bele-</i>	‘heal’	Beneficient
<i>bula-</i>	‘insult’	Experiencer
<i>bulu-</i>	‘meet’	Patient
<i>ka-</i>	‘give’	Receiver
<i>kabaka-</i>	‘be angry at, to anger’	Theme/Experiencer
<i>kakme-</i>	‘wake so. up’	Patient
<i>kamo-</i>	‘accuse’	Experiencer
<i>ketme-</i>	‘teach’	Beneficient
<i>kene-</i>	‘look at’	Stimulus
<i>kikmo-</i>	‘scare’	Experiencer
<i>kili-</i>	‘confuse’	Experiencer
<i>kodo-</i>	‘surround’	Patient
<i>konawi-</i>	‘punish by withholding sth.’	Experiencer

<i>nanagme-</i>	‘persuade’	Experiencer
<i>nimi-</i>	‘hate’	Theme
<i>o-</i>	‘surprise’	Experiencer
<i>tamangga-</i>	‘insult’	Experiencer
<i>ta-</i>	‘scold’	Experiencer
<i>-mo-</i>	‘give’	Receiver

Table 7.6: Verb stems with obligatory object suffix.

The majority of transitive verbs can take object suffixes optionally, a process that represents an instance of what was termed ‘optional agreement’ (Corbett 2006:14). There seems to be neither semantic nor morphological constraint to object indexing. Compare the following examples with the verb *temi* ‘see’:

- (37) *Teme-ngg-ep-ten!*
 see-2/3SG.O-2SG-PFV
 [Trying to catch fish. Jointly looking for a fish that has escaped:]
 ‘You have seen it!’ [muyu035:044]
- (38) *Ma tem-e, ne men=tem oyom ege!*
 IMP see-2SG.IMP 1SG string.bag=in in.there DEM
 [Myth about a giant who is luring women in order to eat them:]
 ‘Come on, look here, in my string bag!’ [muyu067:040]

Optional object suffixes as illustrated in (37) occur rather rarely in the corpus and are probably related to certain pragmatic effects whose nature is still not quite clear.

7.3.3 Object prefix

A small minority of verbs take object indexes as prefixes to the stem. Muyu morphology almost exclusively relies on suffixes; the object prefixes described in this subsection are the only morphemes that are attached to the left of the verb stem. In contrast to object suffixes, prefixes are attested with object verbs only (see the introduction to this section). Optional prefixing of verbs outside this subclass is not possible.

The paradigm of object prefixes is presented in Table 7.7. This prefix set has more distinctive force than the object suffixes in Section 7.3.2. All three persons are distinguished in the singular; in addition, gender plays a role in third person. All persons share the same form in plural.

	Singular	Plural
1	<i>nen-</i>	
2	<i>ten-</i>	
3 masc	<i>an-, ane-</i>	<i>yen-</i>
3 fem	<i>wen-, wene-</i>	

Table 7.7: Object prefixes for a closed subset of verbs.

Formally, we see resemblances to free pronouns. The first person singular *nen-* ‘1SG.O’ is related to the pronoun *ne* ‘I’ and the consonant in the onset of *yen-* ‘PL.O’ is also found in the pronoun *yi* ‘3PL’ (similar to the object suffix *-y* ‘PL.O’). The third person singular forms have allomorphs with an additional /e/. These are free variants with no clear conditions for their use.¹⁶

In Muyu, the closed class of verbs taking object prefixes is even smaller than in other TNG languages where the phenomenon is attested. So far, we have found only four lexemes: *-bani* ‘hit’, *-bomi* ‘chase away’, *-kombi/-kai* ‘hit, kill / fall, hit ground’¹⁷, *-dali* ‘chase away, expel’, and a serialised form *-dale kani* ‘steal, rob (lit. chase away and take)’. (Additionally, see the zero root illustrated in 7.3.5.) One peculiarity is the double marking of *-kombi/-kai* ‘kill, fall’ which not only takes an object prefix but also alternates its stem according to the number of objects: *-kombi* is for singular objects, *-kai* for plural objects. Since this stem alternation lacks person and gender distinctions, it is an instance of verbal number (see Chapter 8).

¹⁶Contrary to the object suffixes presented earlier, all forms of the prefixes in Table 7.7 are equal to those in the dialects collected by Drabbe (1954). A minor exception is Metomka *ee-* ‘2SG.O’ which lost the initial /t/ compared to Ninati and the dialect of this thesis. This /t/ in *ten-* ‘2SG.O’ seems to have no relation to other morphemes for second person. The free pronoun is *kep* ‘you’. However, in other dialects we find a pronoun *tep* ‘you’. The dialect of the present thesis has probably retained an older /t/ in the object prefix, while the /k/ in the free pronoun *kep* represents an innovation.

¹⁷The polysemous verb *-kombi* is rather complex and must not be confused with *kombi* ‘put (sg.sbj)’. When *-kombi* means ‘hit, kill’, we find the patient marked by the prefix and the agent as subject. On the other hand, it is intransitive when it means ‘fall, hit ground’.

The following examples illustrate the object prefix for the verb *-bani* ‘to hit’. All NPs in these elicited examples are realized overtly, although this is not obligatory:

- (39) a. *Yi=go ne nen-ban-ip-ten.*
 3PL=PTC 1SG 1SG.O-hit-2/3PL-PFV
 ‘They hit me.’
- b. *Yi=go kep/kup ten-ban-ip-ten.*
 3PL=PTC 2SG.M/2SG.F 2SG.O-hit-2/3PL-PFV
 ‘They hit you (masc./fem.).’
- c. *Yi=go Pieter an-ban-ip-ten.*
 3PL=PTC Peter 3SG.M.O-hit-2/3PL-PFV
 ‘They hit Peter.’
- d. *Yi=go Hermina wen-ban-ip-ten.*
 3PL=PTC Hermina 3SG.F.O-hit-2/3PL-PFV
 ‘They hit Hermina.’
- e. *Yi=go nup/kip/kip yen-ban-ip-ten.*
 3PL=PTC 1PL/2PL/3PL PL.O-hit-2/3PL-PFV
 ‘They hit us/you/them.’

To sum up, we find object prefixes less frequently than object suffixes. Only four lexemes are known to date. Another prefixed lexeme, with slightly different object prefixes is presented in the following subsection.

7.3.4 The double marked verb *-mo-*

The verb *-mo-* ‘give’ is exceptional in two respects. Firstly, it is the only verb known so far that obligatorily bears both an object prefix and an object suffix. The prefix refers to the direct object (theme of transfer) and the suffix to indirect object (receiver). If we also count the subject suffix, *-mo-*

In this case, the undergoer of the ‘falling’ event is marked in the prefix. The subject suffix is expletive *-en* and does not refer to any entity. For details on this phenomenon see Section 9.2.2.

is the only verb in Muyu indexing three arguments. Secondly, the verb has a unique set of prefixes and suffixes which are not found with any other verb. The inflected verb forms are given Table 7.8.

	Object SG	Object PL
Receiver SG	win-mo-ngg-	yik-mo-ngg-
Receiver PL	win-mo-y-	yik-mo-y-

Table 7.8: Paradigm for the triple marked verb -mo-.

Both indexes distinguish only two values: singular and plural. The suffixes are formally similar to object suffixes (see Section 7.3.2) but do not have the same person distinction in the singular, i.e. they lack a dedicated form for first person. The prefixes are more divergent from regular object prefixes (see Section 7.3.3) although the onset of the plural form is in both cases /y/.

The following examples illustrate each form of this verb in a sentence respectively:

- (40) a. *Ot kumun kep win-mo-ngg-ip-ten.*
 money all 2SG SG.O-give-SG.RCV-2/3PL-PFV
 ‘The gave all the money to you.’ [Dictionary]
- b. *Emba ye amot nup kumun win-mo-y-i*
 father 3SG.M wealth 1PL all SG.O-give-PL.RCV-INF
yeman engga-en.
 for say-3SG
 ‘Father said that he would give all his property to us.’ [Dictionary]
- (41) a. *Epkat ena yik-mo-ngg-ip-ten.*
 cloth mother PL.O-give-SG.RCV-1PL-PFV
 ‘They gave the clothes to mother.’ [Dictionary]
- b. *Ton kadap kaduk kambong eya*
 fish many person village(BI) here
yik-mo-y-up-ten.
 PL.O-give-PL.RCV-1PL-PFV

Number	Person	Zero root	General
	1	<i>n-</i>	<i>nen-</i>
	2	<i>t-</i>	<i>ten-</i>
SG	3 masc	<i>a-</i>	<i>an-, ane-</i>
	3 fem	<i>w-</i>	<i>wen-, wene-</i>
PL	1/2/3	<i>y-</i>	<i>yen-</i>

Table 7.9: Object prefixes for the root \emptyset ‘hit,kill’, compared to general object prefixes.

‘We gave a lot of fish to the people in this village.’

[Dictionary]

7.3.5 The zero root ‘hit, kill’

Muyu has a verb \emptyset , a phonologically empty verb, with the meaning ‘hit, kill’. As expected, the actor of the event is marked as subject, whereas the patient is marked with an object prefix. The object prefixes of this verb are reduced forms of the set illustrated in Section 7.3.3. The set is given in Table 7.9, the general object prefixes are listed in the rightmost column for comparison. To sum up, verb forms of \emptyset ‘hit, kill’ consist of prefix and suffix only, since the root is phonologically empty.¹⁸

The following examples illustrate the usage of \emptyset ‘hit, kill’:

- (42) *Nak-ok ga anon men-e komb-e*
 day.break-SBJV PTC dog come-SM put:SG.O-SM
a- \emptyset -em=o *engg-an.*
 3SG.M.O-kill-1PL.IMP=QUOT say-1SG

‘Let’s come back tomorrow with a dog to kill it, I said.’

[muyu004:049]

- (43) *Kaduk ko alini.kono odo kep ko*
 person PTC without.reason DEM 2SG.M PTC
t- \emptyset -an-ip *balin.*
 2SG.O-hit-IRR-2/3PL NEG

‘People will not hit you without reason.’

[elicited]

¹⁸In Mian, a zero root with similar formal properties has the general meaning of ‘transfer’ (Fedden 2011:271).

Although we described the verb forms of \emptyset as combination of object prefix and subject suffix, the usual morphological slots of the verb template are still available to \emptyset . This is seen in (43) where *-an* ‘IRR’ is suffixed to the zero root.

The meaning ‘hit’ does not need to be taken literally. It can also occur in contexts like the following:

- (44) *Ambot kok aip ni- \emptyset -en=o engg-on.*
 headache dry there.is 1SG.O-hit-3SG.M=QUOT say-3SG.M
 ‘I had a headache, he said. (lit. headache hit me)’
 [muyu038:097]

Example (44)¹⁹ shows a metaphorical usage of \emptyset ‘hit’. The patient of the metaphorical hitting is the speaker himself, while the actor is an inanimate entity: the headache.

7.4 Aspect and Mood

Suffixes for aspect and mood are found in slot 2 and 5 of the verbal template outlined in the introduction to this chapter. All of them are found with finite verbs only, which means that slot 4 is always filled with a subject suffix.

Three morphemes will be presented in this section: durative *-d*, perfective *-ten*, and irrealis *-an*. Besides these morphological means, Muyu employs periphrastic constructions to mark aspect and mood. Subsection 7.4.4 outlines such periphrastic constructions that are more thoroughly presented in Chapter 11. Finally, some remarks on verbal aspect shall highlight the difference of our analysis to the verbal aspect systems found in other Ok languages, mostly in Mian.

7.4.1 Durative aspect (-d)

Durative aspect is marked with the suffix *-d* in slot 2 of the verbal template. Paradigmatically, it contrasts with the irrealis mood marker *-an* in the same slot, i.e. irrealis and durative never co-occur in the same verb form. Durative is compatible with finite verbs only, which means that subject suffixes are

¹⁹The additional *ji* in the orthography of *ni-en* in (44) should be of no concern. It represents a short glide before /e/ and is only heard in this single instance.

always present in the same verb form. Non-finite verb forms never conjugate for durative aspect. Furthermore, durative *-d* is morphologically and semantically incompatible with perfective *-ten*. Finally, some verbs are lexically incompatible with durative as will be discussed below.

As explicated in 7.2.1, a regular verb stem drops its stem vowel if a suffix with vocalic onset is directly attached to it. Durative *-d* does not contain a vowel and therefore the stem vowel is kept. In fact, durative forms are reliable indicators for the conjugation class of a verb:

- (45) a. *ambangga-d-in*
work-DUR-1SG
'I am/was working. (a-stem)'
- b. *ano-d-in*
eat-DUR-1SG
'I am/was eating. (o-stem)'
- c. *ipmone-d-in*
smell-DUR-1SG
'I am/was smelling (sth.). (e-stem)'

Semantically, the durative indicates that a certain event is conceived of as lasting for a certain period of time. Often the event of the durative verb is contrasted with a point in time which can be either (1.) the moment of utterance or (2.) the beginning of another event. These two options seem to correlate with the text genre since the moment of utterance is more important in conversations (e.g. 'As we talk, he is X-ing'), whereas multiple events are often related to each other temporally in narratives (e.g. 'While he was X-ing, she suddenly Y'). Each possibility is discussed in one of the following subsections.

As mentioned earlier, there are some verbs which are incompatible with durative aspect. Three lexemes have been found so far: *tani* 'die', *tebi* 'wake up, stand up, rise (sun)', and *temi* 'see'. Speakers judge durative forms of these verbs as unacceptable:

- (46) a. **Tao-d-en*.²⁰
die-DUR-3SG.M

‘(Intended:) He is dying.’

- b. **Tebo-d-un*.
wake.up-DUR-3SG.F

‘(Intended:) She is waking up.’

- c. **Kup Temo-d-in*.
2SG.F see-DUR-1SG

‘(Intended:) I am looking at you.’ [elicited]

All three verbs in (46) are defective for durative forms only. Clearly, this has semantic reasons since they denote punctual events lacking temporal extension. Additionally, they do not allow for an iterative reinterpretation: a person dies only once and multiple instances of waking up requires some time (and falling asleep again). As for *temi* ‘see’ this verb expresses an unintentional seeing in the sense of becoming aware of something, which is also hardly compatible with iterativity.

There are two strategies to express the meanings intended in (46). The clearest case is *temi* ‘see’, where we can chose another verb, *kelegi* ‘look at, watch’:

- (47) *Kup kelega-d-in*.
2SG.F look.at-DUR-1SG

‘I am looking at you.’ [Fieldnotes]

The other two verbs follow a different strategy. We can get approximations to the meanings intended above by using the periphrastic inchoative construction (for details see Section 11.6.5). The examples in (46-a) and (46-b) can be changed to the following forms:

- (48) *Tan-en wen-en*.
die-N go-3SG.M

‘He is dying. (lit. he started to die)’ [elicited]

- (49) *Teb-en wun-un*.
wake.up-N go-3SG.F

‘She is waking up. (lit. she started to wake up)’ [elicited]

The exact lexical semantics of these verbs is a matter for future research. It is not clear yet why their internal temporal constitution blocks the durative but does allow for an inchoative. Moreover, we expect to find more verbs that behave like *tani*, *tebi* and *temi* in the future. However, many other concepts that include punctual meanings, e.g. ‘sneeze’ or ‘cough’, are lexicalised as nouns in Muyu.

7.4.1.1 Relation to utterance time

As durative verbs denote an ongoing event, the deictic center can be the utterance time. Examples in which the durative verb is related to the exact moment of utterance are (50) and (51). The former was recorded during a conversation when suddenly the speaker notices that the recording linguist kept standing while everyone else sat down. The latter is from a narrative and places the durative verb in a quoted direct speech. This way the deictic centre shifts to the narrated time. The relevant moment of utterance does not pertain to the narrator but to the quoted protagonist in the narration.

- (50) *Moyon inggen o, tio-d-up ko alo-d-en gole.*
 INTJ INTJ PTC sit-DUR-1PL PTC stand-DUR-3SG.M CONJ
 [During a recording session. Pointing at the recording linguist:]
 ‘Oh good god, we are sitting but he is standing.’ [muyu009:089]
- (51) *“Ai mok, amunggun edo mok medep kemo-d-ip ki?”*,
 oh INTJ afternoon DEM INTJ what do-DUR-2PL EMPH
engg-on go, “Ah nowan o.”
 say-3SG.M PTC oh NEG QUOT
 [Narrative. Someone approaches the protagonists:]
 ‘ “Oh, what are you doing this afternoon?” , he said, (we answered:)
 “Oh, nothing.” ’ [muyu035:007]

Denoting ongoing events has to be understood in a broad sense. Duratives are not restricted to events that are lasting at utterance time but also to processes that may be interrupted but are going to be continued. Consider example (52) from the same conversation as (50). The speaker asks about work that he witnessed the day before. Building a house is a project that usually takes a lot of time and to felicitously utter a durative as in (52), it is

²⁰Note that *tani* is an irregular verb with floating /n/ as discussed in 7.2.2.2.

not necessary that someone is digging at the time of the utterance, not even on the same day.

- (52) *Ambip yen-i yeman nio-d-ip=e?*
 house build-INF for dig-DUR-2/3PL=Q
 [Having witnessed that some people are digging the ground:]
 ‘Are they digging to build a house?’ [muyu009:040]

7.4.1.2 Relation to other events

Narratives often make use of duratives to denote an ongoing event as background when some other event happened (*‘We were X-ing when suddenly Y’*). Hence, durative *-d* is often employed in medial verbs of a clause chain (see Section 12.2.5). The foregrounded event is expressed subsequently in the final verb.

This background-foreground structure is illustrated in (53) which is from a myth. The preceding context of this extract is that the male protagonist ordered his sister to stand underneath a tree that he was about to climb. She should catch whatever he would drop. In (53) the ‘standing’ is the temporally extended background whereas the ‘dropping’ is the suddenly interrupting event. The clauses are marked with the subscripts _{BG} (‘background’) and _{FG} (‘foreground’) respectively. Contrary to duratives related to utterance time (see Section 7.4.1.1), the ongoing event often ends or changes significantly when the interrupting event of the following clause sets in.

- (53) [*Okun-e alo-d-un go,*]_{BG} [*amun kenambun ogo*
 like.that-SM stand-DUR-3SG.F PTC nest strong DEM
wan-e kal-on=gi.]_{FG}
 pick:SG.O-SM throw:SG.O-3SG.M=EMPH
 ‘While she was standing there, he dropped the huge nest.’
 [muyu007:089]

Although foregrounded events tend to interrupt an ongoing background event as in (53), there are examples where the events are overlapping. The following example describes a scene in which two hunters gradually approach each other in the forest. Both the ‘calling’ and the ‘going’ events overlap temporally.²¹

²¹Note that the gloss ‘DS.SEQ’ for the clause clitic *=e* is somewhat misleading here. The events are simultaneous rather than sequential. However, this meaning is conveyed

- (54) *[Towong=bet yongga-d-en=e]_{BG},*
whistling=OBL call.several.times-DUR-3SG.M=DS.SEQ
[win-in.]_{FG}
go-1SG
[Two men hunting in the forest. They communicate whistling in
order not to scare the animals away:]
‘While he kept calling (me) by whistling, I went (in his direction).’
[muyu005:010]

To sum up, durative *-d* marks verbs that denote ongoing events. Such events are anchored temporally in two possible ways: They are either bound to the time of utterance or to the time of a foregrounded event. The foregrounded event may interrupt the ongoing event or (less common) overlap with it.

7.4.2 Perfective aspect (-ten)

The perfective aspect suffix *-ten* stands in slot 5 of the verbal template. It is the only verbal suffix that is attached after the subject suffix. Besides that, its distribution is more restricted than is the case with other suffixes.

Perfective *-ten* is attached exclusively to e-stems. The other two conjugation classes, a- and o-stems, are morphologically incompatible with *-ten*. Furthermore, *-ten* is also restricted regarding combinations with other suffixes. Neither irrealis mood (*-an*) nor durative aspect (*-d*) combines with *-ten*. The S/R markers of slot 3 (*-n* ‘SS’ and *-gVl* ‘SS.SEQ’) are also incompatible with it. To sum up, perfective *-ten* occurs with e-stems only and does not combine with any other verb suffix except for the subject suffix.

Some subject suffixes show allomorphic variation depending on the presence of *-ten*. As discussed in 7.3.1, the first and third person singular forms preceding *-ten* occur as variants without final /n/, i.e. *-a* ‘1SG’, *-o* ‘3SG.M’ and *-u* ‘3SG.F’. As a result, the onset stands in intervocalic position, which leads to a lenition: *-ten* becomes *-den*.²² In contrast, the subject suffixes

by durative *-d* which cancels the sequential meaning of the clitic.

²²In other varieties of Muyu, the /t/ has disappeared altogether, leaving a suffix *-en*. In this context, we would expect the /p/ of some subject suffixes to undergo lenition. This is exactly what happens. My informant for the Kapom dialect reports the following forms (inclusive subject suffix): *-anen* ‘1SG + PFV’, *-ewen* ‘2SG + PFV’, *-onen/-unen* ‘3SG.M/F + PFV’, *-uwen* ‘1PL + PFV’, *-iwen* ‘3PL + PFV’. Note also that *-en* in this case does not trigger the singular allomorphs without /n/.

ending in /p/ do not alter. Compare the following examples:

- (55) a. *balak-o-den*
 disappear-3SG.M-PFV
 ‘It disappeared.’
- b. *balak-ip-ten*
 disappear-2/3PL-PFV
 ‘They disappeared.’

The semantics of *-ten* is not fully clear yet and demands further research. In general, it seems to highlight the completion of an event and thus implies a past interpretation. As such, the term ‘perfective’ is not meant as opposite to ‘imperfective’ here, i.e. verbs lacking the suffix *-ten* do not refer to incompleted events or have an internal temporal viewpoint on the event.²³

Sometimes the semantic contribution of *-ten* is quite clear. This is the case in two contexts: in subordinated clauses and with deadjectival verbs denoting state changes. Consider the following:

- (56) [*Ena ye ot kan-ep-ten odo*] *alun*
 mother 3SG.M money take:SG.O-2SG-PFV DEM praise
komb-an-un balin.
 put:SG.O-IRR-3SG.F NEG
 ‘Since you have stolen Mom’s money, she won’t forgive you.’
 [Dictionary]

The subordinated clause in (56) is marked with square brackets. Perfective *-ten* on the verb *kani* ‘take’ does not only indicate that the event is completed and in the past but also that it is still relevant for the events in the main clause. This semantic contribution of *-ten* seems to be similar to perfect tenses in European languages. However, if *-ten* is absent in this context, the subordinated clause is interpreted as a present and potentially ongoing event:

- (57) [*Ena ye ot kan-ep odo*] *alun*
 mother 3SG.M money take:SG.O-2SG DEM praise

²³For some remarks on verbal aspect in Muyu see Section 7.4.5.

komb-an-un balin.
 put:SG.O-IRR-3SG.F NEG

‘Mom won’t forgive that you steal her money.’ [elicited]

A second scenario in which the semantic contribution is quite clear is when deadjectival verbs denote state changes as shown in the following examples.

(58) a. *Tabuk ko tumn-o-den.*
 tobacco PTC become.moist-3SG.M-PFV
 ‘The tobacco has become moist.’ [Dictionary]

b. *Aluptem embi odo mokap awitn-o-den.*²⁴
 genemon.tree leaf DEM already become.hard-3SG.M-PFV
 ‘The leaves of that genemon tree have already become hard.’
 [Dictionary]

The verbs in (58) are derived from adjectives and express a change to the state expressed by the adjective: *tum* ‘moist’ ; *tumni* ‘become moist’, *awit* ‘dry and hard (plants)’ ; *awitni* ‘become dry and hard (plants)’. Such verbs are usually marked with *-ten* to indicate that the state change has completed and the undergoer subject is now in this state. For details on deadjectival verbs see Section 3.3.2.

Semantic differences between marked and unmarked forms are often obscure. Compare the following examples that are both independent main clauses in narratives:

(59) *Ambom kudu=bet wun-up-ten.*
 car car=OBL go-1PL-PFV
 ‘We went by car.’ [muyu030:75]

(60) *Ogan ye kono=bet wun-up.*
 foreigner 3SG.M boat=OBL go-1PL
 ‘We went by the modern boat.’ [muyu025:003]

²⁴Note that the subject suffixes in the examples are 3SG.M despite the subject referent being plural. This has to do with inanimacy and will be discussed in Section 9.2.2.

The utterances in (59) and (60) have similar meanings. They use the same final verb *wini* ‘go’, both refer to past events and are complemented with an instrumental participant. There is no reason to presume different temporal configurations, differences in Aktionsart or viewpoint aspect. Probably, *-ten* has pragmatic meaning or discursive effects in examples like (59). It would be conceivable, for example, that such final verbs with *-ten* highlight episodic boundaries in discourse. However, the question about the exact meaning of *-ten* is still open and future research will hopefully bring new insights.

7.4.3 Irrealis mood (-an)

There is no overt marker for realis mood in Muyu, which means that verbs that are not explicitly marked for irrealis are to be interpreted as realis. Irrealis mood is marked with the suffix *-an* in slot 2 of the verbal template. Its paradigmatic opposite is the durative marker, hence durative and irrealis never co-occur together in the same verb form.

Since the irrealis suffix has a vowel onset, a preceding stem vowel of the verb is dropped. Compare the examples in (61) and (62) where durative forms are included to illustrate the difference. For details on stem vowels in the basic stem formation pattern see Section 7.2.1.

- (61) a. *ano-d-in*
eat-DUR-1SG
‘I am/was eating.’
- b. *an-an-an*
eat-IRR-1SG
‘I will eat. (o-stem)’
- (62) a. *ipmone-d-in*
smell-DUR-1SG
‘I am/was smelling (sth.).’
- b. *ipmon-an-an*
smell-IRR-1SG
‘I will smell (sth.). (e-stem)’

Verbs in irrealis denote an eventuality that has not been actualised at the time

of utterance. Non-actualised eventualities can take on a variety of different roles. In Muyu, we find a number of functions for irrealis *-an*. Each of these functions will be illustrated with examples in the following subsections:

1. for future events
2. for possibility and ability as well as for impossibility and inability
3. for desired events
4. for prohibited actions
5. for habituals and ritualised events

One remark is necessary about an alternative interpretation. Both Drabbe (1954) and Christensen (2013) analysed *-an* as a future tense suffix. And indeed, referring to future events seems to be a prevailing function of *-an* in our data as well. However, as will be shown in the following subsections, the other four functions from the list above include quite a few examples of past and present eventualities with the suffix in question. Hence it is more adequate to analyse the phenomenon as irrealis mood and explain future as one of the possible functions of irrealis.

7.4.3.1 Future events

The most important function of irrealis *-an* in Muyu is to reference future events. The event denoted by the verb is not actualised yet but will happen or is expected to happen in the future. The degree of certainty with which the event is going to take place is not differentiated and neither is its distance from the reference time. Irrealis mood applies to likely and unlikely future events in addition to immediate future events and more distant future events. This is indicated by the following examples of which (63) is from a discussion about the status of the Muyu language.²⁵ In contrast, the utterance in (64) was a reaction to someone knocking on the door while recording. The event denoted by the irrealis verb was imminent.

²⁵Muyu speakers are aware that their language is endangered, since the younger generation does not speak it actively anymore. However, the time frame for the extinction is conceived of as in many years, when the current speakers are gone.

- (63) *Otbop ko nowan kel-an-on.*
 language PTC NEG become-IRR-3SG.M
 [Discussing the status of the Muyu language:]
 ‘Our language will disappear.’ [muyu012:008]
- (64) *Men-e otbop wam-e y-an-on.*
 come-SM language disturb-SM disturb-IRR-3SG.M
 [Someone knocking on the door while recording:]
 ‘He will come and disturb the story.’ [muyu031:085]

Another type of future eventuality occurs in questions, which are often marked with irrealis as in (65). Note, however, that only questions referring to future events are in the irrealis; those about past events do not carry *-an*. Compare the two examples in (66).

- (65) *Wip=bet mondokb-an-up nea engg-an.*
 middle=OBL share-IRR-1PL Q say-1SG
 [Having caught a fish:]
 ‘Shall we share it from the middle?, I asked.’ [muyu035:060]
- (66) a. *Kep ko otbop bon ko man-an-ep e?*
 2SG.M PTC language place PTC come-IRR-2SG Q
 ‘Will you attend the meeting?’ [Dictionary]
- b. *Kep ko aninggo yanop men-ep ko?*
 2SG.M PTC name there.is come-2SG PTC
 ‘For what reason did you come?’ [Dictionary]

7.4.3.2 (Im)possibility and (in)ability

Irrealis mood is used to express possibilities and abilities as well as their negative counterparts impossibilities and inabilities. In contrast to future event interpretations of irrealis, possibilities and abilities may well be localised in the past. Consider example (67), from a myth about the ancestors. The speaker explains their ability of metamorphosis and uses the verb *keli* ‘become’ three times in irrealis mood. In contrast, (68) denotes a possibility since the speaker is clearly (physically) able to hide but seeks for an oppor-

tunity to do so. Example (68) was taken from a hunting story that recounts past events.

- (67) *Kimiding kibin kel-an-ip. Kak*
 small.mosquito incarnation become-IRR-2/3PL scorpion
kibin kel-an-ip, kodom kibin
 incarnation become-IRR-2/3PL ant incarnation
kel-an-ip
 become-IRR-2/3PL
 [A myth about abilities of the ancestors:]
 ‘They could turn into little mosquitoes. They could turn into scorpions, they could turn into ants, they knew that so ...’
 [muyu034:037]
- (68) *Ap ko wene kede=bet alebal-an-an?*
 tree PTC where where=OBL stand-IRR-1SG
 [Hunting. The speaker needs to hide from a dangerous cassowary:]
 ‘At which tree could I stand (to hide)?’ [muyu037:022]

A final example illustrates that ability can also refer to present eventualities. (69) comes from a discussion about the situation of the language. The speaker remarks that children of the current generation are able to understand the language but do not speak it themselves. This is a proper description of the present state. Nonetheless, the verbs used to describe it are in irrealis mood.

- (69) *Nup otbop kai ini, yi kat balin,*
 1PL language very this(BI) 3PL knowledge NEG,
wedambal-an-ip=ko wedambal-an-ip
 hear-IRR-2/3PL=PTC hear-IRR-2/3PL
 [About the children’s ability to speak Muyu:]
 ‘They do not know our original language, (though) they are able to understand it, they are able to understand it.’ [muyu019:004]

To sum up the examples so far, we see that irrealis mood is compatible with all possible temporal configurations: past, present and future.

Turning now to the negative counterparts of the aforementioned functions, speakers of Muyu also use irrealis mood to express that an event cannot happen (impossibility) or that an actor is unable to perform an action

(inability²⁶). Both cases are formed with a verb in irrealis mood + negation marker (*balin* or *nowan*). Example (70) illustrates an impossibility and is negated with *balin*.

- (70) “*Eyuk, tapi kadap yanop ko b-an-up*
 yes, but(BI) many there.is PTC take:PL.O-IRR-1PL
balin=o”, *engg-ip*.
 NEG=QUOT say-2/3PL
 [Customers deny a delivery of peanuts because of the large amount:]
 ‘ “Yes, but we cannot take that many (sacks of peanuts)”, they said.’
 [muyu025:035]

The other negation marker, *nowan*, is also used with irrealis mood. However, there is a semantic difference depicted in the contrastive pair of (71). The first sentence, with *nowan*, is taken from the corpus. The verb denotes an ability, i.e. the ability to sing, but a referent with this ability is non-existent. In contrast, the second sentence, with *balin*, was elicited and really denotes an inability. There is a (female) referent but she cannot sing.²⁷ In both cases, the verb is in irrealis mood.

- (71) a. *Alalugop komb-an-on* *nowan*.
 song put:SG.O-IRR-3SG.M NEG
 [Story about forming a music group:]
 ‘There is no one who can sing.’ [muyu012:046]
- b. *Alalugop komb-an-un* *balin*.
 song put:SG.O-IRR-3SG.F NEG
 [Elicited variant of the previous sentence:]
 ‘She cannot sing songs for a long time.’ [elicited]

Negative possibility is also found when someone refuses to perform a certain

²⁶Another way to denote inability is via a special infinitive construction: infinitive + *adep* ‘like’. See Section 9.7.2.2 for details.

²⁷Note also the difference in the temporal perspective as expressed in the translation “...for a long time”. *kombi* ‘put’ is used with songs to indicate that someone makes music for an extended period of time. To say that someone sings one (particular) song, one would use the verb *winggi* ‘sing’.

action. In this case, it is not possible to determine if the future reading or the impossibility reading prevails:

- (72) *Ah, ma om tokot an-an-up balin. Yom benyop oya*
 INTJ HORT sago only eat-IRR-1PL NEG meat little there
go mok kan-e negg-em.
 PTC INTJ take:SG.O-SM cook-1PL.IMP
 ‘Oh, we cannot eat sago alone! Let’s cook some meat!’
 [muyu037:082-83]

Finally, one can form questions about a certain possibility or ability:

- (73) *Kep ko nup tana-tana ege ketmengg-e*
 2SG.M PTC 1PL child-RED DEM teach-SM
bal-an-ep nea?
 AUX.CONT-IRR-2SG Q
 ‘Can you teach our children?’
 [muyu030:008]

7.4.3.3 Desired events

Desired events are typically expressed with a periphrastic mood construction that makes use of the auxiliary *kemi* ‘do’, which will be discussed in more detail in Section 11.6.4. Nonetheless, this construction inflects the main verb for irrealis and should therefore be mentioned here.

The following examples shall suffice. Note that although the main verb is in irrealis mood, the auxiliary which constitutes the final verb of the clause must be in realis.

- (74) *Tekm-an-e kem-an.*
 tell-IRR-SM do-1SG
 ‘I want to tell it.’
 [muyu035:002]
- (75) *Kayebak, nup ko ekun-an-e kem-up.*
 big.man 1PL PTC do.like.this-IRR-SM do-1PL
 ‘Boss, we want to do this.’
 [muyu012:070]

7.4.3.4 Prohibited actions

A less prominent function of irrealis mood is to express prohibited actions. The final verb must be conjugated for second person but, unlike a command with positive polarity, does not apply the imperative set of subject indexes but the final verb set (see Section 7.3.1 above). The verb in irrealis mood is often accompanied by a prohibitive adverb *anggayom* ‘do not’ as in the following examples which both have two clauses separated by commas:

- (76) *Kep odo wangga timbel-e, anggayom kedo*
 2SG.M DEM there stay-2SG.IMP PROHIB come.in
man-an-ep.
 come.in-IRR-2SG
 [During recording session. Someone trying to enter the room:]
 ‘You stay there (outside), do not come in!’ [muyu031:002]
- (77) *E, emba, okun-e bom-ime, anggayom takol-on*
 yes father.son like.that-SM walk-2PL.IMP PROHIB leave-3SG.M
takol-on kem-an-ip.
 leave-3SG.M do-IRR-2PL
 ‘Yes sons, you can travel as you like, but do not separate from each other.’ [muyu038:025-26]

Two clauses are expressed in (76) of which the former clause is a positive command employing an imperative subject index. The prohibitive of the latter clause, however, is marked for irrealis mood and employs the regular subject marker. The same holds true for example (77). The latter clause contains a sequence of three verbs of which only the final verb is in irrealis mood. This clause represents a reciprocal construction (see Section 12.7).

7.4.3.5 Habituals and ritualised events

Muyu employs several strategies to denote habitual events. One is a periphrastic aspectual construction, which is dealt with elsewhere (see Section 11.6.2); another one is based on the infinitive in a copula clause. Finally, the strategy relevant for this section makes use of the irrealis mood form of the final verb. The distinction between the available constructions correlates with semantic differences in the conceptualisation of the habitual event.

Habitual events frequently occur in procedural texts. A hypothetical

actor has to undertake a certain action, each time a certain outcome is intended. This can be expressed with an irrealis verb as in (78). This example is from a procedural text about making sago and consists of three clauses. The first one and the last one have final verbs in irrealis mood and designate the habituality of the action.²⁸

- (78) *Kan-an-un,* *kan-e*
 take:SG.O-IRR-3SG.M, take:SG.O-SM
mene-n-u=get, *kobom-an-un.*
 come-SS-3SG.F=and.then.SG hit.with.stick-IRR-3SG.F
 [During the process of making sago. The woman takes a palm leaf
 midrib:]
 ‘She takes it, she brings and hits it with a stick.’ [muyu013:067]

Habitual event descriptions like in (78) are not specified in regard to their temporal configuration. However, there are cases where we can safely assign a past interpretation. This is the case, for example, when referring to past habits of the ancestors which we label ‘ritualised events’ for the purposes of this description.

One such ritualised event was brought up in reaction to governmental health advice. The inhabitants of the village were advised not to share their cigarettes with others while smoking in order to prevent the transmission of diseases. The speaker in (79) comments that this practice was common among their ancestors. Note that the main action (‘do that’) is expressed by a periphrastic habitual; only the hypothetical (and negated) consequence is in irrealis mood.

- (79) *Okem-e kim-ip odo keyap=a yowol-an-ip*
 do.that-SM do-2/3PL DEM quick=LNK die:PL.S-IRR-2/3PL
balin.
 NEG
 [Commenting on the ancestors practice to pass on their cigarette
 while smoking:]
 ‘They used to do that but they would not die (more) quickly.’
 [muyu019:082]

²⁸Sago is usually processed by a couple, husband and wife. Thus, procedural texts about making sago differentiate the several stages of the process with ‘He does ..., then she does ..., then he does ...’. The respective subject referents are generic human actors.

7.4.4 Outline of periphrastic aspect and mood

In this section, we examined three morphemes conveying semantics of aspect and mood (*-d* ‘DUR’, *-ten* ‘PFV’, and *-an* ‘IRR’). All three occur on finite verbs, i.e. together with a subject suffix. However, aspect and mood in Muyu is not limited to purely morphological encoding. Periphrastic constructions with auxiliaries or multi-verb constructions exist as well. Since this chapter is devoted to verbal morphology, a short outline of periphrastic means for aspect and mood shall suffice. For details, the reader should follow the references to the respective sections in other chapters.

All of the following periphrastic constructions have in common that a further verb is serialised to the main verb. This new verb takes all the verb suffixes, while the main verb is suffixed with the serial marker *-e* ‘-SM’ (see Section 7.6.4) or *-en/-an* ‘-N’ for n-participles (7.6.5).

- **Continuative:** The continuative construction denotes events that are going on for a certain period in time. It is formed with the auxiliary *bili* ‘AUX.CONT’ which does not occur outside this construction in any other context. E.g. *ane bilip* ‘they kept eating’. For details see Section 11.6.3.
- **Habitual:** Frequently recurring events are expressed with the main verb + auxiliary *kemi* ‘do’, e.g. *ane kemip* ‘They usually eat’. The habitual is used irrespective of absolute temporal anchoring, i.e. past habitual (‘X used to do Y’) is not distinguished from present habitual (‘X usually does Y’). For details see Section 11.6.2.
- **Inchoative:** To indicate that an event has just started, an inchoative construction makes use of the motion verb *wini* ‘go’. The main verb is in the n-participle form (see Section 7.6.3). E.g. *anen wunup* ‘we started to eat’. For details see Section 11.6.5.
- **Desiderative:** To express that some actor wants to do something, the desiderative is formed with the main verb + auxiliary *kemi* ‘do’. In contrast to the habitual construction which is also formed with *kemi* ‘do’, the main verb of the desiderative must be in irrealis mood. E.g. *anane kemip* ‘they want to eat’. For details see Section 11.6.4.
- **Completive:** The completive construction expresses that a certain event was completed before a new one sets in. It is formed with the

main verb + *wane* ‘finish’. In contrast to the other periphrastic constructions, *wane* is usually not conjugated directly but part of a larger construction. For example, *ane wane* ‘after eating ...’. For details see Section 11.3.1.

7.4.5 Some remarks on verbal aspect in the Ok family context

Verbal aspect seems to play a less important role in Muyu than in other Ok languages. Healey (1964:68) presents aspectual stem distinctions as a typical feature of the Mountain Ok subbranch. In such a system, a lexical sense is conveyed by several formally different verb stems which semantically vary in verbal aspect.

In Mian (Fedden 2011:Ch.8, 2014), for example, about two thirds of all verbal lexemes are organised as alternating pairs of perfective and imperfective stems. Perfective stems are used for describing punctual, non-iterative situations and situations that are referred to as a whole, while their imperfective counterparts describe habitual, on-going or continuous situations of the same kind, e.g. *wen* ‘eat (IPFV)’ and *dowôn* ‘eat (PFV)’. Furthermore, the aspectual value of a verb stem has ramifications for further inflectional possibilities. For example, only perfective stems can be inflected directly with *-s* ‘remote past’, whereas imperfective stems require an auxiliary in order to be inflected for remote past tense:

- (80) Mian
- a. *yōlo éil=e*
 well pig=SG.M
a-nâ'-s-ib=e?
 3SG.M.OBJ-kill.PFV-RPST-2/3PL.AN.SBJ=Q
 ‘Well, did they kill the pig? (Fedden 2011:286)’
 - b. *wen-bi-s-e=be*
 eat.IPFV-AUX.IPFV-RPST-3SG.M.SBJ=DECL
 ‘He was eating. (Fedden 2015:102)’

Although Mian also has biaspectual stems (i.e. stems identical for perfective and imperfective) and monoaspectual verbs (i.e. verbs that lack a stem

for either perfective or imperfective) the pairwise organisation of the verbal lexicon according to aspect remains an important feature of Mian.

Turning to Muyu now, we find that its verbal lexicon can be divided into what was described as conjugation classes in Section 7.2.1. These conjugation classes may have diachronic links to verbal aspect, as evidenced, e.g., by the fact that perfective *-ten* is only compatible with verbs from one conjugation class, e-stems. However, in the present state of the language, we do not find a clear-cut system with aspectual stems as in Mian. This lack of aspectual distinction in Muyu morphology is important in two respects: Firstly, Muyu has a less rich morphology than Mian. For example, it lacks the category of tense altogether, which in the analysis of Mian was taken as an important indicator for aspect regarding some combinatorial restrictions. In Muyu, perfective *-ten* is the only suffix that is restricted to a part of the verbal lexicon. However, the semantics of *-ten* is not fully understood yet and some of its functions seem to partly belong to pragmatics. The remaining suffixes are fully compatible with any verb stem. Especially important in this context is the durative marker *-d*. If Muyu really had a perfective/imperfective stem alternation, we would expect durative to be sensitive to this distinction.

Secondly, many aspectual meanings are expressed via periphrastic constructions in Muyu rather than via morphology. These constructions seem to lack noteworthy combinatorial restrictions. For example, the habitual construction mentioned in the previous subsection is compatible with any verb stem regardless of conjugation class.

To sum up, verbal aspect is less important in Muyu compared to the Mountain Ok languages. There can be no doubt that the lexical semantics of Muyu verbs is more complex than could be investigated in the context of this study. The motivation behind the division of conjugation classes deserves further research, since e.g. the functions of *-ten* are to be investigated in more detail. However, a system in which lexical aspect is a feature of the verb stem is missing from Muyu.

7.5 S/R marking on medial verbs

Medial verbs play a role in clause chaining and represent the predicates of non-final clauses (for their syntactic properties see Section 12.2.1). The syntactic opposite of medial verbs are final verbs which conclude a clause chain.

As many other languages with clause chaining, Muyu distinguishes mor-

phologically between medial and final verbs. Many languages employ markers for switch-reference (S/R), i.e. morphemes that indicate if the following clause keeps the subject referent of this clause or ‘switches’ the subject referent. Only the same subject (SS) condition is marked morphologically in Muyu. If no corresponding suffix is present in a medial verb form, it means that the following clause has virtually always a different subject (DS) referent.

Two suffixes are used for S/R marking on medial verbs: *-n* ‘SS’ and *-gVl* ‘SS.SEQ’. They both stand in slot 3 of the verbal template. Since medial verbs are necessarily finite, an S/R suffix is always followed by a subject suffix. In contrast, slot 1 and 2 of a given medial verb form need not be filled. Most commonly, S/R suffixes are attached directly to the verb stem. The remainder of this section is dedicated to morphological properties of the suffixes *-n* ‘SS’ and *-gVl* ‘SS.SEQ’. For details on their syntactic functions and the semantic difference between ‘SS’ and ‘SS.SEQ’, the reader is referred to Section 12.2.2.

S/R marking has influence on subject suffixing. As illustrated in Table 7.4 in Section 7.3.1 above, the subject suffixes have a specific set for medial verbs which contains reduced forms of the final verb suffixes. Importantly, the medial set of subject suffixes is triggered morphologically by *-n* ‘SS’ or *-gVl* ‘SS.SEQ’. In contrast, medial verbs in DS contexts use the final verb set. Compare the following examples:

- (81) a. *meno-n-u*
 come-SS-3SG.F
 ‘She came and she ...’
- b. *mun-un=e*²⁹
 come-3SG.F=DS.SEQ
 ‘She came and then someone else ...’

As mentioned above, S/R suffixes are most commonly attached to the verb stem without intervening morpheme. Both suffixes, *-n* and *-gVl*, have a consonant in the onset and according to the basic stem formation pattern

²⁹It was stated above that only same subject is marked morphologically on the verb. As seen in this example, different subject contexts can be marked with clause clitics like *=e*. However, these are not part of the verb since they can attach to non-verbal elements like negation markers as well.

(see Section 7.2.1), the stem vowel is kept. This can be seen in (81) where /o/ appears in the same subject conjugation but not in the different subject form.

Although instances are found only rarely in natural discourse, same subject *-n* is compatible with irrealis *-an*. The irrealis suffix is in slot 2 of the verbal template and thus precedes *-n* ‘SS’ as illustrated in (82). Note that the consonant cluster /n/ + /n/ in this sequence is resolved with an epenthetic /e/.

- (82) *engg-an-e-n-ip*
 say-IRR-EP-SS-2/3PL
 ‘they will say and they ...’

Besides irrealis, slot 2 also contains the durative suffix *-d*, but durative cannot be combined with *-n* ‘SS’. The other S/R suffix *-gVl* ‘SS.SEQ’ is neither compatible with irrealis nor with durative. This has semantic reasons, since *-gVl* requires a completed event and neither irrealis mood nor durative aspect fulfills this requirement.

The vowel in the suffix *-gVl* ‘SS.SEQ’ is variable; the conditions for the choice of the vowel are fluctuating and probably speaker dependent. The following variants are documented: *-gol*, *-gul*, *-gil*. In many cases, we find assimilation to the subject suffix as in (83-a) but sometimes not, as in (83-b). A high vowel in the subject suffix tends to select *-gol* most of the time as in (84-a) and (84-b), but sometimes full assimilation takes place as in (84-c). To sum up, the vowel tends to assimilate but there are no strict rules.

- (83) a. *engga-gul-up*
 say-SS.SEQ-1PL
 ‘we said (so) and then we ...’
 b. *kumungge-gol-up*
 talk-SS.SEQ-1PL
 ‘we talked and then we ...’
- (84) a. *ano-gol-e*
 eat-SS.SEQ-3SG.M
 ‘He ate and then he ...’

- b. *opko-gol-i*
 think-SS.SEQ-1SG
 ‘I thought (so) and then I ...’
- c. *kalo-gil-ip*
 throw:SG.O-SS.SEQ-2/3PL
 ‘They throw it and then they ...’

Verb forms suffixed with *-n* ‘SS’ can be near-homophonous with irrealis mood verbs if the same subject form is based on a verb with a vowel stem /a/ as shown in (85). These forms are, however, still prosodically distinguishable. The stem vowel /a/ in the same subject form attracts stress, whereas the stress for the irrealis mood remains on the last syllable of the word form. In (85), stress is marked with an acute accent ´ above the vowel symbol.

- (85) a. *bománup*
 boma-**n**-up
 walk-SS-1PL
 ‘we walked and we ...’
- b. *bomanúp*
 bom-an-up
 walk-IRR-1PL
 ‘we will walk’

To sum up, we find S/R morphology on medial verbs rather than final verbs. With these verbs, the same subject condition is marked while the different subject condition lacks a S/R marker. Furthermore, the presence of *-n* ‘SS’ or *-gVl* ‘SS.SEQ’ triggers the medial verb set for the subject indexes.

This concludes our discussion of verb morphology associated with finite verbs. The remainder of this chapter will explore non-finite verb forms which are morphologically less complex and do not have all the suffix slots outlined in the introduction to this chapter.

7.6 Non-finite verb forms

The verbal template presented in the introduction to this chapter specifies the morphological structure for finite verbs. While morphological possibilities are abundant for finite verbs, having an argument index for the subject reference is a minimal requirement. Conversely, non-finite verb forms are those that lack a subject suffix. Non-finite verb forms are also incompatible with markers of aspect and mood or switch reference. Actually, only slot 1 (object suffixes) from the aforementioned morphological structure is available to non-finite verbs. Thus, the morphological complexity of finite verbs is reduced to a minimum in non-finite verb forms.

Non-finite verb forms do not form a homogeneous class but greatly differ in meaning and syntactic function. All in all there are five non-finite verb forms. Each form has a separate suffix and will be discussed in one of the following subsections. Since every non-finite suffix has a vowel onset, the stem vowel of the verb is dropped, according to the basic stem formation pattern discussed in 7.2.1.

7.6.1 Infinitive (-i)

Infinitives are formed with the suffix *-i* and represent the citation form for all verbs throughout this thesis, e.g. *ani* ‘eat’, *ipmoni* ‘smell’, *yenenggi* ‘bind, tie’. Infinitives are used as verbal nouns (see below). Besides that, they are found in purposive constructions (see Section 9.4.4), inability constructions (see Section 9.7.2.2), prohibitives (see Section 9.7.2.1) and commands.

Infinitive verb forms are not only available for simple verbs but also for complex predicates. *Kabu* ‘howl (dogs)’ in (86) is a noun that forms a complex predicate with the light verb *kemi* ‘do’. When more than one verb is part of the predicate, the suffix *-i* is attached to the final verb only. Example (87) is a multi-verb construction consisting of *kulun-i* ‘put down (sg.obj.)’ and *wini* ‘go’.

(86) *kabu kem-i*
 howl(N) do-INF
 ‘howl’

(87) *kulun-e win-i*
 put.down:SG.O-SM go-INF

‘crawl’

As was mentioned in the introduction of this section, slot 1 (object suffixes) is the only available slot for non-finite verb forms. This has an important consequence for object verb roots, i.e. irregular verbs that always need an object suffix to form their root (see Section 7.2.2.3). They require an object suffix not only in finite but also in non-finite verb forms. For example, the root nucleus *ka-* ‘give’ needs an object suffix to form a valid infinitive. Compare the following examples:

- (88) a. *ka-d-i*
 give-1SG.RCV-INF
 ‘give to me’
- b. *ka-ngg-i*
 give-2/3SG.RCV-INF
 ‘give to you/him/her’
- c. *ka-y-i*
 give-PL.RCV-INF
 ‘give to us/you(pl)/them’
- d. **ka-i*
 give-INF
 ‘(Intended:) give’

Verbs that obligatorily take object prefixes (89) and the zero root \emptyset ‘hit, kill’ (90) behave similarly:

- (89) a. *an-ban-i*
 3SG.M.O-hit-INF
 ‘hit him’
- b. **ban-i*
 hit-INF
 ‘(Intended:) hit’³⁰

³⁰The infinitive *bani* is unacceptable with the intended meaning ‘hit’ since this verb

- (90) a. $a-\emptyset-i$
 3SG.M.O-hit-INF
 ‘hit him’
- b. $*\emptyset-i$
 hit-INF
 ‘(Intended:) hit’

In other words, a Muyu speaker cannot simply say ‘give’ or ‘hit’ but must specify the receiver of the giving event or the patient of the hitting event, even when there is no referent for the object provided by the context. To conclude, infinitives are unspecified for the subject argument but not for the object argument.

A similar requirement is found with another type of irregular verbs: defective verbs (see Section 7.2.2.5). The roots of *al-* ‘stand’, *ti-* ‘sit’, *weda-* ‘hear’ must appear in their allomorphic variants with *-bVl* to form their infinitive forms (and all other non-finite forms, for that matter).

- (91) $*ali$ i *alebili* ‘stand’
 $*tii$ i *timbili* ‘sit’
 $*wedai$ i *wedambili* ‘hear’

Syntactically, infinitives have the distribution of nouns and can occur as subjects and objects of clauses as well as possessors or possessed inside a noun phrase. Two examples shall suffice here. In (92), *ani* ‘eat’ is the object of the clause. Note that, in principle, the noun *animan* ‘food’ would do the job here as well. The two infinitives in (93) are possessed with preceding pronouns as possessors.

- (92) *tana=bet an-i=go b-e mun-un.*
 child=OBL eat-INF=PTC take:PL.O-SM come-3SG.F
 ‘A child brought (something) to eat.’ [muyu026:015]
- (93) *Odo yi=bet mo, ta yika yi opkon-i, yi*
 that 3PL=OBL only and 3PL.REFL 3PL think-INF 3PL
ambangg-i.
 work-INF

needs an object prefix. However, there are three homophonous verbs *bani₁* ‘call once’, *bani₂* ‘open, be open’, and *bani₃* ‘grow (fungus)’.

‘It depends on them, their ideas, their works.’ [muyu012:092]

7.6.2 Subjunctive participle (-ok)

The suffix *-ok* ‘SBJV’ is attached to a stem to form a verb form that we label ‘subjunctive participle’ for reasons presented presently. As all non-finite suffixes of this section, *-ok* is neither compatible with a subject suffix nor with any aspect/mood morphology.

The subjunctive suffix *-ok* must be distinguished from the imperative subject suffix *-ok* ‘3SG.M.IMP’. The main difference is that *-ok* ‘SBJV’ is not an argument index and does not inflect according to person, number and gender. Compare the subjunctive in (94) with the two contrasting imperative forms in (95) (for details on the functions of third person imperatives see Section 9.6.3).

- (94) *kaban-ok balin*
run-SBJV NEG
‘I/you(sg.)/he/she/it/we/you(pl.)/they did not run.’
- (95) a. *kaban-ok*
run-3SG.M.IMP
‘Let him run!’
- b. *kaban-uk*
run-3SG.F.IMP
‘Let her run!’

Subjunctive participles have two functions: (1.) they occur in negative contexts with *balin* ‘not’ as in (94) and (2.) they are used in subordinated purpose constructions. In (96), the complex predicate *ok ninebi* ‘take a shower’ (lit. ‘hold water’) is subordinated to the final verb *wini* ‘go’ as indicated by the square brackets. The embedded participle denotes the purpose of the main event. Similarly, we find an embedded purpose construction with an *-ok* form in (97). Both examples show that the suffix *-ok* does not inflect, neither for feminine gender as in (96) nor for plural number as in (97). The appropriate subject suffix is restricted to the final verb of the main clause.

- (96) *Martha handuk kan-e [ok.nineb-ok]_{PURP} wun-un.*
PN towel(BI) take:SG.O-SM take.shower-SBJV go-3SG.F

‘Martha takes a towel and goes to take a shower.’

- (97) *[Wen-e om alum-ok]_{PURP} wen-em.*
 go-SM sago chop.sago-SBJV go-1PL.IMP

‘Let’s go to chop some sago.’ [muyu006:036]

The semantics of *-ok* implies that the event denoted by the verb has not taken place. This is obvious in the case of negation but is also central for the purpose constructions with *-ok*. To highlight this semantics, Christensen (2013) glosses *-ok* as irrealis (‘IRR’). Drabbe (1954), on the other hand, uses the term ‘ok-participle’. To avoid confusion with irrealis *-an*, which is a feature of finite verbs, we opted for ‘subjunctive’.

7.6.3 N-Participle (-en/-an)

The suffix of the n-participle has an allomorphic variation that depends on the conjugation class of the respective verb. E- and o-stems select the variant *-en*, while a-stems select the variant *-an*. An alternative analysis would see the suffix as **-n* and the preceding vowel as the stem vowel of the verb. However, if this were the case, we would expect the vowel /o/ to appear for o-stems. Compare the forms given in (98). Due to the lack of clear semantic contribution, we gloss the suffix simply as ‘-N’. Translations are avoided in (98) since bare n-participles never occur by themselves.

- (98) *ambangg-an* [work-N] (=a-stem)
an-en [eat-N] (=o-stem)
tan-en [die-N] (=e-stem)

N-participles occur in two contexts. Firstly, they can be found in combination with the adverbial marker *=mo*; the participle can be used as a manner adjunct to the main predicate. Example (99) is from a procedural text about traditional medicine. The sap of a certain tree is applied to a knee injury. To check the effect, the patient has to walk:

- (99) *Totk-an=mo* *won-on.*
 step.several.times-N=ADV go-3SG.M
 [After medical treatment of an injured knee:]

‘He walks around, stepping a few times (to strain the knee).’

[muyu045:044]

The steps in (99) are conceptualised as the manner of the walking event. The form *totk-an=mo* represents an appropriate answer to the question *Medep adep?* ‘How?’.

Secondly, the n-participle is combined with *wini* ‘go’ to form the inchoative construction. Several other constructions make use of *wini* ‘go’ (for an overview see Section 11.3), but the inchoative is the only one combining with the n-participle.

- (100) *An-en wun-up.*
eat-N go-1PL
‘We started to eat.’ [Fieldnotes]
- (101) *Kumungg-en wun-up*
talk-N go-1PL
‘We started to talk.’ [Fieldnotes]

Both uses of the n-participle, manner adjuncts and inchoative constructions, are quite rare in natural discourse.

7.6.4 Serial marker (-e)

In the corpus, the serial marker *-e* ‘SM’ is by far the most frequent of all verb suffixes.³¹ This is due to its function: *-e* marks non-final verbs in multi-verb constructions of all kinds, and these syntactic structures are ubiquitous in Muyu (for details see Chapter 11).

Example (87), which illustrated a serialised infinitive form, is repeated here as (102). The preceding verb obligatorily takes *-e*. A more interesting example is given in (103). Here, each verb has a separate object while the subject referent is shared and marked on the final verb.

- (102) *kulun-e win-i*
put.down:SG.O-SM go-INF
‘crawl’
- (103) *Ap wilib-e kelak onongm-un.*
tree pile-SM small.fence make-3SG.F
‘She piled wood to make a small fence.’ [muyu031:069]

³¹This includes finite verbs. For example, *-e* outnumbers the subject suffixes of all person-number combinations together.

There is no other function of *-e* in Muyu syntax. Therefore, its subsumption under non-finite verb forms is somewhat misleading. Verbs with *-e* are always verbs in multi-verb constructions. The multi-verb construction as a whole is finite since its final verb takes all the necessary suffixes. Furthermore, there is no syntactic subordination of serial marked verbs (as is the case, for example, with n-participles).

7.6.5 Serial marker (-o)

The serial marker *-o* is very similar to the serial marker *-e*. Both are used to mark non-final verbs in multi-verb constructions. However, they differ strikingly in terms of frequency, since *-o* has only a few instances in the whole corpus. Consider the following example:

- (104) *Kol-o teb-an=e*
 leave-SM move-1SG=DS.SEQ
 [Diving for a previously spotted fish. After a few tries the protagonist gives up:]
 ‘I left it and came out (of the water) and then someone else ...’
 [muyu035:033]

Due to the low frequency of *-o*, a semantic difference between the two serial markers is hard to grasp. Most instances behave exactly alike. However, there is a morphological difference in some verbs. Defective verb roots like *ti* ‘sit’ were shown in 7.2.2.5 to occur as allomorph with *-bVl* in certain forms. Inter alia, the serial marker *-e* always selects the augmented variant, e.g. *timbele*. In contrast, *-o* is compatible with the short root. Compare the following examples:

- (105) *Al-o bekmo-d-un.*
 stand-SM wait-DUR-3SG.F
 ‘She was standing and waiting.’ [muyu011:035]
- (106) *Alebel-e kelega-in.*
 stand-SM watch-1SG
 ‘I stood there and watched.’ [muyu037:029]

The morphological variation between (105) and (106) suggests that there is, or at least used to be, a semantic difference concerning the temporal

configuration. We leave this as an open question for further research.

Chapter 8

Verbal number

8.1 Introduction

Number is often regarded as a category of the nominal domain. Yet many languages have number in the verbal domain as well (Frajzynger 1985, Durie 1986, Corbett 2000, Veselinova 2013). Verbal number can reflect either the number of participants in an event or the number of occurrences of an event. An alternative term for this phenomenon, not used in this thesis but gaining ground rapidly, is ‘pluractionality’ (Newman 1912).

The presence of verbal number as a category in a language usually means that some verbs form pairs contrasting in the number value while their general descriptive meaning is equal. An example would be the Mupun verb pair *tu* vs. *tue* ‘kill.SG’ vs. ‘kill.PL’ which denote the number of the object argument:

- (1) Mupun (Frajzynger 1993:60)
- a. *n-tu* *joos*
1.SG-kill.SG rat
‘I killed a rat.’

 - b. *n-tue* *joos (mo)*
1.SG-kill.PL rat (PL)
‘I killed rats.’

There is some controversy as to whether verb pairs contrasting in their num-

ber value should be considered as cases of suppletion or as separate lexical items. In this study, we join the party advocating the ‘separate-lexeme approach’ (e.g. Mithun 1988:214, Mel’čuk 1994:386-387, Corbett 2000:258-259) for reasons that will become clear during this chapter. In any case, it is worth noting that in most languages verbal number is not a category affecting the whole word class but only a subclass of verbs (Newman 2012:195). This is also the case in Muyu.

Corbett (2000) distinguishes **participant number** from **event number** and this distinction will be applied in our analysis of Muyu verbal number in this chapter. Participant number indicates the number of participants that take part in the denoted event, e.g. ‘take one thing’ vs. ‘take many things’. Event number, on the other hand, indicates how many occurrences of the same event take place, e.g. ‘knock on the door once’ vs. ‘knock on the door repeatedly’. The latter is notoriously difficult to discern from verbal aspect.

Verbal number is widely attested in the languages of the world. In her sample of 193 languages, Veselinova (2013) found 34 languages with verbal number, i.e. approximately 18%. The geographical focus of this feature lies in North America but the category is also present in South America, East Asia, the Caucasus and the Pacific region. TNG languages of her sample that utilise verbal number are Usan (Reesink 1987) and Amele (Roberts 1987), whereas Kewa (Franklin 1971), Dani (Bromley 1981), Asmat (Voorhoeve 1965) and Suena (Wilson 1974), all of which are classified as TNG, do not have verbal number. We conclude that verbal number is not a general feature of TNG. On a genealogical level below TNG, the Ok languages are probably inconsistent. Muyu seems to be the only Ok language in which verbal number is a prominent category.¹

There is some evidence that verbal number may occur as an areal feature in some places. Honeyman (2016:225) points out a high density of non-related verbal number languages in the northern part of Sandaun province, Papua New Guinea. The importance of areal features in Papuan languages has been reported before, with the ‘Highlands evidentiality area’ (San Roque

¹This statement requires some clarification. The fact that verbal number has not been used in the description of Ok languages so far does not mean that the phenomenon is absent from those languages. Firstly, verbal number is notoriously difficult to discern from aspect. Hence there may be some overlap between verbal number in Muyu and lexical aspect in Mountain Ok. Secondly, although Fedden (2011) does not explicitly discuss verbal number for Mian, his wordlist includes verbs that are specified for object number and subject number, especially in the semantic domain of ‘cutting’ and ‘breaking’.

& Loughnane 2012) as one prominent example. As for Muyu, we do not find verbal number in the immediate vicinity, neither in the Greater Awyu languages² (De Vries 2020) to the west nor in the other Ok languages to the east. However, verbal number is a prevalent feature of South New Guinea (linguists in this area favour the term ‘pluractionality’). Verbal number/pluractionality is attested for Marind³ (Anim; Olsson 2017), Yelmek (Bulaka River; Gray & Gregor 2019), Ramno (Yam; Lee 2016), Ngkolmpu (Yam; Carroll 2016), and Marori (Isolate; Arka 2012). Further research may uncover a contact scenario in which Muyu acquired verbal number according to the model of South New Guinea languages.

Before we start our discussion of Muyu verbal number, some notational remarks are necessary. The bulk of this thesis makes use of the infinitive as the standard citation form of verbs. However, in this chapter, we often cite verb stems rather than infinitives. It is therefore useful to know about the formal relationship between verb stems and infinitives. To learn more about stem formation in Muyu, the reader is referred to Chapter 7. For the purposes of this chapter, a short summary shall do: Verb stems comprise a root and a stem vowel. The root of a regular verb ends in a consonant and represents the invariable part of the verb (i.e. the root is constant in all possible inflectional forms). The stem vowel, in contrast, is dropped in those forms where a vowel-initial suffix is directly attached to the stem. This is also the case in the infinitive. For example, to form the infinitive of the verb stem *koke*, one has to clip the /e/ and attach the suffix *-i*: *koki* ‘fall (sg.sbj.)’. Unfortunately, the reverse direction is not as easy, since one has to know the stem vowel of the respective verb. This can be either /a/, /e/, or /o/.

The remainder of this chapter is organised as follows: After a short outline of the features of verbal number in Muyu (§8.2), we discuss participant number (§8.3) by looking at subject number and object number in turn,

²Traditionally, inter-marriage with speakers of the Dumut (Greater Awyu *ɿ* Awyu-Dumut) language Mandobo has been very frequent (Schoorl 1993/1957). Their bonds are strong until today, e.g. Muyu and Mandobo residents in the Merauke district vote for a shared representant in the local elections as the author witnessed in his 2019 fieldtrip.

³Although no direct neighbours, speakers of Marind (Olsson 2017) have been in direct contact with virtually all groups of South New Guinea and some of the central lowlands. Their infamous head hunting raids led them several hundred kilometres from their villages (for details see Knauff 1993:156). Until the late 20th century, speakers of Greater Awyu languages were alive who had witnessed such Marind head hunting raids in the central lowlands. (Lourens de Vries, p.c.)

before we continue with event number (§8.4). Although participant number and event number are often clearly distinguishable, some ambiguous cases are shown in §8.5. Finally, some preliminary remarks on the diachronic source of verbal number will be given in §8.6.

8.2 Features of verbal number in Muyu

This section deals with the basic features of verbal number. It should be noticed, however, that verbal number does not encompass the whole word class but only a subset of verbs. At the moment 39 verb pairs have been identified that are specified for number. These are highly frequent verbs, so that verbal number is an important feature by its high token frequency.

The central features of verbal number in the Muyu verb lexicon are listed below. The remainder of this section gives a short outline of each feature.

1. The basic number distinction is **binary**: singular vs. plural.
2. Singular and plural stems may be formally similar or entirely unrelated.
3. Verbal number correlates with the system of **conjugation classes**.
4. Verbal number either encodes **participant number** or **event number**.
5. Participant number has **absolute alignment**.
6. Verbal number is an independent subsystem of the Muyu verb and **independent of argument indexing**.
7. Verbal number is restricted to a **closed class of verbs** rather than the whole word class.

Ad 1) - Muyu distinguishes between singular and plural verbs. Such a binary system is cross-linguistically more common than e.g. a tripartite division (Durie 1986:356, Veselinova 2013).

Ad 2) - Formally, verbal number is not based upon productive derivation but some generalisations are possible based on a partial phonological resemblance. Table 8.1 illustrates three formal patterns that lead to stem alternations in the verbal number domain. Two of them can be seen as suffixation (with or without prior clipping of the root) while the third strategy

is the alternation of formally unrelated roots. Suffixation can apply in both directions: either the singular stem is formed by an additional suffix from the plural stem or vice versa. The examples given in the middle columns cite the full verb stems, i.e. including the stem vowel which indicates the conjugation class (see Section 7.2.1). As can be seen from these few examples, the conjugation classes correlate with verbal number. All singular stems in Table 8.1 are e-stems, while plural stems are either a- or o-stems.

Process	Singular stems		Plural stems	Gloss
Suffixation	<i>badane</i>	←	<i>bada</i>	‘pull out’
	<i>ane</i>	→	<i>anengga</i>	‘eat, drink’
Suffixation to clipped root	<i>bane</i>	→	<i>bamba</i>	‘call’
	<i>nine</i>	→	<i>niga</i>	‘hold’
Stem alternation	<i>kale</i>		<i>namo</i>	‘throw’
	<i>kane</i>		<i>bio</i>	‘take’
	<i>kamone</i>		<i>numbuma</i>	‘put in, insert’

Table 8.1: Verbal number stem alternation. Formal patterns.

The second type of Table 8.1, suffixation to a clipped root, seems to contradict our conclusion that verb roots are invariable (see Section 7.2.1). This contradiction is only apparent, though, since the invariability of verb roots is related to inflection. A verb inflects via affixes illustrated in the verbal template of Chapter 7. The verb root remains constant when such affixes are attached. In contrast, the formal processes involved in verbal number oppositions are not inflections. Verbal number is understood here as a semantic relation between individual lexemes. Formal patterns as illustrated in Table 8.1 are mere generalisations of formal similarities. However, they are not productive and apply to a closed class of verb pairs only.

Ad 3) - Conjugation classes are related to verbal number in Muyu. Despite some exceptions, singular stems are e-stems while plural stems are either a- or o-stems. This has some morphological ramifications, e.g. only singular stems can take the perfective suffix *-ten*. For details on conjugation classes see Section 7.2.1.

Ad 4) - The kind of number distinguished is either participant number or event number. The former encodes the number of entities denoted by an argument (subject or object) of the respective verb, whereas the latter encodes the number of event occurrences (once or several times).

Ad 5) - As will be shown in the following section, participant number has absolutive alignment, i.e. participant number relates to the S argument of intransitive verbs and the O argument of transitive verbs.

Ad 6) - Verbal number is a separate subsystem in Muyu and must be distinguished from argument indexing. As shown in Section 7.3, argument indexing is based on three kinds of morphemes: subject suffixes, object suffixes, and object prefixes. Only subject suffixes are obligatory for any finite verb. In contrast, verbal number is not expressed via affixes but directly encoded in the verb stem. Consequently, the number value of a given verb stem is also intact in non-finite forms that are incompatible with subject suffixes. All this leads to the conclusion that verbal number and argument indexing must be strictly separated. The distinctive features are summarised in Table 8.2.

Features	Verbal number	Argument indexing
Categories distinguished:	number	person, number, gender
Locus of marking:	verb stem	affixes (3 slots)
Type of alignment:	absolutive	accusative

Table 8.2: Features distinguishing verbal number from argument indexing.

To sum up, verbal number in Muyu is characterised by at least seven features which are regularly found in the literature. This category is ubiquitous in our corpus data despite its restriction to a limited number of verbs. It turns out that those verbs conveying verbal number semantics exhibit high token frequency.

8.3 Participant number

Participant number is a number distinction related to one of the core arguments of the verb. Intransitive verbs indicate the number of the S argument (§8.3.1), while transitive verbs indicate the number of the O argument (§8.3.2). The A argument is never related to verbal number, therefore we in-

interpret the system as having absolutive alignment.⁴ There is no ditransitive verb with verbal number attested so far.

8.3.1 Subject number

Intransitive verbs have an S argument which can be related to verbal number. This type is called subject number and competes with subject suffixes as discussed below. Subject number is rather rare and only a few instances are identified yet, they are listed in Table 8.3.

Singular stem	Plural stem	Gloss
<i>alo</i>	<i>alendili</i>	‘stand’
<i>koke</i>	<i>kombVlo</i>	‘fall’
(<i>kulune wini</i>)	<i>kulumbangga</i>	‘crawl’
<i>noke</i>	<i>nombVlo</i>	‘fall’
<i>talili</i>	<i>yaluli</i>	‘burst’
<i>tole</i>	<i>totka</i>	‘ perch on , step on’
-	<i>ali(n)o</i>	‘sit, live’

Table 8.3: Intransitive verbal number pairs.

The following examples illustrate subject number of the pair *koke* / *kombVlo* ‘fall’:

- (2) *On ap kobi tol-on.*
 bird tree on perch:SG.SBJ-3SG.M
 ‘A bird perched on the tree.’ [Dictionary]
- (3) *Wamung kadap tana kon bop totka-d-ip.*
 fly many child woman corpse perch:PL.SBJ-DUR-2/3PL
 ‘Many flies are perching on a female dead body.’ [Dictionary]

The number of the subjects in (2) and (3) are both redundantly marked, since number is expressed in the verb stem and the subject suffix. Note that the locus of the events, i.e. ‘on the tree’ and ‘on a female dead body’, are both single locations. Therefore, the verbal number distinction does not encode any locational distribution but really the number of subject referents.

⁴Argument structure and the symbols S, A, O are discussed in Chapter 8.

Note the gloss for *tole / totka* in Table 8.3 where two translations are offered. In fact, these verbs are polysemous and mean either ‘perch on’ (like ‘A bird perched on a branch’) or ‘step on’ (like ‘I stepped on the carpet’). Interestingly, both meanings are affected by verbal number. However, they differ in the type of number. The meaning ‘perch on’ distinguishes subject number (e.g. ‘How many birds perched on the branch?’), whereas the meaning ‘step on’ distinguishes event number (e.g. ‘I stepped on the carpet several times (to make my mother angry)’). To sum up, the interpretation of verbal number (as participant vs. event number) is partially determined by the meaning of the verb stem, as polysemous cases show.

The verbs for ‘fall’ in Table 8.3 are apt to show the difference between verbal number and argument indexing. In general, the obligatory subject suffix in finite verbs can lead to a redundant double marking of subject number:

- (4) *Martha=go ap kobi=bet **kok-u-den**.*
 PN=PTC tree on=OBL fall:SG.S-3SG.F-PFV
 ‘Martha fell from a tree.’ [Fieldnotes]
- (5) *Nimbin=ko ap kobi=bet **kombil-ip**.*
 women=PTC tree on=OBL fall:PL.S-2/3PL
 ‘The women fell from a tree.’ [Fieldnotes]

However, this is only the case for animate referents but not for inanimate referents, as illustrated by the following examples⁵:

- (6) *Yum yumu kadap kep men=dem ombet **kombel-en**.*
 banana ripe many 2SG string.bag=in OBL.DEM fall:PL.S-3SG.M
 ‘Many ripe bananas fall out of your bag.’ [Dictionary]
- (7) *Ap embit kok kadap eyani **nombel-en**.*
 tree leaf dry many here fall:PL.S-3SG.M
 ‘Many dry leaves fall here.’ [Dictionary]

Both (6) and (7) have their subject NP in plural as marked explicitly by

⁵A semantic difference between *koki* and *noki* and their plural counterparts *kombVlo* and *nombVlo* has not been found yet.

the quantifier *kadap* ‘much, many’. Nonetheless, the subject suffix is *-en* ‘3SG.M’ in both cases. We interpret this suffix as expletive subject suffix that is used with inanimate subjects and does not have reference at all (for details see Section 9.2.2). However, verbal number still agrees with the NP in (6) and (7) as expected. As a consequence, number marking of the falling entities is not redundant in these cases.

To sum up, argument indexing distinguishes between animate and inanimate subjects. The latter trigger an expletive subject suffix whereas animate subjects have the full range of person, number and gender values. In contrast, such a sensitivity to animacy is not relevant in the domain of verbal number. A verb like *kombVlo* ‘fall (pl.sbj.)’ combines with all plural subjects equally, regardless if animate or inanimate.

The verbs for ‘crawl’ in Table 8.3 are noteworthy since the singular stem is not a simple verb. Whereas the plural stem is *kulumbangga* ‘crawl (pl.sbj.)’, we find a multi-verb construction *kulune wini* formed with the motion verb *wini* ‘go’ in the singular cell. The verb *kulune* on its own is transitive and means ‘put something down on the ground’, e.g. a rug or a mat. An intransitive use of *kulune* is not attested but the semantic relationship with *kulune wini* ‘crawl (sg.sbj.)’ is obvious. There are two possible interpretations of these data. Firstly, a lexical gap has led to the use of a multi-verb construction ‘put down go’ as the singular version of an already existing plural verb. Or, secondly, given the phonological similarity of *kulumbangga* and *kulune*, both lexical items could stem from the same diachronic source. While the plural verb has completely lexicalised into *kulumbangga*, the singular verb resisted full lexicalisation, possibly blocked by the transitive use of *kulune* ‘put something down on the ground’. Although the second explanation is favored by the author of this study, it must be highlighted that diachronic processes in Muyu (and Ok languages generally) are not understood well enough for a final decision.

Another peculiarity of subject number can be seen in the incomplete row of Table 8.3. The plural verb *ali(n)o* ‘sit, live (pl.sbj.)’ does not have a singular counterpart. This gap is usually filled by *ti-* ‘sit, live’ which is not specified for verbal number⁶:

⁶For the irregular stem alternation between *timbVlo* ‘sit, live’ and *ti* ‘she sits/lives’ as well as for the irregularities concerning the presence or absence of /n/ in *alino* ‘sit, live (pl.sbj.)’, the reader is referred to Section 7.2.2.

- (8) *Yi=go ok Kowo kebet **al**-ip.*
 3PL=PTC river PN side live:PL.S-2/3PL
 ‘They live at the shore of the Kao river.’ [Dictionary]
- (9) *Yu=go ok Kowo kebet **ti**-un.*
 3SG.F=PTC river PN side live-3SG.F
 ‘She lives at the shore of the Kao river.’ [elicited]

At first glance, it looks as if *ali(n)o* and *ti-* in (8) and (9) contrast exactly in subject number. However, *ti-* is not restricted to singular subjects as the following example illustrates:

- (10) *Yi=go mit ambip **timbil**-i yeman win-ip.*
 3PL=PTC money house live-INF for go-2/3PL
 ‘They go to live in a hotel.’ [Dictionary]

In fact, we can even freely substitute *ali(n)o* for *ti-* in plural subject contexts. Compare (8) with (11). Speakers insist that there is no semantic difference between the two:

- (11) *Yi=go ok Kowo kebet **ti**-ip.*
 3PL=PTC river PN side live-2/3PL
 ‘They live at the shore of the Kao river.’ [elicited]

To conclude, we interpret *ali(n)o* ‘sit, live (pl.sbj.)’ as a plural stem without a corresponding singular stem. The lexical gap is filled by the verb *ti-* ‘sit, live’ which does not encode verbal number at all.

8.3.1.1 Deadjectival verbs encoding subject number

Verbal number also plays a role in the morphological formation of verbs from an adjectival base. Adjectives take one of two verbalizing suffixes, *-n* to form a singular verb and *-telebi* to form a plural verb. Since deadjectival verbs are necessarily intransitive, verbal number applies to subject number only. The pattern is exemplified with *bop* ‘rotten’ in (12) and *yit* ‘cool’ in (13). Generally, this pattern is productive and can be applied to any verb in the Muyu lexicon. For further details on the morphological word formation process, the reader is referred to Section 3.3.2.

- | | | | |
|------|--------------------|----------------------|------------------------|
| (12) | <i>bop</i> | | ‘rotten’ |
| | <i>bop-n-i</i> | [rotten-VBLZ.SG-INF] | ‘rot, decay (sg.sbj.)’ |
| | <i>bop-teleb-i</i> | [rotten-VBLZ.PL-INF] | ‘rot, decay (pl.sbj.)’ |
| (13) | <i>yit</i> | | ‘cool’ |
| | <i>yit-n-i</i> | [cool-VBLZ.SG-INF] | ‘cool down (sg.sbj.)’ |
| | <i>yit-teleb-i</i> | [cool-VBLZ.PL-INF] | ‘cool down (pl.sbj.)’ |

As can be seen in (12) and (13), the verbalizing morphemes *-n* and *-telebi* form inchoative verbs. The property of the adjectival base is predicated to the subject argument. Furthermore, these subjects are specified for number depending on which of these morphemes is chosen. Their verbal number values can be seen in the following examples, which also include ungrammatical uses:

- | | | | |
|------|-------------------------------------|--|--------------|
| (14) | <i>Ton mim bop-n-o-den.</i> | | |
| | fish one rotten-VBLZ.SG-3SG.M-PFV | | |
| | ‘One fish is rotten.’ | | [Fieldnotes] |
| (15) | <i>*Ton kadap bop-n-ip-ten.</i> | | |
| | fish many rotten-VBLZ.SG-2/3PL-PFV | | |
| | ‘(Intended:) Many fish are rotten.’ | | [elicited] |
| (16) | <i>Ton edo bop-teleb-ip.</i> | | |
| | fish DEM rotten-VBLZ.PL-2/3PL | | |
| | ‘These fish are rotten.’ | | [elicited] |
| (17) | <i>*Ton mim bop-teleb-ip.</i> | | |
| | fish one rotten-VBLZ.PL-2/3PL | | |
| | ‘(Intended:) One fish is rotten.’ | | [elicited] |

As can be seen from (15) and (17), contradictory marking of number, i.e. singular NP quantifier + plural verb (or vice versa), leads to ungrammatical clauses. In contrast, the adjectival bases do not include any number information.

8.3.2 Object number

Transitive verbs have A and O arguments of which only the latter is related to verbal number. Hence, transitive verbs may have object number but never

subject number. Together with the existence of subject number this meets the requirements for an absolutive alignment system. Unlike subject number, object number is rarely redundant since object affixes almost never co-occur on the same verb. Verbs conveying object number semantics are listed in Table 8.4.

Singular stem	Plural stem	Gloss
<i>ami(n)o</i>	<i>amingga</i>	‘weave’
<i>anale</i>	<i>adile</i>	‘cut down tree(s)’
<i>badane</i>	<i>bada</i>	‘pull out’
<i>bani</i>	<i>bai</i>	‘take a/several part(s) of sth.’
<i>benba(n)o</i>	<i>benbanga</i>	‘carry’
<i>kadine</i>	<i>kadingga</i>	‘carry on shoulder’
<i>kale</i>	<i>namo</i>	‘throw (away)’
<i>kamoni</i>	<i>numbumi</i>	‘put in’
<i>kane</i>	<i>bio</i>	‘take’
<i>kombe</i>	<i>kilibe, yale</i>	‘put, lay down’
<i>kulune</i>	<i>kemengga</i>	‘put down’
<i>mangge</i>	<i>alumo</i>	‘sow, plant’
<i>mone</i>	<i>belenggo</i>	‘buy’
<i>nine</i>	<i>niga</i>	‘hold’
<i>nili</i>	<i>nindami</i>	‘carry on head’
<i>ombe</i>	<i>ombVlo</i>	‘break’
<i>teka</i>	<i>temba(n)</i>	‘drag, pull’
<i>tokbe</i>	<i>tabangga</i>	‘split’
<i>wane</i>	<i>wanamo</i>	‘pick fruit’
<i>wine</i>	<i>wingga</i>	‘chop tree(s)’
<i>wombe</i>	<i>wolobo</i>	‘cut off, break’
<i>yeno</i>	<i>yenengga</i>	‘build house(s)’
<i>yimingge</i>	<i>yiminangga</i>	‘hang’

Table 8.4: Transitive verbal number pairs.

To illustrate object number in context, we take a look at an exemplary pair. The object number verbs *kane* ‘take (sg.obj.)’ and *bio* ‘take (pl.obj.)’ are among the most frequent verbs in the corpus. Compare the following examples:

- (18) *Tit aip kan-an-ep balin.*
 product there.is take:SG.O-IRR-2SG NEG
 [If you do not work ...]
 ‘You will not get any result.’ [muyu044:064]
- (19) *Talep-talep mo b-e men-e kem-ip.*
 big-RED only take:PL.O-SM come-SM do-2/3PL
 [Conversation about gardening. A long time ago the taro crop was
 better:]
 ‘They used to bring the big ones only.’ [muyu017:060]

Since Muyu rarely marks number on the NP⁷, object number is an important means to indicate if one or several objects are affected by an event. Therefore, *kane* and *bio* are used in many complex predicates, e.g. the multi-verb construction *be mini* ‘bring (pl.obj.)’ illustrated in (19).

As mentioned in the previous section, object number gives us a reasonable test for the question of whether verbal number is actually verbal aspect. If, for example, the semantic difference in *kane* and *bio* is an aspectual distinction, then we would not expect the singular verb *kane* to refer to repeated events. An example for this usage in (20) comes from a procedural text about traditional medicine and healing.

- (20) *Anikat y-∅-an-on=go nonggibi adaman*
 sickness PL.O-hit-IRR-3SG.M=PTC medicine medicine
kan-i=mo oyen.
 take:SG.O-INF=ADV there.is
 ‘When we are sick, we usually take medicine. (lit. when sickness hits us, there is taking medicine)’ [muyu045:002]

The verb *kane* in (20) refers to a single object, i.e. the medicine that is taken. However, this event does not take place only once but every time someone is sick, hence the use of the habitual infinitive. Compare this example with (19) above, where a periphrastic habitual with the auxiliary *kemi* ‘do’ is used. In contrast to (20), the habitual in (19) is based on a plural verb because several object referents are affected by the frequently occurring event. To conclude, we see that the number of the object is entirely independent from

⁷Exceptions are the kinship plural *-a* and full reduplication of nouns and adjectives as in example (19). Both kinds of exceptions are rarely used.

the aspectual domain.

Not all verb stems in Table 8.4 are perfectly regular. Firstly, there are stems with floating /n/ (see Section 7.2.2.2): *ami(n)o* ‘weave (sg.obj.)’, *benba(n)o* ‘carry (sg.obj.)’ and *temba(n)* ‘drag, pull (pl.obj.)’. Moreover, *ami(n)o* and *benba(n)o* are o-stems despite having singular number. Secondly, *teka* ‘drag, pull (sg.obj.)’ is irregular and has a vowel stem ending in /a/, i.e. an a-stem (see Section 7.2.2.1). Thus *ami(n)o*, *benba(n)o* and *teka* represent exceptions to the rule that singular stems are E-stems.

Another peculiarity is that the singular stem *kombe* ‘put, lay down (sg.obj.)’ has two plural counterparts: *kibile* and *yale*. Speakers insist that the plural stems are synonymous and give the following examples:

- (21) *Omani amidak yinim wani kilib-e.*
 banana floor on down put:PL.O-2SG.IMP
 ‘Put the bananas on the floor!’ [elicited]
- (22) *Omani amidak yinim wani yal-e.*
 banana floor on down put:PL.O-2SG.IMP
 ‘Put the bananas on the floor!’ [elicited]

We did not find any semantic divergences between *kilib* and *yale*. So if we accept them as being synonymous, the question about their relationship to the singular stem *kombe* arises. Two interpretations are possible: (1.) There are two pairs of verb stems in which the singular stems are homophones, i.e. *kombe* / *kilib* ‘put, lay down’ and *kombe* / *yale* ‘put, lay down’. (2.) There are three independent lexemes of which two are identical in meaning and therefore have the same semantic relationship to the third. As should be clear by now, we favour the latter interpretation. Each verb stem in a verbal number pair represents an independent lexeme. Thus, synonyms with the same number value do not affect the counterpart. There is no need for doubling the singular stem *kombe*.

8.4 Event number

Some Muyu verbs indicate event number rather than participant number. While the latter relates to the number of event participants, event number denotes if an event happens only once or several times. So far, only a few verb stems have been found that convey event number as part of their lexical

meaning. They are listed in Table 8.5. For an explanation of the polysemy of *tole/totka* see Section 8.3.1 above.

Singular stem	Plural stem	Gloss
<i>bane</i>	<i>bamba, yongga</i>	‘call s.o.’
<i>bulune</i>	<i>bulubo</i>	‘hit’
<i>bune</i>	<i>bemengga</i>	‘water’
<i>(kaweno)</i>	<i>kadilibo</i>	‘climb’
<i>kededani</i>	<i>kededai</i>	‘ask’
<i>nolone</i>	<i>nolotka</i>	‘touch’
<i>tole</i>	<i>totka</i>	‘perch on, step on ’

Table 8.5: Verbal number pairs relating to event number.

Though all verbs in Table 8.5 are transitive, the number distinction is independent of the object argument. This means that a plural event may take place several times involving a single subject as well as a single object. Conversely, a single event takes place once despite plural subjects or plural objects. Examples with *bani* ‘call once’ and *bambai* ‘call several times’ are given in (23) and (24).

- (23) *Nimbin-nimbin okun-e ban-an=go teleb-ip.*
 women-women like.that-SM call.once-1SG=PTC gather-2/3PL
 [Story about the speaker’s attempts to form a music group:]
 ‘Thus I invited women to get together. (lit. I called women, they gathered)’ [muyu012:054]
- (24) *Okun-e ni-ngg-e a-∅-a engg-e*
 like.that-SM hold-2/3SG.O-SM 3SG.M.O-kill-1SG.IMP say-SM
kem-un=go welen kel-on=got, nup
 do-3SG.F=PTC difficult become-3SG.M=and.then.DS 1PL
bamba-un.
 call.several.times-3SG.F
 [A woman catching a rat. She needed help from some nearby children:]
 ‘She wanted to catch and kill it but it was hard, so she kept calling us.’ [muyu039:026]

In (23), the speaker makes use of the singular event verb *bani* when he

actually calls several women to gather. He surely did not stand in the middle of the village and call once. Nonetheless, his call is not conceptualised as iterative event but rather as one single invitation going out to all women of the village. Example (24) is from a narrative about catching a rat. Here, the protagonist called some children to help her. The speaker was one of them (hence ‘us’). Due to the reluctance of the children, she had to call them repeatedly until they finally joined her.

Note that in Table 8.5 the plural cell for ‘call s.o.’ also contains *yongga* besides *bamba*. Both are used synonymously and there is no reason to assume any semantic variance. For our treatment of synonymy in relation to verbal number, see the discussion of the synonyms *kilibi* and *yale* ‘put, lay down (pl.obj.)’ in Section 8.3.2 above. In principle, our interpretation that verbal number pairs consist of individual lexemes also applies here. However, we need to consider that the stem pair *bane* ‘call s.o. (sg.obj.)’ and *bamba* ‘call s.o. (pl.obj.)’ show phonological similarity by sharing the first syllable. This is not the case with *yongga*. It is likely, therefore, that *bamba* stems from the same source as *bane*, whereas *yongga* is not related diachronically and enters the verbal number relation due to another (yet unknown) factor. All this has no impact on the synchronic level of description.

As was discussed in 8.3.1, the type of verbal number of the polysemous verbs *tole* and *totka* ‘perch, step on’ depends on which meaning is evoked. In (25), where it means ‘step on’, the subject is singular, hence the plurality of the verb is related to the event itself. The reverse situation is given in (26) where the subject is plural but the event number is singular. In this case, a singular event is distributed over the subject set in such a way that each referent is related to a single stepping event. The speaker warns each of the addressees not to step even once on the thorns. Note that the verb in (25) is inflected as N-form (for details see Section 7.6.3) in adverbial function.

- (25) ***Totk-an=mo*** *won-on.*
 step.several.times-N=ADV go-3SG.M
 [After medical treatment of an injured knee:]
 ‘He walks around, stepping a few times (to strain the knee).’
 [Fieldnotes]
- (26) *Badopmo min-ime,* *nong yik eyani*
 carefully come-2PL.IMP, rattan thorn here

tol-an-ip.

step.on.once-IRR-2PL

‘Be careful, or you will step on these rattan thorns.’ [Dictionary]

In some cases, it is less clear if we are dealing with object number or event number. *Kadilibo* ‘climb several times’ is presumably in opposition to *kaweno* ‘climb (once?)’. Basically, *kadilibo* refers to several climbing events whether the location changes between the events or stays the same:

(27) *Yosep pepaya kadap kadilibo-d-en.*
 PN papaya many climb.several.times-DUR-3SG.M
 ‘Joseph is climbing many Papaya trees.’ [Dictionary]

(28) *Yosep pepaya mim kadilibo-d-en.*
 PN papaya one climb.several.times-DUR-3SG.M
 ‘Joseph is climbing one Papaya tree several times.’ [elicited]

A single climbing event on a single tree would require the verb *kaweno*:

(29) *Yosep=ko pepaya kaweno-d-en.*
 PN=PTC papaya climb-DUR-3SG.M
 ‘Joseph is climbing a papaya tree.’ [elicited]

Since the plurality of climbing events in (27) and (28) is independent of the number of trees that are climbed, we classify it as event number. However, this is less clear for *kaweno* in (29). Since one and the same person cannot climb several trees at the same time we cannot decide whether (29) is the opposite of (27) (i.e. contrasting the number of trees) or the opposite of (28) (i.e. contrasting the number of climbing events).⁸ Thus *kaweno* may be single event and single object at the same time.

⁸This problem is also not remedied by the fact that *kaweno* can be used with a plural subject, e.g. *ap kawan-an-up* [tree climb-IRR-1PL] ‘We will climb the tree’, since we have no independent criterion to decide if this climbing of several persons on one tree is conceptualised as a single event or several events.

8.5 Ambiguous cases. Beyond verbal number

So far we encountered verb pairs that encode either participant number or event number. In one case, *tole/totka*, both types are attested, though with different meanings since these verbs are polysemous: ‘perch on, step on’. Therefore, even polysemous cases do not challenge our assumption of a clear-cut division between participant number and event number.

Within the group of participant number, we distinguished between singular and plural stems based on a clear-cut binary split. Singular is equal to a quantity of 1, while plural covers all quantities higher than 1. Most verb pairs are not vague about this quantity split and a third value (e.g. dual, paucal) is not available in Muyu.

There are, however, two verb pairs associated with the domain of cooking and eating which behave differently. The verbs in question are (1.) *ano* vs. *anengga* ‘eat/drink’ vs. ‘eat/drink large amounts or many times’ and (2.) *nengga* vs. *nenggangga* ‘cook/burn’ vs. ‘cook/burn large amounts or many times’. Comparing the glosses, we find two components: ‘large amounts’ and ‘many times’. It seems that these verb pairs are ambiguous between object number and event number. Which meaning is the dominant one? In what follows, we discuss the problem with respect to the pair *ano/anengga* only. The reader should keep in mind that the latter pair *nengga/nenggangga* works exactly alike.

First, we need to recognise that *ano* vs. *anengga* is not a straightforward participant number alternation. Both singular and plural objects (as well as singular and plural subjects for that matter) are covered by *ano*:

- (30) *Omani mim ano-d-in.*
 banana one eat-DUR-1SG
 ‘I am eating one banana.’ [elicited]
- (31) *Omani anggo ano-d-up.*
 banana five eat-DUR-1PL
 ‘We are eating five bananas.’ [elicited]

While *ano* denotes both singular and non-singular quantities, we find *anengga* in contexts with particularly large amounts of objects:

- (32) *Ih, nimbin alop odo im ogo*
 INTJ women two DEM pandanus.fruit DEM

anengga-d-ip=o.

eat:PL-DUR-2/3PL=QUOT

[Story. Owner of a garden, watching two women:]

‘Oh, the two women are eating plenty of (my) pandanus fruit.’

[muyu065:058]

In (32), the speaker seems to highlight that the women are eating too much of his pandanus fruit. Similarly, we can alter the examples above to exceed the ordinary amounts of food. Compare (31) with the following example:

- (33) *Omani seratus anengga-d-in.*
 banana one.hundred(BI) eat:PL-DUR-1SG

‘I am eating a hundred bananas.’

[elicited]

Thus the relevant information is indeed the quantity of the object. However, in contrast to object number as discussed in Section 8.3.2, the distinction here is not singular vs. plural but rather usual amount vs. large amount. If a subject eats what is considered a normal quantity of food, *ano* is used. Otherwise, a Muyu speaker can use *anengga*.

An alternative interpretation would be to attribute the split between *ano* and *anengga* to an aspectual alternation between a punctual or complete event vs. a temporally extended or iterative event. This would be supported by the gloss ‘eat/drink several times’ given above. The relation to larger quantities of eaten objects would then be merely an implicature from a primary aspectual distinction. To test for this possibility, we construed two contexts and checked them in elicitation:

- (A) I eat many bananas over the course of the day: I’ll start with one banana, after one hour another one, again after one hour another one, and so on until evening.
- (B) I eat a single banana over the course of the day: I’ll start by taking one small bite, after one hour another bite, again after one hour another one, and so on until evening.

Context A includes many bananas over an extended period of time. This context should elicit *anengga* and indeed we get the following response:

- (34) *Omani anengga-d-in.*
 banana eat:PL-DUR-1SG

‘I am eating plenty of bananas.’ [elicited]

However, the decisive context is represented in B. Here we have a small quantity of bananas (only one single item) over an extended period of time. Our informants respond with *ano*:

(35) *Omani ano-d-in.*
banana eat-DUR-1SG

‘I am eating a banana.’ [elicited]

Comparing (34) and (35) and their respective contexts, we see that the alternation between *ano* and *anengga* is sensitive to the amount of bananas eaten rather than the extended period of time. Both eating events in context A and B may last for a whole day but eating one banana triggers *ano* while eating a large quantity of bananas triggers *anengga*.

To sum up, besides ordinary object number which distinguishes singular and plural, Muyu also has verbs that highlight larger amounts of objects. So far this mechanism was found with two verb pairs only. It is likely though that future research uncovers further examples along the lines of *ano* and *anengga*.

8.6 Some remarks on the diachronic source of verbal number

The main conclusion of this chapter was that verbal number is a lexically specified feature rather than deriving productively from a derivational process. Generally, verbal number pairs can be considered to consist of separate lexemes.⁹ One piece of evidence for this was that formal patterns, although some resemblances are indeed present, do not allow for the analysis of any morphemes with plural meaning (or singular, for that matter). However, there are three verbs for which the diachronic source of the plural stem is still transparent. They therefore allow for some conclusions about their diachronic source.

⁹Of course there is the possibility to propose a suppletive relation between the stems of a verbal number pair. However, this depends on how suppletion is defined. Such theoretical morphological considerations go far beyond the scope of this thesis. For the purposes of this study, verbal number pairs are considered separate lexemes.

All three verb stems concerned are plural stems listed once again in Table 8.6. All of them follow the pattern ‘suffixation to clipped root’ (see Section 8.2).

Singular stem	Plural stem	Gloss
<i>koke</i>	<i>kombVlo</i>	‘fall’
<i>noke</i>	<i>nombVlo</i>	‘fall’
<i>ombe</i>	<i>ombVlo</i>	‘break’

Table 8.6: Plural stems with bVl.

The clipped roots in Table 8.6, *ko-*, *no-*, and *o-*, are complemented with /bVl/ respectively. This string of segments occurred also in defective verbs like *timbVlo* ‘sit’ in Section 7.2.2.5, where we argued that it is grammaticalised from the continuative auxiliary *bili* ‘AUX.CONT’.

The difference between defective verbs like *timbVlo* ‘sit’ and plural number verbs like *kombVlo* ‘fall (pl.sbj.)’ is the progress of the diachronic process. The former still has inflections that do not need *-bVl* as in (36), whereas the latter has the root *kombVlo* in all inflectional forms, e.g. in (37).¹⁰ Therefore, we interpret the *-bVl* to be fully lexicalised into the plural stems of Table 8.6 and no longer morphologically analysable.

- (36) *ti-en*
sit-3SG.M
‘He sat.’ [Fieldnotes]
- (37) *kombel-en*
fall:PL.SBJ-3SG.M
‘(Many inanimate things) fell.’ [elicited]

The continuative auxiliary *bili* as a source for the lexicalisation of verbal number gives us a conceivable diachronic scenario: In a first stage, an aspectual construction ‘fall + continuative’ refers to a continuation of a falling event. Such a meaning would not only denote prolonged falling (e.g. from high altitude¹¹) but extend also to iterative events with multiple entities falling one after another. After some time, the iterative interpretation would become

¹⁰The mismatch in number between verbal number and the subject suffix in (37) is explained by the fact that inanimate subjects trigger *-en* ‘-3SG.M’ as a default.

¹¹Traditional Muyu houses were tree houses built up to 30 meters above the ground.

dominant. In a second stage, the plural number of the falling entities enters the core meaning of the construction. After the auxiliary has merged with the main verb, the resulting item is reinterpreted as a single lexeme. This new lexeme is semantically related to its original form which continues to exist. They both have the same descriptive meaning ‘fall’, but the new lexeme has the additional meaning ‘PL.SBJ’ while the original lexeme remains unmarked for number. In a third stage, the speakers reinterpret the meaning of the original stem as ‘SG.SBJ’ to contrast it with the new stem. This is the final stage and can be seen in the present system.

Although a diachronic scenario like the one offered here seems plausible, it is but one route for the emergence of verbal number in Muyu. Since the verbal number stem alternations are formally diverse, we do not expect that there is one single origin for all pairs but a multitude of diachronic developments probably affecting each other.

Chapter 9

Clausal syntax

9.1 Introduction

This Chapter describes the syntax of simple clauses. Complex clauses and sentences with multiple clauses are the topic of Chapter 12. This chapter is structured as follows. In Section 9.2, verbal clauses are discussed along with their categorisation based on the number of arguments they take. In Section 9.3, the grammatical relations subject, object, oblique and comitative are defined and thoroughly discussed. In addition, this section contains information about ambitransitives. Then we turn to non-verbal clauses, of which several formal types can be distinguished (section 9.4). Leaving the field of declaratives, the next two sections are about non-declaratives: interrogatives in Section 9.5 and imperative clauses in Section 9.6. Finally, this chapter is concluded by a description of negation in Section 9.7. The remainder of this introduction provides a definition of the clause as a syntactic unit in Muyu.

Although the clause is regarded as one of the most basic units of syntax, its features depend largely on the grammar of the individual language. In the case of Muyu, we define the clause as a syntactic unit with at least the following grammatical features:

1. A clause consists of a **predicate** and **one or more arguments**. The predicate is either verbal or non-verbal. Verbal predicates can be simple or complex (e.g. multi-verb constructions). The arguments can be either overt NPs or omitted and retrievable from the discourse context.
2. A (verbal) clause has **exactly one finite verb in the clause final position**, by which is meant a verb with a subject suffix. The finite

verb can be a medial verb or a final verb. (For morphological details see Chapter 7).

3. A clause is **host to clause clitics**. Examples are illocutionary force clitics, e.g. =*e* ‘Q’, or clause chaining clitics, e.g. =*e* ‘DS.SEQ’.
4. A clause is the **maximum scope of negation**. The negation particle *balin* always stands clause final. Its scope can be a subclausal unit (especially in combination with multi-verb constructions) but the scope of negation never exceeds a clause boundary.
5. A (verbal) clause is the **minimum domain of a subject**. There is only one subject within a clause, even in multi-verb constructions that denote many sequential events. A subject referent can be continued in the clause chain (indicated morphologically on the verb, i.e. same subject marking) and thus exceed a clause boundary.

The remainder of this chapter will shed light on the different parts of this definition. Furthermore, this definition plays a role in our account of complex predicates as discussed in Chapter 10 and 11, since one of the features of complex predicates is monoclausality. Whenever the term ‘monoclausality’ turns up in Chapter 10 or 11, we imply the features given in the definition above.

9.2 Verbal clause types

In this section, verbal clauses are categorised according to the number of their arguments. On the basis of this criterion, intransitive clauses (§9.2.1), transitive clauses (§9.2.3) and ditransitive clauses (§9.2.4) are distinguished - including one, two and three arguments, respectively. Another type represents impersonal clauses (§9.2.2) in which a syntactic argument is required that does not refer to any extra-linguistic entity.

Through the course of this section, we use the terms ‘subject’ and ‘object’ for the arguments of intransitive and (di)transitive verbs. For more technical definitions of what constitutes subjects and objects in Muyu, the reader is referred to the section on grammatical relations (§9.3). This is also where ambitransitives are discussed (§9.3.3), i.e. a type of verb that can head two of the clause types discussed in this section.

9.2.1 Intransitive clauses

Intransitive clauses have a single argument, i.e. the subject. This argument is cross-referenced with an argument index on the verb. The basic constituent order is SV. The subject NP can be omitted so that the clause is represented by its predicate only. Semantically, the subject of an intransitive clause is either actor or undergoer of the event in the predicate. For inanimate referents in subject position see Section 9.3.1.1.

Here are some examples of intransitive clauses:

- (1) *Katma=go Adi timbol-on. Katma=go tana manggan timbul-un.*
 side=PTC dad sit-3SG.M side=PTC child daughter sit-3SG.F
 ‘The father was sitting on one side and the daughter was sitting on
 the other side.’ [muyu016.009]
- (2) *Awon=ko angg-en.*
 pig=PTC lie.down-3SG.M
 ‘The pig lay down.’ [muyu004.054]
- (3) *Ok alopn-o-den.*
 river turn.yellow-3SG.M-PFV
 ‘The river is polluted. (lit. turned yellow)’ [muyu017.167]

All the examples above have only one single argument. The verbs are clause final and are suffixed with a cross-referencing subject index. The subject is either a human (1), an animal (2) or an inanimate (3). In (1), a locational adjunct, *katma* ‘side’, precedes each of the subjects.

Intransitive verbs belong to one of the following semantic classes:

1. Motion verbs, e.g. *wini* ‘go’, *mini* ‘come’, *ambeni* ‘swim’, *kabani* ‘run’.
2. Posture verbs and their semantic extensions, e.g. *anggi* ‘lie (down), sleep’, *timbili* ‘sit, live at’.
3. Human activities, e.g. *bekmi* ‘wait’, *ambanggi* ‘work’, *moknai* ‘dance’.
4. Bodily processes, e.g. *winggai* ‘vomit’, *tani* ‘die’, *kilingmi* ‘shiver’.
5. Emotional states, e.g. *ayaki* ‘be happy’, *kodoli* ‘pout’.
6. Deadjectival inchoative verbs derived with the verbalising suffix *-n* (for this type of derivation, also see Section 3.3.2). They predicate the

inception of the state expressed by the adjective that is the basis of the derivation.

7. Processes involving non-human subjects, e.g. *kalali* ‘become clear (water or weather)’, *teni* ‘melt’, *tili/titki* ‘bloom, bear fruits’, *toki* ‘heal (wound)’, *tabami* ‘drip’, *towenebi* ‘flow’, *kini* ‘shine (sun)’.
8. Change of states, e.g. *natwali* ‘appear, emerge’, *balaki* ‘disappear’, *ambuluni* ‘collapse’, *wakoli* ‘stop’.

From these verb classes, motion verbs are discussed more thoroughly in the following subsection, since they impose special syntax on the clause.

9.2.1.1 The motion verb complex

This section describes a peculiar kind of intransitive clause, namely those including motion verbs. Unlike other intransitive verbs, motion verbs often do involve a second argument, which can be a goal, a source or a direction of movement. Hence they do not look like genuine intransitive clauses.

Additions to the motion verb follow a specific pattern that will be labeled ‘motion verb complex’ in this section. The schema is illustrated in Figure 9.1. The motion verb is the main verb of the complex. It is preceded by the locational argument, which is in turn preceded by a directional, i.e. a separate word class indicating direction of motion. Both locational argument and directional are optional and can be omitted. The remainder of this subsection will discuss evidence for this template. It must be stated, however, that the motion verb complex is a tendency rather than a strict rule. Counterexamples can be found occasionally.

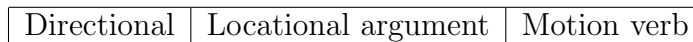


Figure 9.1: Schematic template of the ‘motion verb complex’.

The basic motion verbs of Muyu are *wini* ‘go’ and *mini* ‘come’.¹ These two are by far the most frequent verbs in the corpus, especially due to their major role in associated motion MVCs (see Section 11.3.4). They can be used as final verbs, though, as in the following examples:

¹The stem vowel in the first syllable of these verbs always assimilates to the vowel of the immediately succeeding suffix (see Section 7.2.2.4).

- (4) *Kali Kao wun-up=ki.*
 river(BI) Kowo go-1PL=EMPH
 ‘We went to Kowo river.’ [muyu025.001]
- (5) *Kim talep nange-n-up, kawut kampung mun-up=o.*
 road big arrive-SS-1PL directly village(BI) come-1PL=PTC
 ‘We arrived at the main road and then we came directly to the village.’
 [muyu037.090]

As can be seen in (4) and (5), the locational argument immediately precedes the motion verb. This slot of the template can be filled with a toponym like *Kali Kao* ‘Kowo river’ in (4) or a general NP like *kim talep* ‘main road’ or *kampung* ‘village(BI)’ in (5). In addition we find adverbs (e.g. *taman* ‘far away’) and deictics (e.g. *wonggo* ‘there’).

Further constituents of a clause do not intervene between a motion verb and its locational argument. Adjuncts like instruments stand outside of the motion verb complex and thus precede it. In the following example the motion verb complex is marked with square brackets:

- (6) *On kuduyap=bet [Merauke wan-a-den].*
 bird shadow=OBL PN go-1SG-PFV
 ‘I went to Merauke by airplane.’ [muyu041.048]

Directionals form a distinct word class and indicate the direction of movement (see Section 4.4). As such, they typically co-occur with *wini* ‘go’ or *mini* ‘come’. The following directionals are found in Muyu:

- (7) *yado* - ‘up’
kido - ‘down’
kolo - ‘back’
kedo - ‘out’
wudo - ‘into, hither’

Directionals are not arguments of motion verbs but form a complex predicate together with the verb. In the motion verb complex, they are placed in the first slot:

- (8) *[kolo ambip wun-u-den].*
 back house go-3SG.F-PFV

‘She went back home.’ [muyu007.104]

- (9) *Ok Widi wani [kido weno-n-up].*
 river PN down down go-SS-1PL

‘We went down the Widi river and we ...’ [muyu038.192]

Example (8) exactly follows the template given in Figure 9.1. The order of constituents is: directional *ɔ* locational argument *ɔ* motion verb. Note that the postpositional phrase *ok Widi wani* ‘down the Widi river’ in (9) precedes the motion verb complex. As a consequence, the ‘Widi river’ is not to be interpreted as the goal but rather the trajectory of motion.

Some motion verbs begin with a syllable that may have been a directional historically: *kawini* ‘climb, go up’, *kamini* ‘climb here, come up’, *towini* ‘pass’. However, since no locational argument can intervene, they must be considered fully lexicalised:

- (10) a. *Ap kawen-en.*
 tree climb-3SG.M
 ‘He climbed the tree.’ [Fieldnotes]

- b. **Ka ap wen-en.*
 ? tree go-3SG.M
 ‘(Intended:) He climbed the tree.’ [elicited]

- (11) a. *Kep odo kede towen-ep?*
 2SG.M DEM where pass-2SG
 ‘Where did you pass?’ [muyu010.060]

- b. **Kep odo to kede wen-ep*
 2SG.M DEM ? where go-2SG
 ‘(Intended:) Where did you pass?’ [elicited]

The (b) examples in (10) and (11) split off the elements **ka* and **to* and move them into the directional slot of the motion verb complex. Structures like these are unequivocally rejected as ungrammatical. Hence they are no longer recognised as directionals, although they may have been in a previous

stage of the language.

In some rare cases, the motion verb complex contains two directionals:

- (12) *ta kolo yado wan-an-up.*
 and back up go-IRR-1PL
 ‘and we will go back upstream.’ [muyu038:139]

Examples like (12) are found infrequently and demand further scrutiny. In particular, two questions arise. Firstly, are there restrictions as to which directionals can be combined? Secondly, is the order of directionals rigid or flexible? We leave these questions for future research.

9.2.2 Impersonal clauses

Impersonal clauses are clauses that semantically do not involve any argument. Their verb is atransitive.² However, finite verbs obligatorily need a subject suffix. Therefore, impersonal clauses are suffixed with non-referential argument indexes that are formally identical to the third person singular masculine forms: *-on*, *-en* or *-o*.³

Common verbs in impersonal clauses have to do with times of the day or daylight: *amnomni* ‘become night’, *midiki* ‘it gets dark’, *naki* ‘the day breaks’, *opni* ‘become evening’.

- (13) *Ih, midik-o-den, ambip kolo wan-a.*
 INTJ become.dark-3SG.M-PFV house back go-1SG.IMP
 ‘Oh, it’s dark already, I must go back home!’ [muyu030:186]

Impersonal clauses often take part in complex syntactic structures as in the following examples:

- (14) ***Nak-on=e,*** *kedo anon=ko b-e*
 day.break-3SG.M=DS.SEQ then dog=PTC take:PL.O-SM
wun-u-den.
 go-3SG.F-PFV
 ‘After the day broke, she took the dogs and went.’ [muyu031:023]

²Another term regularly found in the literature is ‘zero-intransitive clauses’ (Dryer 2007:267).

³For the allomorphic variation between *-on*, *-en* and *-o* see Section 7.3.1.

- (15) *Am ko nek=mo kem-en=ko nak-on.*
 rain PTC heavily=ADV do-3SG.M=PTC day.break-3SG.M
 ‘It rained heavily until the next morning.’ [muyu006:023]

The impersonal clause in (14) has a subsequent clause chained to it while the impersonal clause in (15) concludes its chain. The position of the clause has temporal implications due to the iconic order of clause chains. For details on complex sentences see Chapter 12.

Impersonal clauses must not be confused with clauses involving inanimate subjects. Like impersonal clauses, inanimate subjects trigger a non-referential third person singular masculine suffix at the verb. However, inanimate subjects are real subject referents that are simply not marked on the verb. In contrast, impersonal clauses do not have a subject at all. For details on inanimate subjects the reader is referred to 9.3.1.1.

9.2.3 Transitive clauses

Transitive clauses have two arguments: a subject and an object. The basic constituent order is AOV, although deviation from this order is possible.

The following examples follow the basic constituent order:

- (16) *Ne yom emba yom om an-up.*
 1SG and father and sago eat-1PL
 ‘I and (my) husband ate sago.’ [muyu026:029]
- (17) *Ambo Lukas odo ye kacang alum-en.*
 brother PN DEM 3SG.M peanut(BI) plant:PL.O-3SG.M
 ‘Brother Lukas planted his peanuts.’ [muyu040:005]
- (18) *Kip tenaga mo monal-ip-ten=gi.*
 2PL energy(BI) just ruin-2/3PL-PFV=EMPH
 ‘You just wasted your energy!’ [muyu029:070]

Muyu clauses show a tendency to express maximally one argument NP overtly. Hence examples like (16)-(18) are hard to find in the corpus. It would be more natural to omit one of the argument NPs. This is illustrated in (19), a sequence of three clauses that together make up a short episode in a narrative about two siblings:

- (19) a. *Yanggan=ko bio-n-ip.*
 torch=PTC take:PL.O-SS-2/3PL
 ‘They took the torches and then they ...’
- b. *Anyan, yu nin-un.*
 sister 3SG.F hold:SG.O-3SG.F
 ‘The sister, she held (one).’
- c. *Kedo yu kawupki, yu taman*
 then 3SG.F brother 3SG.F younger.brother
nin-on.
 hold:SG.O-3SG.M
 ‘And her brother, her younger brother held (one).’
 [muyu007:080-082]

Each of the clauses in (19) is transitive but the overt arguments are distributed over the sequence. (19-a) introduces the object, *yanggan* ‘torch’, whereas the subject is only present in the argument index at the verb. In contrast, (19-b) and (19-c) express the contrasting subjects explicitly while omitting their object, which is recoverable from the initial clause. This way, each clause has maximally one overt argument NP. Another strategy to ensure a maximum of one overt argument is by distributing arguments over several verbs in a single clause.

Transitive verbs fall into three subgroups depending on whether the object is marked through an affix, verbal number or not at all:

- subclass 1: Transitives which do not cross-reference their object, e.g. *ani* ‘eat’.
- subclass 2a: Transitives which index the object with a suffix, e.g. *buluyi* ‘meet several people’.
- subclass 2b: Transitives which index the object with a prefix, e.g. *anbani* ‘hit him’.
- subclass 3: Transitives which include the number of objects in their semantics, *bi* ‘take (pl.obj.)’.

Morphological structures of these subclasses are explained in other parts of this study. Argument affixes are explicated in Chapter 7 (for subclass 2a see Section 7.3.2, for subclass 2b see Section 7.3.3). Verbal number, i.e. subclass 3, is dealt with in Chapter 8.

The examples in this section given so far have covered two of the subclasses already. Transitives of subclass 1 are employed in (16) and (18) above, while subclass 3 is exemplified in (17) and (19). The following examples complete the illustration of the transitive verb subgroups. The verb in (20) contains an object suffix (subclass 2a) while (21) shows a verb with an object prefix (subclass 2b).

- (20) *Ma aip awa-d-ime.*
 other there.is join-1SG.O-2PL.IMP
 ‘You other people, join me!’ [muyu029:008]
- (21) *nup alop mim odo yen-ban-ip-ten.*
 1PL three DEM PL.O-hit-2/3PL-PFV
 ‘They hit the three of us.’ [muyu044:041]

The final verbs in (20) and (21) bear an object affix, each without an overt NP for these object arguments.

9.2.4 Ditransitive clauses

Ditransitive clauses have a third argument which usually has the semantic role of receiver, experiencer or beneficiary. This section only deals with ditransitive clauses that have a verb whose argument structure comprises three arguments. Besides that, Muyu also makes use of complex predicates that introduce additional arguments via additional verbs in multi-verb constructions.

Verbs which have genuinely three arguments are exceptional in Muyu and the only clear case is *ka-* ‘give’.⁴ However, since this verb has a high token frequency, we find many instances of ditransitive clauses. *Ka-* ‘give’ belongs to the morphological category of ‘object verbs’, i.e. a small subgroup of verbs that cross-refer to a non-subject argument via affixation (see Section 7.3.2

⁴The other verb for transfer of objects, *-mo-* ‘give’, is attested only in the dictionary and will be ignored in this section. For its morphological features and some example sentences, see Section 7.3.4.

for morphological details). Some examples are the following:

- (22) *Kep ot=ko ka-d-ip-ten=go*
 2SG.M money=PTC give-1SG.RCV-2/3PL-PFV=PTC
komb-a-den.
 put:SG.O-1SG-PFV
 ‘They gave me your money and I kept it.’ [muyu030:207]
- (23) “*Kaiwen=ko ka-ngg-em=o*”, *engg-an gole*
 PN=PTC give-2/3SG.RCV-1PL.IMP=QUOT say-1SG CONJ
min-ip.
 come-2/3PL
 [Coming home from the garden. Bringing food:]
 ‘ “Let’s give it to Kaiwen”, I said, so they came.’ [muyu023:005]

As was already discussed with regard to transitive clauses above, Muyu clauses have the tendency to express maximally one noun phrase overtly. This is also the case for ditransitive clauses. In (22), the theme object *kep ot* ‘your money’ is overt, whereas the receiver is only found in the suffix *-d* at the verb. In contrast, the embedded clause in (23) expresses the receiver *Kaiwen* ‘(personal name)’ overtly, while the theme object needs to be deduced from context.

However, if the third argument is indeed expressed overtly, the NP can be marked with *aip* ‘there is’:

- (24) *Om=ko yi aip ka-y-e kem-ok balin.*
 sago=PTC 3PL there.is give-PL.RCV-SM do-SBJV NEG
 [Hiding sago from the children:]
 ‘They never gave the sago to them.’ [muyu032:014]

Besides *ka-* ‘give’, only a small class of verbs have to take an object suffix obligatorily and they all contain only two core arguments. However, such suffixes can also be attached to many other transitive verbs optionally and then refer to a receiver, experiencer or beneficiary of the denoted action. The resulting clauses are ditransitive:

- (25) “*Karet aip alume-d-ime=yo*” *engga-en.*
 rubber there.is plant-1SG.BEN-2PL.IMP=QUOT say-3SG.M
 [A father commands his wife and children:]

‘ “Plant some rubber trees for me!” , he said.’ [muyu028:010]

The verb suffix *-d* in (25) refers to the beneficiary of the event. Planting is not usually associated with a beneficiary and therefore, the suffix is optional. To sum up, transitive verbs can obtain a third argument by employing an optional object suffix to its stem.

It is sometimes not clear, however, if a verb has originally two or three arguments. Compare the following examples with the verb *kulubi/kolobi*⁵ ‘show’:

(26) *ekun-e onongme-n-i kedo kolobe-ngg-an.*
 like.this-SM make-SS-1SG then show-2/3SG.EXP-1SG
 [Story about fishing. The protagonist taught his brother how to make a shrimp trap:]
 ‘I made (it) like this and showed (it) to him.’ [muyu038:052]

(27) *Apyop odo kan-e kulub-un.*
 fruit DEM take:SG.O-SM show-3SG.F
 [Picture story. A girl picked a fruit from at tree and brought it to her father:]
 ‘She took that fruit and showed it.’ [muyu015:012]

The verb suffix *-ngg* in (26) refers to the experiencer of the showing event. In this specific utterance, all referents are known from previous discourse: the protagonist, his brother, the trap. Therefore, the biclausal structure in (26) almost exclusively depends on verbs of which the final verb refers explicitly to the brother of the protagonist. In contrast, the verb in (27) lacks such a suffix although the denoted situation is very similar to the previous example. A protagonist takes an apple and shows it to her father who has been introduced in the previous discourse.

Comparing the meaning of the two examples above, we have to ask if there really is a difference between the suffixed verb and the one without suffix? Does *kolobenggan* in (26) have three arguments whereas *kulubun* in (27) has only two? It seems plausible to attribute an experiencer to the semantics of both verb forms, since ‘showing’ presupposes someone to whom something is shown. This requirement is clearly absent in verbs like *alumi* ‘plant’ in

⁵The vowels in *kulubi/kolobi* are speaker dependent and do not trigger any difference in meaning.

example (25) above. For the purposes of this study, we refer to ditransitive clauses only if the third argument is morphosyntactically present, i.e. via verb affix or overt NP. The exploration of assumed semantic ditransitivity is left for future research.

9.3 Grammatical relations

Muyu is a typical head-marking language, which cross-references arguments at the verb, while NPs are not marked for their grammatical function in the clause. The core grammatical relations of a Muyu clause are subject (§9.3.1) and object (§9.3.2). Subjects comprise S in intransitive clauses and A in transitive clauses, while objects are O in transitive clauses. The system of argument indexing on the verb obviously follows the nominative alignment pattern.

There are exceptions, however, to the argument indexing of subjects. Firstly, inanimate subject referents behave differently in that they mostly trigger a default 3SG.M marker that does not agree with the subject argument (see §9.3.1.1). Secondly, in its intransitive reading, the ambitransitive *-kombi* ‘hit ground, fall’ is the only verb known so far that agrees with the subject via prefix rather than suffix (see §9.3.3.1).

Besides argument indexing, the verbal number system agrees with the subject or the object referent in number, depending on the respective lexeme. Intransitive number verbs agree with subject number, while transitive verbs agree with object number. Thus, the verbal number system follows the absolutive alignment pattern. Verbal number is not a part of this section (see discussion in Chapter 8).

Finally, Muyu has an oblique marker *=bet* (§9.3.4). This enclitic is used for several non-core arguments and also to highlight unusual behaviour of core arguments, especially with agentive subjects. This section will be concluded by a short outline of comitatives (§9.3.5).

9.3.1 Subject

The grammatical relation of subject covers S in intransitive clauses and A in transitive clauses. We use two main criteria for the definition of a subject. Firstly, a subject is indexed on the verb by a cross-referential suffix. The subject suffix is syntactically required by all finite verb forms:

- (28) *[Nimbin alop oto]_S kutule-n-**ip**=a*
 women two DEM be.shocked-SS-2/3PL=LNK
 ‘Those two women were shocked and they ...’ [muyu065:060]

The subject is the noun phrase which is cross-referential with the subject index, e.g. *nimbin alop oto* in (28). Pronominal subjects match with the subject index in their person, number and gender values. Since NPs with nominal heads usually do not mark these features⁶, the subject index not only agrees with but actually adds information to the subject. However, there seems to be an animacy distinction. Inanimate subjects behave differently with regard to their subject index (see Section 9.3.1.1 below). The morphological facts about subject suffixes are discussed in Section 7.3.1. The noun phrase itself is not overtly marked as subject (e.g. via case marking).⁷

Secondly, the subject is the pivot of the switch-reference system. In a clause chain, medial verbs are morphologically marked if the subject of the subsequent clause will be coreferential with the actual subject. This phenomenon is known as ‘same subject’ marking (glossed ‘-SS’ as in (28) above) and applies to all subjects irrespective of transitivity or semantic role. Furthermore, the subject is always shared by all element verbs in multi-verb constructions (see Chapter 11 on complex predicates).

Semantically, a subject can be the actor or the undergoer of the event. Undergoer subjects are especially common in intransitive clauses with stative predicates, e.g. *ayaki* ‘be happy’.

A small class of verbal number pairs indicate the number value of the subject (see Section 8.3.1). Some exceptional verbs mark their subject via verb prefix rather than suffix if the subject is the undergoer of the event (see §9.3.3.1).

9.3.1.1 Inanimate subject

In the previous section, we defined the subject as displaying two features: (1.) subject indexing on the verb and (2.) serving as pivot in the switch

⁶Although person, number and gender are not morphological features on the noun, NPs can indicate some of this information, as seen in example (28). Nominal heads are always third person. Plurality can be indicated via quantification. Gender is known if the sex of a referent is part of the descriptive meaning of the noun.

⁷Subjects can be marked, however, under certain circumstances with the oblique marker =*bet*, see Section 9.3.4.

reference system. Inanimate subject referents behave somewhat differently in this respect. They deviate from animate subject referents in that they never trigger agreement with the subject suffix. However, they still serve as pivots in the switch reference system and are therefore treated as subjects. The remainder of this section illustrates these facts with examples.

The stative verb *alopni* ‘turn pale’ has exactly one argument, i.e. an argument referring to the entity that is affected by the state. It can be a human, e.g. when someone is sick, but more prototypical entities co-occurring with *alopni* are fruits. If the argument refers to a human, the subject suffix on the verb inflects for person, number and gender, as we would expect from a prototypical subject:

- (29) a. *Hermina alopn-u-den.*
 PN turn.pale-3SG.F-PFV
 ‘Hermina has turned pale.’ [Fieldnotes]
- b. *Enamba alopn-ip-ten.*
 parents turn.pale-2/3PL-PFV
 ‘The parents have turned pale.’ [Fieldnotes]

In contrast, if the argument of *alopni* ‘turn pale’ refers to fruit, the subject suffix is invariably in the 3SG.M form:

- (30) a. *Omani alopn-o-den.*
 banana turn.pale-3SG.M-PFV
 ‘The banana has turned pale.’ [Dictionary]
- b. *Omani kadap alopn-o-den.*
 banana many turn.pale-3SG.M-PFV
 ‘Many bananas have turned pale.’ [elicited]

The crucial evidence is (30-b) where the number is quantified directly in the NP via *kadap* ‘many’. However, the subject referent on the verb is *-o* ‘3SG.M’. This marker is no longer referential but is syntactically required

nonetheless. We therefore treat it as a default agreement suffix.⁸

The lack of information due to the expletive suffix is sometimes compensated for by verbal number:

- (31) *Atom talil-on.*
 coconut burst:SG.SBJ-3SG.M
 ‘The coconut bursts.’ [Fieldnotes]

- (32) *Atom yalul-on.*
 coconut burst:PL.SBJ-3SG.M
 ‘The coconuts burst.’ [Fieldnotes]

Both verbs in (31) and (32) are inflected with an expletive *-on*. However, the number of coconuts is determined by the choice of verb. *Talili* denotes only singular subjects, while *yaluli* is used for plural subjects. For details on verbal number, the reader is referred to Chapter 8.

Clauses with inanimate subjects must not be confused with impersonal clauses (see Section 9.2.2 above). Both make use of an expletive suffix. However, clauses with inanimate subjects simply fail to cross-refer to their subject referent via verb suffix, whereas impersonal clauses do not have a subject referent at all.

Curiously, inanimate subjects, although not cross-referred by argument indexes, are nonetheless tracked by switch reference (S/R) marking in clause chains. In (33), the fruit are subject of the last two clauses which are delimited by square brackets. For details on clause chaining and S/R marking, see Chapter 12.

- (33) *Bodob-on=e* *wen-e wen-e kelega-un=go*
 bear.fruit-3SG.M=DS.SEQ go-SM go-SM watch-3SG.F=PTC
 [*wen-e yumune-n-e*], [*nombel-en*].
 go-SM become.ripe-SS-3SG.M fall:PL.SBJ-3SG.M
 [A woman had planted a coconut tree:]
 ‘It bore fruit so she waited until they were ripe and fell down.’
 [muyu031:078]

The verb of the first bracketed clause bears a same subject marker *-n*. Hence,

⁸All allomorphs of 3SG.M (*-en*, *-on*, *-o*) are found as expletive suffixes. For an outline of the conditions on this allomorphy, the reader is referred to Section 7.3.1.

the subsequent clause has joint subject reference. Nonetheless, both clauses fail to index the subject argument which is actually plural. The plurality of the fruit is correctly indicated by verbal number: *nombili* ‘fall (pl.sbj.)’ refers to multiple falling entities. To sum up, both the switch reference system and verbal number have access to inanimate referents even if the subject index does not cross-refer. Therefore, inanimate subjects are still subjects, albeit to a somewhat lesser degree.

The examples shown so far contrasted humans with fruit. This could lead to the impression that the relevant distinction was human vs. non-human. However, animals pattern with humans, even tiny ones like caterpillars and ants:

- (34) *Niyap=ko memang wedambal-an-un.*
 cassowary=PTC indeed(BI) hear-IRR-3SG.F
 [Pigs are bad at hearing people but ...]
 ‘The cassowary indeed can listen.’ [muyu005:053]
- (35) *Nenggeleng odo ne omani embit an-ip.*
 kind.of.caterpillar DEM 1SG banana leaf eat-2/3PL
 ‘The caterpillars ate my banana leaves.’ [Dictionary]

Niyap ‘cassowary’ has female gender which is indicated by the feminine verb suffix *-un* in (34). Similarly, the plurality of the caterpillars in (35) is captured by the subject suffix *-ip*. Hence the relevant distinction is animate vs. inanimate. Moreover, there seems to be no further subdivision of animates. Humans, birds of prey and insects behave alike.

9.3.2 Object

Defining the grammatical relation of object is less straightforward than with subject. Put simply, an object in a Muyu clause is a core argument that is not a subject. Objects are present in transitive and ditransitive clauses (see §9.2.3 and §9.2.4) and differ from the subject in that they are never cross-referenced by the subject suffix on the verb and are not involved in the switch reference system.

- (36) *Ma nimbin alop oto [om]_O kopomo-t-ip=ko,*
 but women two DEM sago squeeze.sago-DUR-2/3PL=PTC

‘But while the two women were squeezing the sago, ...’
[muyu067:016]

In (36), the noun phrase *ma nimbin alop oto* ‘the two women’ is cross-referenced by the verbal suffix *-ip* and hence identified as subject. This leaves us with the noun phrase *om* ‘sago’ which is accordingly assigned the grammatical relation of object.

One should keep in mind that constituent order is not a good criterion to determine grammatical relations in Muyu. Speakers are free to put *om* ‘sago’ in clauses like (36) at the beginning of the clause without obvious change in grammatical relations. Moreover, two overt NPs are rarely encountered in one and the same clause, as was already discussed in Section 9.2.3. All this renders constituent order rather impractical for syntactic analysis.

A second, but much weaker criterion for objecthood is cross-referencing via object suffixes and object prefixes. The morphological aspects of this mechanism are discussed in Section 7.3.2 and 7.3.3. The reason for it being a weaker criterion to determine the object of a clause is that object affixes are restricted to a small subclass of verbs. In the majority of clauses an object affix is simply not present. However, if present, there are two types of affixes: object suffixes and object prefixes. Object suffixes match pronominal objects in person and number. Object NPs with nominal head are specified for number via the object suffix on the verb, since number is not dependent marked at the NP itself.⁹ Object prefixes, on the other hand, match pronominal objects in person, number and gender, and NPs with nominal head are specified for number and gender via the prefix. To sum up, cross-referencing object affixes can serve as criterion for objecthood but are much less likely to occur than subject suffixes.

Defining objects as non-subject arguments yields ambiguities in ditransitive clauses. After all, a ditransitive clause features two non-subject arguments. Syntactically, one would expect a mechanism to distinguish the two non-subject arguments from each other in order to disambiguate the semantic role that is realised by the respective argument. Indeed, the argument that represents the receiver or recipient of an event can be marked with *aip* ‘there is’ explicitly (see example (24) above). However, this marking on the NP is optional, so that in case of missing *aip* two overt non-subject arguments look exactly alike. Note that such clauses are highly artificial and mostly found

⁹Number is the only category that is specified for object NPs this way, since nominal heads are always third person and gender is not distinguished in object suffixes.

in dictionary examples:

- (37) *[Ne woya ambang yom]*_{O1} *[ot]*_{O2}
 1SG grandmother grandfather and money
ka-y-a-den.
 give-PL.RCV-1SG-PFV
 ‘I give money to my grandfather and grandmother.’ [Dictionary]

In practice, however, ambiguities between the semantic roles of two non-subject arguments never arise, for two reasons: Firstly, as we have seen in Section 9.2.4, ditransitive verbs are virtually always provided with an object affix. Verbs like *ka-* ‘give’ specify the receiver of the theme argument via object suffix, as can be seen in (37). Secondly, the semantic roles of the arguments can be predicted according to the animacy hierarchy (Silverstein 1976). Consider example (37) again. The argument *ne woya ambang yom* ‘my grandfather and grandmother’ ranks higher on the animacy hierarchy and is therefore much more likely to represent the receiver of a transfer event. The low-ranking argument *ot* ‘money’ is semantically predestined to be the theme of transfer. To sum up, both non-subject arguments of a ditransitive clause can be treated as syntactic objects by our definition without risking any ambiguities with respect to their semantic role.

The grammatical relation of object covers a broad range of semantic roles. This is true not only with respect to ditransitive clauses as discussed above but also for objects in transitive clauses. Objects encompass at least: beneficiaries, experiencers, patients, receivers, stimuli and themes. The exact semantic role of an object argument is determined by the semantics of the verb. A list with semantic roles of the object argument in object verbs is provided in Section 7.3.2. Information on semantic roles for other transitive verbs goes beyond the scope of this study.

As was mentioned above, object arguments are not registered by the switch reference system. Besides that, objects differ from subjects regarding multi-verb constructions. While each component verb must share the subject argument throughout the construction, no such requirement is found for objects. Despite being monoclausal, each component verb can bring in their own object argument. For details, see Chapter 11.

9.3.3 Ambitransitives

Most verbs are unambiguously either transitive or intransitive. Besides that, a small class of verbs are ambitransitives, i.e. they can be used in both intransitive and transitive clauses without any morphological derivation. This section deals with the grammatical relations of such verbs. Ambitransitive verbs must not be confused with atransitive verbs which are discussed in Section 9.2.2.

Cross-linguistically, ambitransitives can be divided into two types according to their patterning of grammatical relations (Dixon 2002:177). In the S=A type, the object can be elided freely while the subject remains the same. Hence, the transitive A becomes intransitive S, as in the English example ‘she is singing a song’ vs. ‘she is singing’. The second type is S=O, where the subject of a transitive is elided instead of the object. Hence, the transitive O become intransitive S, as in the English example ‘he broke the branch’ vs. ‘the branch broke’.

Muyu displays both types of ambitransitives. We first discuss verbs of the S=O type. A selection of relevant verbs is given in Table 9.1. More data can reveal further lexemes in the future.

Lx	Transitive	Intransitive
<i>bani</i>	A opens O	S is open
<i>kumbi</i>	A extinguishes O (O=fire)	S goes out (S=fire)
<i>taki</i>	A closes O	S is closed
<i>talili</i>	A disperses O	S bursts
<i>tuli</i>	A leans O against X	S leans against X
<i>yiminggi</i>	A hangs O somewhere	S hangs somewhere

Table 9.1: Some ambitransitive verbs (type S=O).

The S=O type verb is illustrated by the following examples with the verb *bani* ‘open’:

- (38) *Jack ambonkim ban-on.*
 PN door open-3SG.M
 ‘Jack opens the door.’ [Fieldnotes]
- (39) *Ambonkim=ko ban-o-den.*
 door=PTC open-3SG.M-PFV

‘The door is open.’ [Fieldnotes]

As can be seen from these examples, Muyu *bani* is analogous to English ‘open’. The object *ambonkim* ‘door’ of the transitive clause in (38) becomes the subject of the intransitive clause in (39). Another example is *yiminggi* ‘hang (sg.obj.)’ as in the following examples:

(40) *Ap kobi yimingga-n-e*
 tree on hang:SG.O-SS-3SG.M
 [A man made a fake bird’s nest:]
 ‘he hung it on a tree and he ...’ [muyu007:121]

(41) *Apyop odo ap ya yimingge-d-en.*
 fruit DEM tree at hang:SG.O-DUR-3SG.M
 [Picture stimulus:]
 ‘The fruit is hanging on the tree.’ [elicited]

Note, however, that the intransitive cases in (39) and (41) are ambiguous. This is due to the fact that the subject suffix at the verb may either be a non-referring suffix in its default ‘3SG.M’ form (see Section 9.3.1.1) or an ordinary argument index that refers to a non-overt subject argument. Hence, (39) can mean either ‘The door is open’ or ‘He opened the door’, while (41) means either ‘The fruit is hanging on the tree’ or ‘He is hanging the fruit on the tree’. The ambiguity itself shows that such verbs are ambitransitive.

Turning now to the S=A type of ambitransitive verbs, an illustrative example is *telebi* ‘gather, attend’. The O argument denotes an event or place where the gathering takes place. This argument is not necessary, however, and the verb is used intransitively with a similar meaning:

(42) *Yi=go otbop timbon teleb-ip.*
 3PL=PTC language place attend-2/3PL
 ‘They attend a meeting.’ [Dictionary]

(43) *Kaduk-kaduk, anggotmi teleb-ip=e*
 person-person friend gather-2/3PL=DS.SEQ
 ‘Some people, some friends got together and then someone else ...’
 [muyu036:024]

In (42) the object is *otbop timbon* ‘meeting, get-together’ and the clause is

clearly transitive, whereas (43) does not comprise any object.

However, typical verbs of the S=A type are harder to unambiguously identify than verbs of the S=O type. This is due to the fact that objects are often omitted from the clause. A good many times, the omitted object is nonetheless semantically implied in which case it makes no sense to treat the clause as intransitive. Consider the following examples:

- (44) *Tio-n-ip ano-d-ip*
 sit-SS-2/3PL eat-DUR-2/3PL
 [After a father prepared a meal for his daughter and himself:]
 ‘They were sitting and eating.’ [muyu016:010]
- (45) *pastor kan-e wen-e kulub-a-den.*
 pastor take:SG.O-SM go-SM show-1SG-PFV
 [The speaker wrote a hymn for the local church:]
 ‘I brought it and showed it to the pastor.’ [muyu019:204]

The final verb in (44) is a form of *ani* ‘eat’. Is *anodip* an intransitive clause? Quite naturally, eating presupposes something to be eaten. There are two possible interpretations: (a.) *ani* ‘eat’ is ambitransitive and is used intransitively in (44), or (b.) *ani* ‘eat’ is transitive but the object was omitted in (44) since it is given in the previous discourse. For a better understanding of the problem, compare *ani* ‘eat’ with *kani* ‘take (sg.obj.)’ in (45). In this example, the object (i.e. the hymn) is also mentioned in the previous discourse and therefore omitted in the present clause. In contrast to *ani* ‘eat’ in (44), no one would interpret *kani* ‘take (sg.obj.)’ as intransitive. The object argument is simply not expressed overtly but clearly implied nonetheless. To sum up, Muyu certainly has some ambitransitive verbs of the S=A type, but many of them allow for different analyses, so that their identification is often problematic.

9.3.3.1 Ambitransitive -kombi ‘hit/kill, hit the ground’

A unique kind of ambitransitive verb is represented by the verb *-kombi* ‘hit/kill, hit the ground’. It belongs to the S=O type, but differs from ordinary S=O type ambitransitives since it is object prefixing. In transitive clauses, A refers to the agent of hitting or killing, while O is the patient:

- (46) *Ma nup=bet wen-e ane-komb-an-up kot*
 but 1PL=OBL go-SM 3SG.M.O-kill-IRR-1PL and.then.DS
 [Myth. Dogs complaining that hunter never kills the prey himself:]
 ‘but we would go and kill it and then you ...’ [muyu031:011]

The ‘prey’ in (46) is given information and not expressed overtly. However, since *-kombi* is obligatorily prefixed, the object is indicated with the argument index *ane-*.

In intransitive clauses, S refers to a patient hitting the ground. Remarkably, the argument of intransitive *-kombi* is not marked at the subject suffix as we would expect. Rather, the cross-reference occurs at the object prefix:

- (47) *tem-ip=ko wio-komb-o-den=go* (...) *see-2/3PL=PTC 3SG.F.O-hit.ground-3SG.M-PFV=PTC*
 [Pear story. Some boys watching the fall from the bicycle:]
 ‘They saw that she had hit the ground and ...’ [muyu011:023]

As can be seen from (47), the patient is indexed with the object prefix *wio-* on the verb.¹⁰ The subject suffix, on the other hand, is a default form (syntactically required and expressed as 3SG.M, see Section 9.3.1.1).

From the examples given so far, one might wonder if the argument cross-referenced in the prefix of *-kombi* ‘hit ground’ is really the subject. Evidence for this comes from multi-verb constructions, since component verbs always share their subject:

- (48) *kaduk ane-komb-e yon omb-i=ka* (...) *man 3SG.M.O-hit.ground-SM foot break:SG.O-INF=PTC*
 ‘When a man falls and breaks his foot ...’ [muyu050:003]

Both verbs in (48) have *kaduk* ‘man’ as their subject. However, the former verb cross-references to the subject via “object” prefix. This is the only known instance of a subject marked via prefix.¹¹

To sum up, *-kombi* is the only known ambitransitive verb with object prefix. While ordinary ambitransitives of type S=O always make use of

¹⁰Note that the speaker interprets the protagonist of the pear story as a girl.

¹¹In fact, this is the only prefixing verb that can occur intransitively. In all other cases the subject suffix refers to A and the object suffix refers to O. Therefore, we treat *-kombi* ‘hit ground’ as an exception that does not compromise our terminological choices of ‘subject suffix’ and ‘object prefix’.

the subject suffix for cross-reference, *-kombi* uses the object prefix for the S argument in intransitive clauses.

9.3.4 Oblique =bet

This section deals with arguments that are different from the unmarked core arguments discussed in the previous sections. For these additional arguments, Muyu employs an enclitic oblique marker =bet. While noun phrases and postpositional phrases host this clitic, so too do whole clauses. The enclitic =bet is structurally outside the phrase or clause it attaches to. Hence the noun phrase template presented in Chapter 6 does not provide a slot for =bet. Since the host of the clitic is the whole phrase or clause, the directly preceding element can be from any word class. This section deals with oblique noun phrases only.

Concerning their function in the clause, obliques can be core arguments or adjuncts. An exhaustive list of all functions is given in Table 9.2. Columns 2 and 3 show a brief example of each function. Although there are seven different functions for =bet, we gloss this clitic uniformly as ‘OBL’.¹² The reader should keep in mind that these functions are not conveyed by the semantics of the enclitic itself but must be deduced from context. Oblique marking often depends on the semantics of the clause predicate, as will be seen below.

Function	Ex	Ft
Location	<i>Kanggewot=bet</i>	‘in Kanggewot’
Goal of movement	<i>ok Inngo kaba=bet</i>	‘to the estuary of the river Inngo’
Source of movement	<i>ambip=bet</i>	‘from the house’
Instrument	<i>alung=bet</i>	‘with a crowbar’
Temporal	<i>adon alop mim=bet</i>	‘at three o’clock’
Partitive	<i>om=bet</i>	‘from the sago’
Agentive subject	<i>adi=bet</i>	‘it was father who ...’

Table 9.2: Functions of obliques marked with =bet.

For languages in this geographical area, it is by no means surprising that

¹²De Vries (2020) uses the gloss ‘CIRC’ (circumstantial marker) for similar morphemes in Greater Awyu languages. Riesberg (2018) does not use a functional gloss for the marker =en in her examples of Yali (Dani language) but glosses it as ‘=EN’. Yali =en can have causal, instrumental, ablative or ergative/agentive function.

a single marker shares all the functions listed in Table 9.2. For instance, de Vries (2020:103) reports about joint markers for instrument, time, location, source, manner and ablative in many of the Greater Awyu languages. Besides that, we often find languages in which agentive subjects, under certain conditions, are marked with the same marker as instruments and other adjuncts, a phenomenon known as ‘optional ergative’ (McGregor 2010, Riesberg 2018).

The following subsections will illustrate each function with some examples and discuss the conditions of occurrence.

9.3.4.1 Locations, Goals and Sources

Obliques marked with *=bet* can represent static locations of events on the one hand, and goals and sources of movement on the other. In any given case, which of these functions will be realised depends on the semantics of the verb and the respective discourse context. A peculiar case of oblique marking is related to the basic motion verbs *wini* ‘go’ and *mini* ‘come’ as will be discussed in the next subsection.

Some examples of oblique-marked phrases are the following:

- (49) *Wen-e adi=bet alo-n-ip, ok ani=mo*
 go-SM up=OBL stand-SS-2/3PL river down=just
kelega-d-ip.
 watch-DUR-2/3PL
 [Dogs at the shore of a river:]
 ‘They went and stood up there, just watching the river beneath.’
 [muyu031:026]
- (50) “*Tanah Merah=bet=o*”, *engg-ip.*
 Tanah Merah=OBL=QUOT say-2/3PL
 [Reflecting upon where to bring the peanuts recently harvested:]
 ‘ “To Tanah Merah”, they said.’
 [muyu025:031]

In (49), the verb *ali* ‘stand’ requires the oblique phrase to be a static location. In contrast, the phrase in (50) needs to be interpreted as the goal of movement. There is no verb available to trigger this function in (50), but in the previous discourse, the question arose where to bring the peanuts. Hence, *Tanah Merah=bet* can only be interpreted as the (proposed) goal of this bringing event. In other words, either the descriptive meaning of the verb or the given discourse context determines the function of *=bet*.

Reconsider example (49) above, where we identified *adi=bet* as location of the standing event. The clause initially starts with a motion verb. This construction is more thoroughly discussed in the next subsection. What is important here is that *adi=bet* is both the location of standing and the goal of prior motion. Hence, we cannot clearly separate goals from locations in such constructions. Both are glossed as ‘OBL’.

The *bet*-marked phrases in (49) and (50) seemed more like arguments of the verbs. Standing events and movement quite naturally imply locations and goals to be expressed in their vicinity. However, the oblique phrase in (51) is much more like an adjunct that is not directly implied by the semantics of the verb.

- (51) ***Taman=bet*** *ka-y-ip*.
 far=OBL give-PL.RCV-2/3PL
 [Receiving land from the government to make a garden:]
 ‘They gave us (a place) far away. (lit. far away they gave us)’
 [muyu027:008]

The structural position of *taman=bet* ‘far away’ in (51) is difficult to determine. Semantically, it modifies the object, i.e. the transferred land, rather than the giving event. However, if *taman* ‘far’ really was the object of the clause, e.g. as adjective to an omitted head *ambikin* ‘land, soil, ground’, we would not expect it to be marked with the oblique marker *=bet*.

Obliques are also used in questions:

- (52) ***Kede=bet=an?***
 where=OBL=COP
 ‘Where is it?’ [Fieldnotes]

The locational meaning of the oblique in (52) is clearly retrieved from the question word *kede* ‘where’.

Finally, locations can be metaphorical. A type of metaphorical location frequently encountered in natural discourse is languages:

- (53) *Aninggo ogan otbop=bet=ko* “*belender*”.
 name foreign language=OBL=PTC blender
 [Visiting a Javanese facility where fruits of the salacca palm are processed:]

‘Its name in the foreign language is blender.’ [muyu030:109]

The phrase *ogan otbop=bet* ‘in the foreign language’ modifies the noun *aninggo* ‘name’. Oblique phrase of this sort are typical answers to word translation tasks: *nup otbop=bet* ‘in our language ...’.

9.3.4.2 Goals and sources in the motion verb complex

The basic motion verbs *wini* ‘go’ and *mini* ‘come’ are part of a syntactic pattern labeled *motion verb complex* in Section 9.2.1.1. This pattern is characterised by a locational argument directly preceding the motion verb. An unmarked locational argument denotes a goal of movement for the respective motion verb. In contrast, if such a locational argument is an oblique, it functions as the source of movement. Compare the following examples.

(54) ***Kali Kao*** *wun-up=ki*.
 river(BI) Kowo go-1PL=EMPH
 ‘We went to Kowo river.’ [muyu025:001]

(55) ***Ambip=bet*** *wen-e kabak=a, kalalang=a, men=a*
 house=OBL go-SM axe=and machete=and string.bag=LNK
bi-up.
 take:PL.O-1PL
 [Leaving to work in the garden:]
 ‘We went from home and took an axe, a machete and some bags with us.’ [muyu023:002]

Kali Kao ‘river Kali’ is the unmarked goal of movement in (54). It directly precedes the motion verb as is required for the locational argument in the motion verb complex. The locational argument *ambip=bet* ‘from the house’ in (55) is an oblique and hence denotes the source of movement. They went from the house instead of towards it. The same holds true for motion verb complexes with *mini* ‘come’:

(56) *Kim talep nangge-n-up, kawut kampung mun-up=o*.
 road big arrive-SS-1PL directly village(BI) come-1PL=PTC
 ‘We arrived at the main road and then we came directly to the village.’ [muyu037:090]

- (57) ***Wani=bet*** *mun-up*, *Awyu ambip wani=bet*.
 down=OBL come-1PL Awyu house down=OBL
 [Returning home to their village:]
 ‘We came from down there, from the Awyu region down there.’
 [muyu028:001]

The unmarked *kampung* ‘village’ in (56) is the goal of movement, whereas the oblique *wani=bet* denotes a source of movement in the locational argument position of the motion verb complex.

In summary, basic motion verbs contrast unmarked locational arguments with oblique locational arguments; the former denoting goals of movement and the latter indicating sources of movement.

9.3.4.3 Goals of preposed motion verbs

In the previous subsection, we have seen that the motion verb complex contrasts unmarked locational arguments with obliques in order to differentiate between goals and sources of movement. However, this system is different for preposed motion verbs. There are three main contexts in which the motion verb precedes its locational argument: (1.) Tail-head linkage (see Section 12.9), (2.) right-dislocated motion constructions (see Section 12.2.11) and (3.) associated motion multi-verb constructions (see Section 11.3.4). All three belong to complex syntax and will be discussed in later chapters. In the remainder of this section, we can only give short examples that illustrate the behaviour of motion verbs and their locational arguments.

Firstly, when a motion verb is the pivot of a tail-head linkage, it occurs as the final verb in the tail and is immediately repeated in the head (though mostly in a different inflectional form):

- (58) *Kilok Kone kaba wadi=go wun-up. Wen-e wadi=bet*,
 Kilok Kone estuary up=PTC go-1PL go-SM **up=OBL**
kumungg-an: ...
 tell-1SG
 ‘We went upstream to the estuary of Kilok and Kone. (We) went up there and I told (him):’
 [muyu038:041]

The tail *wunup* is repeated as *wene* in the head of the following clause. Its locational argument, *wadi=bet* ‘up there’, is clearly the goal of movement

despite being an oblique. The following verb *kumunggi* ‘tell’ is separated from the oblique with a prosodic break.

Secondly, a conjoined motion structure specifies the movement of the main clause it succeeds. This is similar to clause chaining in the sense that the verb of the main clause is a medial verb with a same subject marker. In contrast to clause chaining, the conjoined motion structure does not end on a finite verb:

- (59) *Kan-e boma-n-e wen-e ok=bet.*
 take:SG.O-SM walk-SS-2SGIMP go-SM river=OBL
 ‘Take (him/her) to a river!’ [muyu045:010]

The conjoined motion structure in (59) is *wene ok=bet* ‘(lit.) go to river’. This is not a full clause on its own, since it does not end in a finite verb. Rather, it depends on the preceding clause and takes its subject from the medial verb which is marked for same subject with *-n*. The goal of movement is the final element of the whole construction.

Thirdly, prior motion multi-verb constructions are complex predicates in which the first verb is a basic motion verb. They commonly denote that the subject arrived at a certain event location before the main event takes place. An example is given in (60). For details on multi-verb constructions see Chapter 11.

- (60) *Ta men-e wiyam oya=bet tem-an=ko (...)*
 and come-SM **original-place there=OBL** see-1SG=PTC
 [Looking in several places for a fish that has been speared:]
 ‘and I came back to the original place and saw that ...’
 [muyu035:052]

After an initial conjunction *ta*, the clause in (60) starts with a basic motion verb which is followed by its locational argument *wiyam oya=bet* ‘original place’ (i.e. the place where the protagonist has started his search). The following verb *temi* ‘see’ is still part of the same clause and denotes the main event of the multi-verb construction. Contrary to (58) above, the oblique in (60) is not separated from the subsequent verb with a prosodic break. The whole clause is uttered as one intonation unit.

All three constructions illustrated above involve a basic motion verb, directly followed by the goal of movement. We thus subsume them under the

feature ‘preposed motion verbs’. Contrary to motion verb complexes, where the locational argument always precedes the motion verb, the locational argument following a preposed motion verb is virtually always marked with **=bet**. This has serious consequences for the functional space of the oblique. Since the oblique argument following a preposed motion verb denotes the goal of movement, there is no marker left to mark sources of movement. As a consequence, speakers appear to have difficulties in construing the postverbal *=bet*-phrase as denoting a source:

- (61) (...) *men-e adi=bet* (...)
 ... come-SM up=OBL ...
 ‘...coming up there...’
 ‘(but not:) *...coming from up there...’ [elicited]

The findings of this and the preceding section are summarised in Table 9.3.

	Motion verb complex (ARG>verb)	Preposed motion verb (verb>ARG)
unmarked	GOAL	∅
<i>bet</i> -marked	SOURCE	GOAL

Table 9.3: Functions of the locational argument in motion verb complexes and after preposed motion verbs.

9.3.4.4 Instruments

An instrument can be any referent that is used by an actor to bring about an event, like tools and implements, vehicles, body parts, etc. Noun phrases denoting an instrument are obligatorily marked with *=bet*. Muyu does not distinguish certain types of instruments as many other Papuan languages do.¹³

¹³Mian, e.g., has suffixes that productively derive adverbs from nouns. The noun denoting human hands has a different instrument suffix (*-tub* ‘with (for hands only)’) than all other nouns (*-dum* ‘with (instrumental)’) (Fedden 2011:92). Similarly, Yali (Dani language family) marks *=en* on body part instruments but *=et* or *fam* on all other kinds.

- (62) **Ambom kudu=bet** win-ip.
 turtle car=OBL go-2/3PL
 ‘They went by car.’ [muyu027:024]
- (63) **Tinggi=bet** bada-up kole tinggi kok.
 hand=OBL pull.out:PL.O-1PL CONJ hand painful
 [Plucking a dead cassowary:]
 ‘We pulled out (the feathers) with (our) hands, so the hands were aching.’ [muyu037:073]
- (64) **Ambulok=bet** ayetm-up.
 palm.rib=OBL wrap-1PL
 ‘We wrapped it with the rib of a palm tree.’ [muyu035:064]

Notice that the instrument is the only overt NP in the examples above. In (63) and (64) the object of the transitive verb is recoverable from context. This is part of the discourse strategy in which Muyu prefers clauses with maximally one overt NP.

9.3.4.5 Times

Temporal adjuncts are expressed as obliques with =bet. These can be noun phrases like *adon alop mim* ‘three suns (i.e. three o’clock)’ in (65), bare numerals indicating an hour as in (66), or adverbs as in (67). The corpus contains temporal adjuncts mostly in relation to travelling as illustrated in all of the following examples.

- (65) **Adon alop mim=bet** nangg-up-ten.
 sun three=OBL arrive-1PL-PFV
 [Travelling to the village by car:]
 ‘We arrived at three o’clock.’ [muyu030:171]
- (66) **Et=bet** kubun-an-up=o engg-ip.
 eight=OBL descend-IRR-1PL=QUOT say-2/3PL
 [Travelling to Merauke by plane:]
 ‘They said, “We will land at eight.” ’ [muyu030:157]
- (67) *Kot kibik=bet* men-ep.
 and.then now=OBL come-2SG
 [Talking to the recording linguist, A.Z.:]

‘So now you came (to our village).’ [muyu044:135]

9.3.4.6 Partitives

Obliques are also used to convey partitive meanings. In such contexts, =*bet* is used to mark the phrase that refers to the set from which a certain quantity is taken.

In (68), the speaker reports about preparations for a trip. They also packed cigarettes from two brands, ‘Lampion’ and ‘Surya’, of which an unknown amount of packs was available. Syntactically, the larger sets are marked with =*bet*, followed by a specific quantity:¹⁴

- (68) a. *Tabuk=ko kedo Lampion=bet alop mim aip*
 tobacco=PTC out PN=OBL three there.is
kan-up.
 take:SG.O-1PL
 ‘(As for the) tobacco, from Lampion we took three (packs).’
- b. *Surya=bet ayet anggo aip kan-up.*
 PN=OBL pack five there.is take:SG.O-1PL
 ‘From Surya, we took five packs.’ [muyu038:015-16]

The two parts (a.) and (b.) from (68) form a parallelism. The larger set and the quantity vary while the verb and the markers =*bet* and *aip* remain equal.

Specifications of the exact quantity taken from the larger set, as seen with *alop mim aip* ‘there were three’ in (68), are employed only infrequently. More commonly, the amount is left vague or at least distinguished for singular vs. plural via verbal number. The following example is from a hunting story. The protagonists know they would find many dogs in the village, but they only have to take some of them to successfully hunt down the pig:

- (69) “*Anon aip kumungge-gul-up, anon=bet b-e*
 dog there.is tell-SS.SEQ-1PL dog=OBL take:PL.O-SM

¹⁴The attentive reader will notice that in (68) the singular verb *kani* ‘take (sg.obj.)’ is used although the protagonists take more than one pack. This is due to the existential marker *aip* ‘there is’. For details on verbal number, see Chapter 8. Compare also the remaining examples of this subsection.

men-em=o”, *engg-up*.
 come-1PL.IMP=QUOT say-1PL
 [The protagonists lost track of the pig they were hunting:]
 ‘ “Let’s call some dogs and then bring some of the dogs (to hunt it
 down)” , we said.’ [muyu005:030]

In (69), the dogs are introduced first with an existential construction: *anon aip* ‘there are dogs’. The second clause contains the oblique marked with =*bet*. Contrary to the packs of cigarettes in (68), the quantity of the dogs in (69) is not specified. However, it has to be larger than one, since the verb *bi* is a plural verb.

The referent of the oblique can also be an uncountable mass:

(70) ***Ambikin=bet*** *b-e* *kan-e*, *ta om*
 ground=OBL take:PL.O-SM take:SG.O-SM and heap.up
aka-un.
 heap.up-3SG.F
 [Fostering a coconut tree:]
 ‘She took some of the soil and heaped it up.’ [muyu031:054]

(71) *ta ye* ***walok=bet*** *kan-e* *ne aip*
 and 3SG.M saliva=OBL take:SG.O-SM 1SG there.is
wum-a *engg-an-an* *yanggemop oya=go*.
 smoke-1SG.IMP say-IRR-1SG pipe there=PTC
 [Discussing the danger of infectious diseases:]
 ‘and I get some of his saliva when I try to take a smoke from his
 pipe’ [muyu019:054]

Both examples above have an uncountable mass as referent of the oblique, i.e. *ambikin* ‘ground, soil’ in (70) and *walok* ‘saliva’ in (71). In both cases, an unspecified amount is taken from this mass. As for verbal number, singular verbs are preferred for uncountable referents as seen with *kani* ‘take (sg.obj.)’ in (71). However, plural verbs like *bi* ‘take (pl.obj.)’ in (70) are also found.¹⁵ For details on verbal number in general, the reader is referred to Chapter 8. However, at the present state of knowledge we cannot discuss the interactions of partitives and verbal number in more detail. This represents a promising

¹⁵This specific construction is an idiomatic multi-verb construction: ‘take:PL.O’ + ‘take:SG.O’ = ‘collect’. For a more detailed account see Section 11.3.7.

topic for studies in the future.

9.3.4.7 Agentive subjects (Optional ergative)

Obliques are occasionally used for agentive subjects, a phenomenon that is well attested for Papuan languages¹⁶ and broadly known as ‘optional ergative’ in the literature (McGregor 2010, Riesberg 2018 *inter alia*). This term is not optimal for Muyu since morphological indexing of arguments on the verb, i.e. the main device to mark grammatical relations, exhibits nominative alignment. The occasional marking of an agent must not be confounded with general ergative alignment of grammatical relations. This is why the term ‘agentive subject’ is used in this study.

The purposes of marking agentive subjects with =*bet* are manifold. Generalising over all possible applications results in a rather broad, and thus vague, function, as e.g. ‘highlighting agentivity’ or ‘discourse focus’. Therefore, we refrain from determining a single function of =*bet* cliticised to subjects. Instead, we give the relevant contexts found in the corpus and illustrate each context with examples. Here are the main contexts:

- Deviant constituent order (i.e. OAV)
- Highlighting a contrast
- Non-human subjects
- Speakers of quoted speech
- Extra-clausal actors
- Intransitive subjects

The following paragraphs discuss each context in turn.

Deviant constituent order (i.e. OAV)

¹⁶The body of Papuan languages for which similar systems are reported is constantly growing. To mention just a few: Dani (Bromley 1981:85, 97), Digul Wambon (Jang 2008:75), Folopa (Anderson and Wade 1988), Fore (Scott 1978:100), Ma Manda (Pennington 2016), Numanggang (Hynum 2010), Yali (Riesberg 2018), Yonggom Wambon (Wester 2014:160).

The standard constituent order in Muyu transitive clauses is AOV. The order of the core argument is not rigid as long as the verb remains clause final. Therefore, we often find clauses of the type OAV. The subject of such a clause is frequently marked with *=bet*, as in the following examples:

- (72) *Niyap=ko kawut kaduk=ma=bet kan-e*
 cassowary=PTC directly man=other=OBL take:SG.O-SM
kadin-on.
 carry.on.shoulder-3SG.M
 [After collaboratively killing a cassowary:]
 ‘The other man immediately took the cassowary on his shoulders.’
 [muyu037:064]
- (73) *Kaduk tana=go, adi=bet, alidan=bet keleg-i=go,*
 man child=PTC father=OBL parents=OBL watch-INF=PTC
 [Parents who consider to marry their daughter off to a man:]
 ‘The young man must be examined by the father, by the parents and
 then ...’
 [muyu018:010]

The clause in (72) begins with the object, *niyap* ‘cassowary’, and puts the subject next to the predicate. There can be no confusion about the grammatical relations of the overt arguments since the subject is marked with *=bet*. A similar structure is given in (73). Here, we see that the speaker actually utters two partially co-referential agents, i.e. a self-initiated repair. The initially expressed *adi* ‘father’ is corrected to become *alidan* ‘parents’. Both phrases are marked with *=bet*.

Although OAV constituent order often triggers *=bet* at the subject in natural discourse, it is by no means obligatory. In absence of an overt marker, the grammatical relations are nonetheless assigned correctly, since addressees can make use of contextual clues and general world knowledge. Compare (73) with its (elicited) variant (74). The parents are still likely to be interpreted as subject, when the addressee compares this utterance with his knowledge of the world: it is the parents who examine the marriage candidate and not vice versa.

- (74) *Kaduk tana=go alidan keleg-i=go,*
 man child=PTC parents watch-INF=PTC
 ‘? The young man must examine the parents and then ...’

‘The young man must be examined by the parents and then ...’
[muyu018:010]

Lacking a suitable context or if both arguments are equally likely the agent of the denoted event, =*bet* really is decisive for the identification of the subject. Thus, we can elicit minimal pairs like the following:

- (75) a. *Pati=go Selsius a-∅-en.*
PN=PTC PN 3SG.M.O-hit-3SG.M
‘Pati hit Selsius.’ [Fieldnotes]
- b. *Pati=go **Selsius=bet** a-∅-en.*
PN=PTC PN=OBL 3SG.M.O-hit-3SG.M
‘Pati was hit by Selsius.’
or:
‘Pati, Selsius hit him.’ [Fieldnotes]

The grammatical relations in (75) are reversed between (a) and (b) with the help of =*bet*.

Highlighting a contrast

Another context for oblique marking of a subject is when a larger group of individuals are potential actors of the event and the speaker needs to single out the appropriate one. The subject of the clause refers to the actual actor, and the noun phrase is marked with =*bet* to highlight this contrast between actual referent and potential referents.

- (76) “*Oyip nengg-ime*”, *engg-on=e ta tana=bet*
also cook-2PL.IMP say-3SG.M=DS.SEQ and child=OBL
nengga-un.
cook-3SG.F
[After eating sago, the man is still hungry. Luckily, there is some rice in the house:]
‘He said “please cook it too” and the child cooked it.’
[muyu026:034]

The command in quoted speech in (76) is directed at both women in the house: his wife (=also the first-person narrator in this recording) and their daughter. Both of them are given in the discourse context and both are addressed by the man as can be seen by the plural imperative suffix: *-ime* ‘2PL.IMP’. Marking *tana* ‘child’ with *=bet*, the narrator emphasises that it was the child who obeyed and not the wife (i.e. herself). The narrative then continues:

- (77) ***Tana=bet*** *nengg-un=e* *kedo alup* *onongm-in*.
 child=OBL cook-3SG.F=DS.SEQ then vegetable make-1SG
 ‘The child cooked it, then I prepared some vegetables.’
 [muyu026:035]

Here, the child is again contrasted with the wife but this time, the wife’s actions are expressed explicitly in a chained clause with different subject (DS). The overt noun phrase of the first clause is again marked with *=bet*.¹⁷ The referent it contrasts with, the first person (‘I’) in this example, is not expressed overtly but marked in the subject suffix of the final verb.

The contrasting referent does not need to be given in the discourse context. It can be introduced directly in the contrasting construction like *anggotmi* ‘friend(s)’ in (78). Still, the *bet*-marked phrase is always the agentive subject rather than the phrase of the newly introduced referent:

- (78) *Anggotmi yeman kole, nup=bet mo an-i balin*.
 friend for CONJ 1PL=OBL only eat-INF NEG
 [Muyu people should share when they catch fish:]
 ‘It is (also) for friends so we must not eat all by ourselves.’
 [muyu038:219]

Furthermore, (78) illustrates that oblique marking of agentive subjects also works in negated clauses. Muyu grammar makes no difference between positive and negative declaratives in this point.

The newly introduced referent can also be the agentive subject of the

¹⁷We actually see an instance of tail-head linkage (THL) between the last clause of (76) and the first clause of (77). One might think that the repetition of the clause forces also the repetition of *=bet* and therefore, the marking has nothing to do with the contrast in (77). However, this is not the case since THL in Muyu is not bound to repeat the whole clause word by word. Mostly, only the final verb is repeated. For details on THL the reader is referred to Chapter 12.

clause. Compare (78) with (79). In such cases, *=bet* is used to highlight an unexpected referent:

- (79) “**Ambang=bet** *ka-y-o-den=o*”, *engg-an*,
 grandfather=OBL give-PL-3SG.M-PFV=QUOT say-1SG
 “*Ambang talep=bet*”.
 grandfather big=OBL
 [Children get excited that their father is bringing home a monitor
 lizard to eat:]
 ‘ “It was the lord who has given it to us”, I said, “The great fa-
 ther.” ’ [muyu049:007]

The lord, *ambang talep* ‘(lit.) big grandfather’, is not given in the previous discourse to (79). For the addressees of the quoted speech, i.e. the children, the lord is an unexpected referent since they are attributing the prey to their own father.

Finally, we see examples where the contrastive potential of *bet*-marking is somewhat less important. Its main function in (80) is to single out a certain referent from a group. Considering agentivity of the respective referents, the woman’s seeing event is probably less active than the catching and killing event that is undertaken by the rest of the group. Nonetheless, the woman is singled out first; it is her who spotted the rat:

- (80) **Ne ena=bet** *tinggan benem* *tem-un=go* *wen-e*
 1SG mother=OBL mouse kind.of.mouse see-3SG.F=PTC go-SM
ni-ngg-e *a-∅-up* *yeman, olal-an-e*
 catch-2/3SG.O-SM 3SG.M.O-hit-1PL about talk-IRR-SM
kem-an.
 do-1SG
 [Beginning of a story, after introducing the protagonists and setting
 a location:]
 ‘I want to tell about (the time when) my mother saw a big rat and
 then we caught and killed it.’ [muyu039:004]

To sum up, contrasting certain referents and singling out referents from a group are covered by the same morphosyntactic marker in Muyu. Similarly, not only contrastive referents, but also the unexpected ones are marked with *=bet*.

Non-human subjects

There is a general tendency in Muyu grammar that subjects should refer to humans or at least animate beings. Clauses that do not conform to this tendency mostly diverge from the regular morphosyntactic mechanisms. For example, inanimate subjects do not trigger agreement of the subject suffix on the verb (see Section 9.3.1.1). Oblique marking offers a similar mechanism to highlight untypical subject referents.

Transitive clauses most commonly denote an event in which a human acts upon a non-human undergoer (e.g. ‘Maria eats rice.’). However, this is not necessarily the case. Subjects can be inanimate, and thus non-human, like the river ‘Bian’ in (81). Note that the river is mentioned twice in this example: first as goal of the falling event and second as actor that carries away the coconut. Only the second instance is marked with *=bet*.¹⁸

- (81) *ma kok-e Bian kubun-o-den, **Bian=bet** ok*
 CONJ fall:SG.S-SM PN descend-3SG.M-PFV PN=OBL water
kan-e wen-en.
 take:SG.O-SM go-3SG.M
 [A coconut tree was growing at the river:]
 ‘When it (=a coconut) fell into the Bian river, the Bian river took
 it away.’ [muyu031:082]

A similar case is given in (82), where the subject refers to an animal. Although animals are certainly more agentive than rivers, the respective phrase is still marked with *=bet*, since the predicated actions are typically human actions: ‘sitting’ and ‘talking’.

- (82) **On sa=bet** *tio-n-e=get,*
 bird wild.chicken=OBL sit-SS-3SG.M=and.then.SS
olal-o-den.
 talk-3SG.M-PFV

¹⁸The attentive reader will notice the lexeme *ok* ‘water’ after the marked phrase in (81). Prima facie, this noun seems to belong to the subject, as in ‘the water of the Bian river took it away’, rendering the *=bet* as an instance of the partitive function discussed in 9.3.4.6. However, *ok* in (81) is actually part of the predicate, forming a complex predicate with the two subsequent verbs: *ok kane wini* ‘to make something float away’. For complex predicates see Chapter 11.

[Having spotted a wild chicken on a tree:]

‘The wild chicken sat (there) and made sounds. (lit. talked)’
[muyu031:064]

We conclude from examples like (82) that the relevant feature for oblique marking of untypical agents is not animacy but a human vs. non-human distinction. However, like all instances of agentive subject marking, this must be seen as a tendency rather than a strict rule.

Speakers of quoted speech

Quoted speech is abundant in natural discourse. The quote itself is mostly embedded and subordinate to a verb of speech, e.g. *enggi* ‘say’. In such embedded structures, the embedded quote behaves like the object of a transitive clause. The subject of the clause always refers to the speaker being quoted. Subjects in such clauses are very frequently marked with *=bet*, probably to highlight who is the originator of the quoted speech. An example is given in (83). In Section 12.6, these structures are discussed more thoroughly under the label ‘embedded quotatives’.

- (83) ***Ena=bet***, “*Ah, tana=go men-e komb-ip*
mother=OBL INTJ child=PTC come-SM put:SG.O-2/3PL
oyen”, *engg-un*.
that.is.it say-3SG.F
[Hearing the sound of a paddle hitting at the side of a canoe:]
‘Mother said, “Oh, that means the children have arrived.” ’
[muyu038:197]

The subject in (83) is expressed two times: first as an overt NP, second via argument indexing on the final verb. The quoted speech intervenes between these two elements. Quotes can become rather long and clause chains with more than three clauses are no exception, leading to complex sentences where the overt NP is quite distant from the verb of speech. Therefore, the oblique marking of the subject in such constructions probably helps the addressee to identify the quoted speaker right from the start.¹⁹

However, speaker subjects are also marked with *=bet* when a verb of

¹⁹Notice that in example (83) the quote itself is marked by an interjection *ah*. Hence, *=bet* + interjection unmistakably introduces quoted speech.

speech is adjacent, as in the following sequence:

- (84) *Engg-un=go, ne=bet kumungg-an: “Ena,*
 say-3SG.F=PTC 1SG=OBL tell-1SG mother
ne=bet=an=non=e”, engg-an.
 1SG=OBL=COP=MAYBE=QUOT say-1SG
 [A mother asking the children whose hand is touching hers:]
 ‘When she said that, I answered: “Mom, maybe it is me”, I said.’
 [muyu039:041-042]

Note that there are two verbs of speech in (84). Since the first verb *kumunggan* is a final verb, there is a clause boundary before the quote starts. Hence, the marked subject *ne=bet* is subject to *kumunggan* but not to *enggan* (although they are co-referential). Technically, there is no need to express the subject pronoun overtly, since the subject is already indicated with the verbal suffix *-an* before the quote. Still, speakers prefer to overtly express the pronoun and always mark it with *=bet* in this context. There are two possible explanations for this: Firstly, contexts with a single distant verb of speech as in (83) have lead to the generalisation that speaker subjects are typically oblique. This generalisation could have lead to the practice of always highlighting speaker subjects even if the verb of speech is adjacent. Secondly, the oblique marker before verbs like *kumunggi* ‘tell’ serves actually to disambiguate the grammatical relation of the pronoun. This becomes more important in third person contexts where co-referentiality of the free pronoun and the argument index on the verb is not guaranteed:

- (85) *Yu kumungg-un:*
 3SG.F tell-3SG.F
 ‘(i) She said: ... (yu = -un)’
 ‘(ii) She told her: ... (yu ≠ -un)’ [Fieldnotes]

In (85) the free pronoun can either be interpreted as the subject, i.e. co-referential with *-un*, or as an indirect object, i.e. not co-referential with *-un*. However, although the latter interpretation is possible, free pronouns are not the common means to express this grammatical relation. The receiver of the talk would be omitted altogether if retrievable from the context.²⁰ Therefore, we estimate this motivation for oblique marking before adjacent verbs of speech as unlikely. More probably, the marking of speaker subjects

was motivated by a generalisation of cases with distant verbs of speech.

Finally, there are cases where a verb of speech does not occur at all, leaving the overt noun phrase as the only reference to the speaker:

- (86) ***Anggotmi=bet*** “*Aeh okun-e balin, ekun-e*
 friend=OBL INTJ like.that-SM NEG like.this-SM
ambangg-ime, ekun-e ambangg-ime (...)”
 work-2PL.IMP like.this-SM work-2PL.IMP
 [Having friends is important in life:]
 ‘Friends (can tell you:) “Oh, don’t do like that, you must do like
 this, and do like this! (...)” ’ [muyu056:091]

The speaker subject in (86), *anggotmi* ‘friend’, is marked with *=bet*. Although the quoted speech in (86) goes on for several clauses (which were left out here for reasons of space), the construction is never closed with a final verb of speech. We interpret instances like (86) as elliptic quotative constructions in which the verb of speech is omitted. Similar cases are found quite regularly in the corpus. The overt subject NP is the only element that refers to the source of the quoted speech. This makes it all the more important to unambiguously identify the noun phrase as the speaker subject with the help of *=bet*.

Extra-clausal actors

The oblique marked subject phrases given so far have all been arguments of verbal clauses. However, agents can occur in discourse outside of clauses as well. Sensible answers to questions asking ‘Who did XY?’ are simple phrases like *ne=bet* ‘I (did it)’, *ye=bet* ‘He (did it)’, etc. Here is an example where such an extraclausal answer is embedded as quoted speech:

²⁰NPs with nominal heads do occur in this position, however, as the following example shows:

- (i) *Tana Yanu kumungg-a-den, “Wen-e yal-e=yo.”*
 child PN tell-1SG-PFV go-SM lay.down:PL.O-2SG.IMP=QUOT
 ‘I told the boy Yanu: “Go and make some (traps).” ’ [muyu010:161]

The indirect object can be expressed overtly in preverbal position. This is found mostly if the referent is introduced to the discourse.

- (87) “*Neka=bet*”, *engga-un jadi* (...)

1SG.REFL=OBL say-3SG.F so(BI)

[Asked when she will begin to work in the garden:]

‘ “It’s up to me”, she said, so ...’ [muyu029:136]

The marker is cliticised to the reflexive form of the pronoun: *neka* ‘myself’. Both the reflexive and =*bet* combine to highlight the agentivity of the speaker, i.e. her volitional control of the situation.

Furthermore, instead of complete extra-clausality, oblique marked agents can also be complemented by a copula. An example is (84) above, where the quoted speech is *ne bet an* ‘It’s me’.

Intransitive subjects

For several Papuan languages, it has been reported that agent marking extends to intransitives (Riesberg 2018). Indeed, Muyu intransitive subjects are sometimes marked with =*bet* if the subject referent should be contrasted with other potential referents or a certain emphasis should be put on the subject. This conforms with the notion of ‘discourse prominence’ mentioned above.

The following sequence is an excerpt from a conversation about planting peanuts collaboratively:

- (88) a. *Kibik wot kibik edo kumun alum-ip=a*

now month now DEM all plant:PL.O-2/3PL=LNK

‘You all together plant (the crop) this month and ...’

[muyu029:128]
- b. *nup aip=bet mene-n-up alebul-up=ket,*

1PL there.is=OBL come-SS-1PL stand-1PL=and.then.SS

traktor aip (...) nan-e mene-n-up=a

tractor(BI) there.is ... take.big.obj-SM come-SS-1PL=LNK

‘We also come and we stay, and then we bring also the tractor

and ...’ [muyu029:130]

As can be seen, the subject in (88-b) occurs in a same subject clause chain of which the first two clauses are intransitive while the last clause is transitive

and has *traktor* as its object. The subject occurs overtly in the first clause of this chain only, hence it is clearly the intransitive subject. Nonetheless, it is marked with *=bet*. This oblique marking of the intransitive subject has a contrastive function. *Nup* ‘we’ contrasts with (the implicit) *kip* ‘you (pl)’ of the immediately preceding clause: It is you who plant the crop; it is us who come, stay and bring the tractor. In this respect, S does not differ from A in transitive clauses.

Intransitive clauses with oblique marked subjects are not particularly frequent in the corpus. In elicitation, our consultants use *=bet* to put emphasis on the subject referent, particularly in question-answer pairs of the following sort:

- (89) ***Ne=bet*** *angg-a-den*.
 1SG=OBL sleep-1SG-PFV
 [Q: ‘Who slept in my garden?’]
 ‘It was me who slept.’ [Fieldnotes]
- (90) ***Ne=bet*** *wan-a-den*.
 1SG=OBL go-1SG.PFV
 [Q: ‘Who went there the other day?’]
 ‘It was me who went (there).’ [Fieldnotes]
- (91) ***Ne=bet*** *ban-a-den*.
 1SG=OBL call.once-1SG.PFV
 [Q: ‘Who was calling?’]
 ‘It was me who called.’ [Fieldnotes]

To sum up, oblique marking of intransitive subjects is possible, although far less encountered than the marking of agentive subjects in transitive clauses.

9.3.5 Comitatives

Comitatives are used to denote accompaniment (e.g. ‘She came **with her fiancé**.’). There are two strategies to express comitatives in Muyu clauses. Firstly, comitatives occur as phrases marked with the postposition *yom*. In contrast to the multi-functional enclitic *=bet* (see Section 9.3.4), *yom* is exclusively used for comitatives in clausal contexts. However, *yom* is also used for noun phrase coordination (see Section 6.8.1) inside NPs, making Muyu a WITH-language in the sense of Stassen (2000), i.e. a language in which ‘and’

and ‘with’ are identical, unlike in AND-languages, where ‘and’ and ‘with’ are formally distinguished (as e.g. in English). Here is an example of a Muyu comitative with *yom*:

- (92) *Edo otbop, taman Bruno Kakut yom Kowo*
 DEM language younger.brother PN PN COM PN
wun-up yeman.
 go-1PL about
 ‘This is a story about me going to Kowo (river) with brother Bruno Kakut.’ [muyu038:001]

The second, but less frequent, strategy to express comitatives makes use of the existential marker *yanop* ‘there is’:

- (93) *Tinggalan muying mana yanop ti-un.*
 rat king.of.rat offspring there.is stay-3SG.F
 ‘A Muying rat stayed (there) with its offspring.’ [muyu040:037]

Compare the verb suffixes of (92) and (93). In the former, the verb is suffixed with a plural index, which means that both the speaker himself and *taman Bruno Kakut* are cross-referenced by the subject suffix. In contrast, the subject of (93) is only *Tinggalan muying*, the ‘Muying’ rat, while its offspring is not included according to the singular value of the subject index.

If we take number as criterial, one would only count (93) as comitative and not (92). However, there is good reason not to take number as criterial here. Stassen (2000) argues that pure instances of WITH-languages are rare and cross-linguistically, we can observe a diachronic shift from comitative encoding to conjunctive encoding. This is exactly what we see in Muyu. The comitative marker *yom* occurs as polysyndeton (i.e. multiple markers, one for each element) in noun phrase conjunction, e.g. *kep yom ne yom* ‘you and I’. The comitative *yom* triggers a plural index on the verb, probably adopting this feature from conjunctive *yom*. In contrast, *yanop* ‘there is’ does not undergo this diachronic shift since it is not a genuine comitative marker. The subject index, therefore, remains singular as in example (93).

Although this shift of *yom* is observable in Muyu, we interpret instances like *taman Bruno Kakut yom* ‘with brother Bruno Kakut’ in (92) as comitative, since there is only one noun phrase. In contrast, noun phrase conjunction needs both conjuncts to be expressed overtly.

9.4 Non-verbal predication

This section deals with clauses that do not contain verbs. Clauses whose predicate belongs to a class other than verb are quite common in Muyu. This section only covers affirmative non-verbal clauses. Such clauses often have a binary structure as can be seen in (94). The first phrase is labeled ‘non-verbal clause subject’ in this study.²¹ The last phrase in (94) is the predicate. This constituent order conforms to the constituent order of verbal clauses (i.e. predicate/verb final).

- (94) *[Tit]=ko [talep talep]=an.*
 product=PTC big big=COP
 ‘The harvest was huge.’ [muyu017:058]

The clause in (94) consists of two noun phrases separated by the particle *=ko*. Alternatively, a demonstrative at the right edge of the first noun phrase is also sufficient to separate the phrases. However, mere juxtaposition without separating element can lead to a different structure, in which only one noun phrase is present:

- (95) *[Tit talep talep]=an*
 product big big=COP
 ‘It’s a huge harvest.’ [elicited]

As can be seen from (95), the non-verbal clause subject is not obligatory and can be omitted. Due to the copula particle, the remaining phrase is still identifiable as a non-verbal predicate.

Formally, we can distinguish three types of clauses with non-verbal predicates, as shown in the following list. In this section, we will use the term ‘copula element’ as a cover term for copula particles and copula verbs, since they are mostly interchangeable.

1. Non-verbal clauses **without a copula** element (i.e. neither particle nor verb)

²¹The term ‘non-verbal clause subject’ seems a little unwieldy. The term was chosen due to the lack of a better alternative. Simply labeling them ‘subject’ would confound them with S and A in verbal clauses. Dixon (2010:100) proposes ‘copula subject’. However, copula elements are optional in Muyu and using this term would lead to instances of copula subjects lacking a copula.

2. Non-verbal clauses with the **copula particle** *=an* ²²
3. Non-verbal clauses with the **copula verb** *keli* ‘become’

Each non-verbal predicate is compatible with all clause structures, e.g. a noun phrase as predicate can be simply juxtaposed to the non-verbal clause subject, or be complemented by *=an* ‘=COP’ or *keli* ‘become’. However, if the non-verbal clause subject is omitted, a copula element is obligatory.

Examples with copula particles were already shown in (94) and (95) above. The following examples are without a copula element (96) and with a copula verb (97). Here and in the remainder of this section, predicates will be in boldface.

- (96) *Odo* ***nup monop***.
 DEM 1PL grandchild
 ‘That is our grandchild.’ [muyu038:207]
- (97) ***On kidim*** *kul-u-den*.
 bird kind.of.bird become-3SG.F-PFV
 ‘She became a crowned pidgeon.’ [muyu065:081]

For the purposes of this chapter, non-verbal clause types are categorised according to the form of the predicate. We distinguish: nominal clauses (§9.4.1), quantificational clauses (§9.4.2), similitive clauses (§9.4.3), benefactive/purposive clauses (§9.4.4), oblique clauses (§9.4.5), and existential clauses (§9.4.6). Each type will be discussed in turn.

9.4.1 Nominal clauses

Nominal clauses have an NP with a nominal head as the predicate. This nominal head can be a noun, a pronoun, or an adjective. Three main functions are expressed via nominal clauses: identification, attribution and possession. Each of these functions will be illustrated in turn.

Nominal clauses for the identification of two referents are given in the following examples:

²²The vowel /a/ in the copula particle is only present when attached to a consonant-final word. Otherwise, the vowel may either assimilate to the preceding vowel or be omitted altogether, leaving a copula *=n*. In some rare cases, a glide /j/ is inserted and the vowel /a/ preserved.

- (98) *Hotel aninggo=ko Balava.*
 hotel(BI) name=PTC Balava
 [Reporting about a trip to Java:]
 ‘The name of the hotel was Balava.’ [muyu030:096]
- (99) *Ye odo ne daman=an.*
 3SG.M DEM 1SG younger.brother=COP
 ‘He is my younger brother.’ [muyu030:229]

The predicates in the examples are different kinds of noun phrases. The noun phrase in (98) consists of only a single noun *Balava*, whereas the noun phrase in (99), *ne daman* ‘my younger brother’, is possessive. Furthermore, these two examples differ in the copula particle which is present in (99) but not in (98). Although both clauses express referential identity of the two phrases, example (99) additionally has a possessive function. Possessive noun phrases are a common way to express possession in non-verbal predication.

Attribution is frequently expressed with predicative adjectives:

- (100) *Ye=go kunkono=on.*
 3SG.M=PTC awkward=COP
 ‘He is awkward.’ [muyu010:171]
- (101) *Tinggalan muying amun edo kili=in=o!*
 rat kind.of.rat nest DEM new=COP=QUOT
 ‘Oh, this nest of a Muying rat is new!’ [muyu040:029]
- (102) *Tana aip welen kel-on jadi.*
 child there.is sick become-3SG.M CONJ(BI)
 ‘Because (he had) a son who was sick.’ [muyu006:007]

Predicative adjectives as in (100)-(102) state that the denoted attribute belongs to the referent in the non-verbal clause subject. In contrast to the identificational nominal clauses seen above, these non-verbal predicates do not have reference themselves. Note that in (102) the Indonesian word *jadi* ‘so, thus’ functions as a clause conjunction that connects the nominal clause to the surrounding discourse.²³

²³Example (102) is an instance of code mixing. Interestingly, although expressed with an Indonesian word, the conjunction follows Muyu syntax. An Indonesian clause would place the conjunction left of the clause. However, it is at the right edge in (102), exactly

Pronouns as predicates are quite rare. The following example shows a reflexive pronoun in the predicate position. For an example with a possessive function see Section 9.4.1.1.

- (103) *Talep kai edo yeka.*
 big very DEM 3SG.M.REFL
 [Counting, separating and grouping fish that were caught:]
 ‘This big one is on its own.’ [muyu038:169]

The reflexive pronoun in (103) indicates that the referent of the non-verbal clause subject is separated from other similar referents, which means that the non-verbal clause subject and the predicate are co-referential.

Copula clauses with nominal predicates are sometimes used to yield certain pragmatic effects. The example in (104) is a sequence from the beginning of a narrative in which the protagonists are merely referred to as ‘we’. Immediately after that, the speaker specifies who was meant by ‘we’. Each referent is introduced with his own copula clause, to the effect that special attention is given to each one.

- (104) a. *Nik yop bat wun-up.*
 kind.of.fruit fruit hunt go-1PL
 ‘We went for Nik fruits.’ [muyu037:004]
- b. *Ne=en, ambo Lukas=en, Agus=en, okun-e*
 1SG=COP brother PN=COP PN=COP like.that-SM
ambip hutan wun-up.
 house forest go-1PL
 ‘It was I, brother Lukas and Agus; thus we went to the forest house.’ [muyu037:005]

9.4.1.1 Bare demonstratives as non-verbal clause subjects

A particular kind of nominal clause is headed by a demonstrative *edo* ‘this’ or *odo* ‘that’, followed by a nominal predicate. The demonstrative points either deictically to an extra-linguistic entity or anaphorically to a previously mentioned referent. Such clauses are used either to predicate attributes to

where its Muyu equivalent *gole* ‘so, because, thus’ would stand.

the referent (105), to identify a referent (106), or to express possession (107). The latter of these functions is only rarely found in the corpus.

- (105) *Edo talep.*
 DEM big
 [Pointing at a fish:]
 ‘This one is big.’ [muyu038:168]
- (106) *Edo emba ye kim=en.*
 DEM father 3SG.M road=COP
 [Talking about different roads in the area:]
 ‘This is father’s road. (i.e. father used this road)’
 [muyu010:069]
- (107) *Odo ne=en.*
 DEM 1SG=COP
 [Talking about a woman, he’d like to marry:]
 ‘That (woman) is mine.’ [muyu018:006]

As can be seen from the contextual descriptions in the examples, (105) uses *edo* ‘this’ deictically, whereas (106) and (107) make an anaphorical use of the demonstrative. In all cases, the predicate is a noun phrase.

Note that the predicate in (107) is a bare pronoun, conveying possessive meaning. Denoting possession with non-verbal clauses is quite infrequent. The more common way to express possession is by using nominal clauses with full possessive noun phrases as the predicate (see example (99) in 9.4.1 above). Muyu does not have special possessive pronoun forms. Instead, possessive meaning is mostly conveyed by a structural position inside an NP (i.e. left of the head noun) while the form of the pronouns is identical to personal pronouns. This ambiguity is probably a major factor for the low frequency of structures like in (107).

9.4.2 Quantificational clauses

Quantificational clauses have either a numeral or a quantifier as their predicate. They are used to make assertions about the quantity of the referent in the non-verbal clause subject.

- (108) *Yu taman=ko mim=an.*
 3SG.F younger.brother=PTC one=COP
 ‘She has one younger brother. (lit. her younger brother is one)’
 [muyu032:003]
- (109) *Midin=ko kadap=an.*
 kind.of.shrimp=PTC many=COP
 ‘The little shrimps were many.’
 [muyu038:068]
- (110) *Ne=bet okmot mim mo, taman ye=bet*
 1SG=OBL fishing.line one only younger.brother 3SG=OBL
alop.
 two
 ‘I had one fishing line, (but) brother, he had two (fishing lines).
 (lit. at me ... at brother ...)’
 [muyu038:070]

The examples above show that bare numerals and quantifiers can occur in the predicative position regardless of the presence or absence of a copula element.

Quantificational predicates must be distinguished from nominal predicates. A nominal predicate is always a full NP. However, the head noun of an NP can be omitted leading sometimes to NPs that consist of a numeral/quantifier only. The following example illustrates this pattern:

- (111) [*Alop*] *okun-e meno-n-ip.*
 two like.that-SM come-SS-2/3PL
 [Picture story. Two goats approaching a narrow bridge from two different directions:]
 ‘Both of them came and then they ...’
 [muyu014:009]

The numeral in (111) is part of a noun phrase with an omitted head noun. Such a phrase always has reference. In contrast, numerals in quantificational predicates, as seen in the examples above, never have reference. Instead, they predicate a certain quantity to the referent expressed in the non-verbal clause subject. In conclusion, quantificational predicates must be distinguished from nominal predicates.

9.4.3 Similative clauses

Similative clauses have a predicate whose head is the postposition *adep* ‘like’. It denotes the similarity of two (distinct) referents.

- (112) **Ye** *adep=an*, *Kilinggono=go ye* *adep*.
 3SG.M like=COP face=PTC 3SG.M like
 [Meeting a stranger who looks like his father-in-law:]
 ‘(He is) like him. The face is like his.’ [muyu030:133]
- (113) **Kuk** *adep=an*.
 palm.ree like=COP
 [Myth. A woman buried a head and unexpectedly, a plant grew out of it:]
 ‘It was like a palm tree.’ [muyu031:047]

There are two similative clauses in (112), the former with a copula particle and the latter without. In (113), the non-verbal clause subject was omitted since it is retrievable from the previous discourse.

A special kind of similative clause is the idiomatic expression in (114) which makes use of a frozen form of the verb *okuni* ‘do like that’. This idiomatic expression is encountered frequently at the end of a recording to indicate that the story has ended:

- (114) **Okun-e** (*a*)*dep=an*.
 like.that-SM like=COP
 ‘It was like that.’ [muyu007:150]

There are three reasons to interpret (114) as idiomatic. Firstly, unlike in other contexts, the verb does not have a clear anaphoric reference.²⁴ Instead, ‘like that’ is related to the whole preceding discourse. Secondly, this is the only known construction where the serial marker *-e* is preceding a postposition. It has lost its functionality here since *okune* in this expression can probably no longer be understood as a verb. Thirdly, the two words are pronounced like one phonological word. As indicated by the brackets in (114), the initial vowel of *adep* is deleted and the whole form is pronounced as [ɔ.ku.nɛ.dɛp].

²⁴In other contexts, *okuni* is often used as a discourse device for coherence (as e.g. “After they did like that, they ...”) or to assert the similarity of two actions (e.g. “They did so too.”).

In general, the deletion of a vowel to avoid hiatus is not unusual in Muyu phonology. This usually indicates that the two vowels are part of the same phonological word (for phonological details see Section 2.3.3). In the case of *okune (a)dep*, this is more evidence that the construction is tightly conjoined, probably even lexicalised to a single lexical expression. To sum up, *okune (a)dep* is an idiomatic expression that can be used as a non-verbal predicate either with or without a copula particle adjoined to it.

Similative clauses can also have infinitive verbs in the predicate. The predicate is still non-verbal since the infinitive is treated like a verbal noun in Muyu. Similatives with infinitives can be used to compare similar events as in the following example:

- (115) *Emba talep tokbut keme-ngg-i adep.*
 father big lie do-2/3SG.O-INF like
 [If we use the wrong words to worship god ...]
 ‘It is like lying to the Great Father.’ [muyu019:235]

The predicate in (115) is a complex predicate composed of the noun *tokbut* ‘lie’ and the light verb *kemi* ‘do’ (for details on light verb constructions see Chapter 10). Furthermore, the predicate is complemented by the object argument *emba talep* ‘Great Father (i.e. lord)’. All these elements are part of the non-verbal predicate headed by the postposition *adep* ‘like’. The function is clear: A contextually given event (i.e. using the wrong words to worship god) is likened to another event (i.e. lying to god).

A similar function is related to non-actualised events: infinitive verbs in similative clauses are used to denote events that almost happened (but eventually did not). An example is the following:

- (116) *Kono odo nanggil-i adep kol-on.*
 boat DEM flip.over-INF like become-3SG.M
 [When he stood up in the canoe:]
 ‘The canoe almost flipped over. (lit. canoe was like flipping over.)’
 [muyu038:109]

The infinitive of the verb *nanggili* ‘turn around, flip over’ is headed by *adep* ‘like’ to express that the event that actually did take place was “as if” the canoe was flipping over. However, if the canoe really was flipping over, there would be no need to state the similarity of events and the speaker could

have just said: ‘the canoe flipped over’. So, by implicature, the addressee understands: ‘like flipping over’ means ‘almost flipping over’. To sum up, similative clauses can be used to compare both physical entities and events. The compared entities can be hypothetical as well as real.

Note that negation of similatives with infinitives leads not just to a reversal in polarity but to another construction altogether (see §9.7.2.2 in the section about negation).

9.4.4 Benefactive/Purposive clauses

This type of non-verbal clause has a predicate whose head is the postposition *yeman* ‘for’. There are several functions of this predicate. With proper nominal complements to the postposition, it denotes either that someone is a beneficiary or receiver of something, whereas infinitive verbs as complements refers to either a purpose or an imminent event.

Benefactive clauses simply have the referent who is the receiver or beneficiary of something as a complement to *yeman* ‘for’:

- (117) *Edo katuk ma yeman=an.*
 DEM person other for=COP
 [Distributing various parcels of land:]
 ‘This (one) is for someone else.’ [muyu056:025]
- (118) *“Eyuk, nup tana yeman kole”, engga-n-i=get.*
 yes 1PL child for CONJ say-SS-1SG=and.then.SS
 [Being asked to work as a teacher in the local school:]
 ‘ “Yes, because it’s for our children”, I said and then I ...’
 [muyu030:009-011]

In both (117) and (118), the postposition heads a noun phrase with a human referent. *Kaduk ma* ‘other person’ in (117) is the receiver of a giving event, while *nup tana* ‘our children’ in (118) is the beneficiary of a contextually given event.²⁵ The final element of the clause in (117) is a copula particle,

²⁵Although predicates with *yeman* ‘for’ can refer to either receiver or beneficiaries, we use the label ‘benefactive clause’ to cover predicates including both semantic roles. The motivation behind this was to not inflate terminology beyond necessity. Note that the categorisation of non-verbal predicate types is based on formal features rather than on semantics.

whereas (118), in which the clause is embedded as quoted speech, is closed by the conjunction *kole* ‘so, because, thus’.

Predicates headed by *yeman* ‘for’ can also refer to purposes. This is found mostly with infinitive verbs as discussed below. Nominal complements with purposive meaning are quite rare. Here is one example:

- (119) *Odo tip yeman, kole wan-an-an=o.*
 DEM good for CONJ go-IRR-1SG=QUOT
 [Being asked to leave the village to attend school:]
 ‘It is for (a) good (cause), so I will go. (I said.)’ [muyu041:016]

Besides the postposition, the predicate in (119) contains a single adjective *tip* ‘good, enough, suitable’. We analyse this case as an elliptical noun phrase in which the head noun (something like ‘aim’, ‘goal’, or ‘end’) has been omitted. Although the postposition is the same as in the examples above, it is clear that the predicate in (119) does not include a beneficiary. It is instead a purpose, which is similar to *yeman*-predicates with infinitives as will be discussed next.

Non-verbal predicates whose head is the postposition *yeman* ‘for’ can have infinitive verbs in order to express the purpose of a non-verbal clause subject or an imminent event. As was argued in Section 9.4.3 for infinitives + *adep* ‘like’, such predicates, although they include a verb, are still non-verbal predicates since infinitives are treated as verbal nouns in Muyu. Here are two examples of the purposive meaning:

- (120) *An-i yeman=an.*
 eat-INF for=COP
 [Picture story. Bringing a fruit to her father:]
 ‘It is (something) to eat.’ [muyu015:011]
- (121) “*Ambo, kakodolok ok=bet nengg-i yeman=an=o*”,
 brother, coconut water=OBL cook-INF for=COP=QUOT
engg-on.
 say-3SG.M
 [Having caught a big fish:]
 ‘ “Oh brother, there is coconut milk to cook it with”, he said.’
 [muyu038:186]

In the context of (120), the fruit being presented by a child to his father

(in a picture story) was mentioned in previous discourse, and consequently, it was omitted in the purposive clause. The purpose itself is made clear by the infinitive + *yeman* ‘for’ as the non-verbal predicate. In contrast, the clause in (121) does include a non-verbal clause subject, i.e. *kakodolok ok* ‘coconut milk’. Note that this phrase bears an oblique marker =*bet* since it is the instrument of the cooking event (see §9.3.4.4). An alternative analysis would be that the instrument is actually part of the predicate and the non-verbal clause subject is omitted as in (120). However, the meaning of the clause in this context makes it clear that the purpose *nenggi yeman* ‘for cooking’ is related to the instrument not to another entity (e.g. the fish). One protagonist introduces the new referent ‘coconut milk’ and asserts its purpose. Therefore, we conclude that non-verbal clause subjects can be obliques in Muyu.

The second function of infinitive + *yeman* ‘for’ is to express imminent events, i.e. events that are about to happen.

- (122) *Ah, edo tan-i yeman=an.*
 INTJ DEM die-INF for=COP
 [Pointing at a fish outside the water:]
 ‘Oh, it’s about to die.’ [muyu038:084]
- (123) *Nup odo nanggil-i yeman=an.*
 1PL DEM turn.around-INF for=COP
 [Refusing to stay for dinner:]
 ‘We want to go back. (lit. We are about to turn around.)’ [muyu038:147]

As can be seen in both (122) and (123), the non-verbal clause subject refers to the actor/undergoer of the event, which can be seen as the major difference to the purposive function of *yeman*-predicates, where the non-verbal clause subject is merely an implement to fulfil a certain purpose. The events expressed in the predicates of (122) and (123) are going to happen soon. This construction does not assume that the actor has volitional control over the event. The travelers in (123) do have control, whereas the fish in (122) does not.

9.4.5 Oblique clauses

Oblique phrases marked with *=bet* can also be non-verbal predicates. Their functions are manifold and are essentially the same as for oblique arguments in verbal clauses. For a discussion of these functions the reader is referred to §9.3.4. For the purposes of this section, a few examples shall suffice:

- (124) “**Ricky***=bet=an=non*”, *engga-un*.
 PN=OBL=COP=MAYBE say-3SG.F
 [Who was hunting pigs there?]
 ‘ “Maybe it was Ricky”, she said.’ [muyu005:038]
- (125) **Kede***=bet=an?*
 where=OBL=COP
 [Talking about someone’s sago:]
 ‘Where is it?’ [muyu006:036]
- (126) *Wep anggo**=bet=an*.
 year five=OBL=COP
 [He taught a class in school:]
 ‘It was for five years.’ [muyu030:019]

The clitic *=bet* is uniformly glossed as ‘OBL’ although it can fulfil various functions.²⁶ In the examples above, each oblique has a different meaning. In (124), the phrase refers to the agent of a previously mentioned action. Note that the copula is complemented by the clause particle *=non* ‘MAYBE’ that modifies the proposition of the clause. The oblique phrases in (125) and (126) have a locational and temporal meaning, respectively. Note that none of these examples has an overt non-verbal clause subject. Nonetheless, each predicate is related to a contextually given referent: hunting pigs (124), sago (125), and teaching a class (126).

9.4.6 Existential clauses

A common type of non-verbal clauses is the existential clauses in which the predicate is marked with one of the two existential particles *aip* ‘there is’ or *yanop* ‘there is’. In contrast to other kinds of non-verbal predication, there

²⁶The functions of *=bet* are outlined in Section §9.3.4.

is no non-verbal clause subject in existential clauses. The NP in existential clauses is instead interpreted as part of the predicate.

- (127) ***Animan aip kel-an-on.***
 food there.is become-IRR-3SG.M
 [Working hard in the gardens:]
 ‘There will be food.’ [muyu056:066]
- (128) ***Ta kampung eyom al-up=ko kodolok yanop=an.***
 and village(BI) in.here live-1PL=PTC head there.is=COP
 ‘and in the village we are living in, there is a leader.’
 [muyu012:068]

The existential markers are compatible with the copula verb (127), the copula particle (128), and can also occur alone as in (130) and (131) below. Since there is no subject in such clauses, the copula verb always inflects with 3SG.M as a default, as can be seen in (127).²⁷ The existential clause in (128) is coordinated to a verbal clause that specifies the relevant location.

The term ‘existential’ is not strictly restricted to the assertion of existence. It can also mean that a referent was present in a certain situation, like someone attending a pig hunt as in the following example:

- (129) ***Alfon aip=an nea?***
 PN there.is=COP or
 [Wondering who attended the hunt:]
 ‘Was Alfon there?’ [muyu006:010]

The question in (129) is clearly not about the existence of *Alfon*. Moreover, we see that existential clauses can easily be employed as questions by appending a clause final question particle *nea* ‘or’.

Finally, existential clauses can be used to express possession. As was already seen in the context of nominal clauses expressing possession (see Section 9.4.1), the nominal element of the predicate is complemented by a possessor. Unlike nominal clauses, the predicate is complemented by an existential marker. Here are two examples:

²⁷The default inflection for 3SG.M subject in existential clauses is similar to the inflection in impersonal clauses (see Section 9.2.2) and verbal clauses with inanimate subjects (see Section 9.3.1.1).

- (130) *Ne mobil yanop kole.*
 1SG car(BI) there.is CONJ
 ‘Because I have a car. (lit. there is my car)’ [muyu025:022]
- (131) *Yeka ye men yanop, ye men*
 3SG.M.REFL 3SG.M string.bag there.is 3SG.M string.bag
yanop.
 there.is
 ‘Each of us had her own string bag.’ [muyu023:019]

As can be seen in these examples, the assertion of the existence of a possessed entity is the same as asserting the possession itself. Therefore, ‘there is my car’ is equivalent to ‘I have a car’. In (131), the existential clause is doubled to convey distributive meaning.

To sum up, existential clauses are special kinds of non-verbal clauses. They lack a non-verbal clause subject, and their predicate is complemented by an existential marker.

9.5 Questions

This section deals with questions. There are two kinds of questions: polar questions ask for confirmation or denial of an affirmation (§9.5.1), while content questions ask for specific information about participants or settings (§9.5.2).

For information on the prosody of questions, the reader is referred to Section 2.4.3 in the chapter on phonology.

9.5.1 Polar questions

Polar questions are questions that can be answered with ‘yes’ or ‘no’. They are based on verbal clauses or non-verbal clauses and have an additional interrogative element that is always appended clause finally. There are three such elements that can transform a declarative into a question: the interrogative clitic =*e*, the clitic =*ko*, and the particle *nea* ‘or’. Only the latter is reserved for polar questions, while =*e* and =*ko* also occur in content questions.

Prosodically, polar questions are characterised by a final pitch rise. For details on prosody, the reader is referred to Section 2.4.3.

The following subsections discuss polar questions with each of the interrogative elements *=e*, *=ko* and *nea* in turn.

9.5.1.1 Polar questions with the interrogative clitic *=e*

The illocutionary force clitic *=e* has an interrogative meaning. As all interrogative elements, it is appended clause finally. The rest of the clause is syntactically equal to a declarative clause.

- (132) *Ok=ko ne aip ka-d-an-ep=e?*
 water=PTC 1SG there.is give-1SG.RCV-IRR-2SG=Q
 ‘Would you also give water to me?’ [muyu001:020]
- (133) *Ambip yen-i yeman nio-d-ip=e?*
 house build:SG.O-INF for dig-DUR-2/3PL=Q
 [Asking about some workers he has seen:]
 ‘Are they digging to build a house?’ [muyu009:040]

The *=e* is phonologically cliticised to the final verb. Evidence for this comes from intervocalic lenition. The final consonants of the subject suffixes in (132) and (133) both end in /p/. In this context, however, the enclitic creates an intervocalic position and triggers lenition of /p/ to the approximant [w] in both cases. Although the phonological host of the enclitic is the final verb, the interrogative clitic has scope over the whole clause. Consider (133), in which the question relates to the purpose of the digging event rather than questioning the digging itself. The speaker has witnessed himself that the workers really are digging, but wants to know the reason why. Therefore, the scope of the interrogative cannot be merely on the final verb.

Questions are sometimes formed from non-verbal clauses. In such cases, the interrogative clitic *=e* is cliticised to a copula particle:

- (134) *Kip=ko ok yanop=an=e?*
 2PL=PTC water there.is=COP=Q
 ‘Do you have water?’ [muyu001:021]

The clause on which the question in (134) is based on is an existential clause with the existential marker *yanop*.

Finally, the interrogative clitic *=e* is also used to form questions out of non-clausal elements:

- (135) “*Eyuk=e? Eyuk=e?*”, *engga-en*.
 yes=Q yes=Q say-3SG.M
 [Asking for re-confirmation of a previous statement:]
 ‘ “Really? Is it right?”, he said. (lit. Yes? Yes? he said)’
 [muyu010:041]

Eyuk ‘yes’ is a discourse particle that cannot appear inside a clause. A speaker can complemented it with *=e* as in (135) when he/she is seeking for confirmation.

9.5.1.2 Polar questions with the clitic =ko

Polar questions with the clitic *=ko* are less frequent than those with *=e* or *nea*. They seem to be restricted to verbal clauses. The particle *=ko* is often cliticised to *nea* as will be shown in the next subsection. Here are some examples of questions with *=ko* only:

- (136) *Otbop bon wen-ep=ko?*
 language place go-2SG=PTC
 ‘Do you go to the meeting place?’ [Dictionary]
- (137) *Kep=ko on ayam wini=go an-an-ep=ko?*
 2SG=PTC bird chicken egg=PTC eat-IRR-2SG=PTC
 ‘Would you like to eat chicken eggs?’ [Dictionary]
- (138) *Yen-ok balin, ambip=ko?*
 build.house-SBJV NEG house=PTC
 ‘They have not built it yet, the house?’ [muyu009:043]

The question marked with *=ko* are similar to those with *=e*. However, *=ko* is not a genuine interrogative marker and question marking must be interpreted as a side effect of this important clitic (see Section 4.8.1 for details).

9.5.1.3 Polar questions with *nea* (ko) ‘or’

The particle *nea* ‘or’ is a tag appended to a clause to form a question. Its function as disjunctive marker (hence the gloss ‘or’) can be seen from alternative questions as outlined in 9.5.1.4. *Nea* can occur alone or in combination with *=ko* (see below). Here are some examples of *nea* alone:

- (139) *Kep=ko nup tana-tana ege ketmengg-e*
 2SG=PTC 1PL child-child DEM teach-SM
bal-an-ep nea?
 AUX.CONT-IRR-2SG or
 ‘Can you teach our children?’ [muyu030:008]
- (140) “*Wip=bet mondokb-an-up nea*”, *engg-an=go (...)*
 middle=OBL share-IRR-1PL or say-1SG=PTC
 [Having caught a fish collaboratively:]
 ‘ “Shall we share it from the middle?”, I said and ...’
 [muyu035:060]

The particle *nea* occurs clause-finally, but in contrast to *=e* and *=ko*, it has a word status. Evidence will be shown below.

The examples above make use of *nea* in verbal clauses. Non-verbal clauses with *nea* occur as well. Example (129) from Section 9.4.6 above is repeated here as (142).

- (141) *Oya=go tip=an nea?*
 there=PTC good=COP or
 [Asking someone about the domestic situation of a prospective bride:]
 ‘Is it good there?’ [muyu018:017]
- (142) *Alfon aip=an nea?*
 PN there.is=COP or
 [Wondering who attended the hunt:]
 ‘Was Alfon there?’ [muyu006:010]

The non-verbal clause in (141) is a nominal clause with predicative adjective, whereas (142) represents an existential clause with the existential marker *aip*. Both of them follow ordinary non-verbal clause syntax (see Section 9.4) and are complemented with *nea* to form a question.

As was mentioned above, *nea* is often followed by *=ko*. Importantly, the initial consonant of *=ko* in this context does not undergo intervocalic lenition, as would be expected. The reason for this unusual behaviour is unknown at the present stage of research.

- (143) *Kip=ko ekun-an-up nea=ko?*
 2PL=PTC like.this-IRR-1PL or=PTC
 [Asking permission for recording a video:]
 ‘(Do you agree that) we do this?’ [muyu012:055]
- (144) “*Om=ko an-an-up nea=ko*”, *engg-e kededan-on ga,*
 sago=PTC eat-IRR-1PL or=PTC say-SM ask.once-3SG.M but
 (...)
- [Myth. Asking his sister who repeatedly refused to cook sago:]
 ‘ “Will we eat the sago?”, he asked but ...’ [muyu007:055]

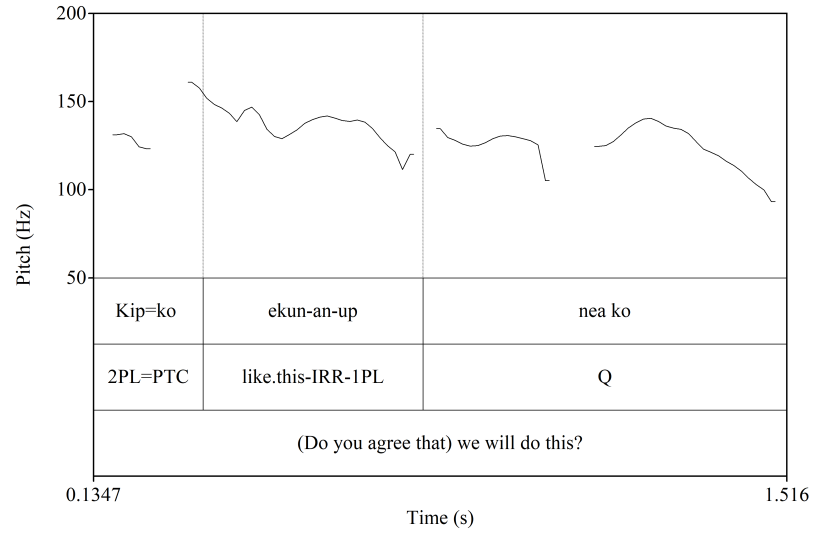
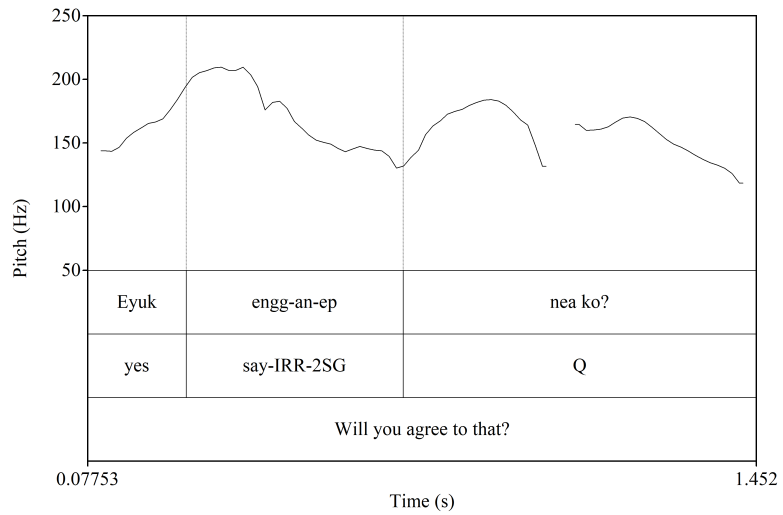
Semantically, we do not see a difference between the short form *nea* or the long form *nea ko*. Both function as a tag at the end of a clause to form a question. The long form probably is motivated prosodically as will be argued next.

The particle *nea* is a phonological word on its own rather than a clitic. This can be seen from the prosody of such questions. The intonation of example (143) is given in Figure 9.2. Prosodically, the question is split in two halves with nearly equal duration. Each half consists of a pitch contour with rising and falling pitch. The first pitch contour spans from the beginning of the utterance to the end of the verb where the pitch abruptly falls. After a pitch reset to a medial level, a new pitch contour starts for the tag *nea ko* and falls at the end of the utterance. As we see from this, *nea ko* is not only a separate phonological word but has its own pitch contour. The long form including *ko* has one more syllable than the short form, leaving more room for the rising-falling pitch contour. This is probably the motivation behind the long form. In questions with *nea* alone, the rising-falling pitch contour is similar but more compressed, with a steeper rise and fall.²⁸

It is important to notice that the intonational pattern found in Figure 9.2 is not an isolated case and is produced regularly by other speakers as well. Another instance is shown in Figure 9.3. It works analogously to the previous example and will not be discussed here separately.

To sum up, *nea* ‘or’ is a tag that is attached to declaratives in order to form polar questions. It is a phonological word and is sometimes used in its

²⁸For reasons of space we cannot give more diagrams of pitch contours in this section. The interested reader can compare the Figures 9.2 and 9.3 with the diagrams given in Section 2.4.3.

Figure 9.2: Intonation of a question with *nea ko*.Figure 9.3: Intonation of a question with *nea ko*.

long form *nea ko* to extend the segmental material bearing the rising-falling pitch contour.

9.5.1.4 Alternative questions with *nea* ‘or’

The previous section has shown the particle *nea* as tag in polar questions. Besides that, *nea* ‘or’ is also used as disjunctive coordinator in alternative questions. Alternative questions are not as frequent as polar questions in the corpus. However, alternative questions always rely on *nea* ‘or’, hence, we interpret the disjunctive meaning as its primary function from which its function in polar questions is derived.

The following examples illustrate an alternative question with coordinated verbal clauses (145) and with coordinated non-verbal clauses (146) respectively:

- (145) *Kup=ko tabuk=ko kan-e wul-an-an nea*
 2SG.F=PTC cigarette=PTC take:SG.O-SM smoke-IRR-1SG or
kol-an-an=go?
 refuse-IRR-1SG=PTC
 ‘Do you allow me to smoke the cigarette or not?’ [muyu018:078]
- (146) *Men-e ye ambip=an nea medep=an=e?*
 come-SM 3SG.M house=COP or what=COP=Q
 ‘It was from his house or what?’ [muyu005:044]

Note that *nea*, standing in medial position between the coordinated clauses, is complemented by an interrogative element at the end of the whole construction. In (145) this is *=go*, whereas in (146) we find *=e*. The illocutionary force comes from these elements. A third option is to add *nea* ‘or’ also at the end of the second conjunct, which leads to double marking as in the following example:

- (147) *Wen-e, wen-e tin=bet ningg-an-an nea, kol-an-an*
 go-SM go-SM near=OBL catch-IRR-1SG or refuse-IRR-1SG
nea?
 or
 ‘I went closer and hesitated if I should catch it or not? (lit. will I catch it or will I refuse?)’ [muyu040:033]

Paradoxically, it is not clear whether double marked cases as in (147) are really instances of alternative questions. What puts this interpretation into question is the prosodic realisation of the utterance. The intonation contour is interrupted after a rise at the first *nea*. Then, after a pitch reset, the pitch remains flat and rises again at the second *nea*. Hence, intonationally, (147) sounds like two juxtaposed questions of the kind: “Shall I catch it? Shall I refuse?”. If this interpretation stands further testing, both occurrences of *nea* are tags instead of disjunctive coordinators and we end up with two juxtaposed polar questions. However, at the present state of research there is too little data to confirm this preliminary analysis. Further research has to investigate experimental data to have a better understanding of intonation in such structures.

9.5.2 Content questions

Content questions seek for information about participants and settings of a certain event. In contrast to polar questions, they employ dedicated interrogative words inside the clause. Muyu has three basic interrogative words *kanema* ‘who’, *medep* ‘what’ and *kede* ‘where’. Further interrogatives are derived as complex interrogatives from these simple forms.

Two of the basic question words can be used to ask for core arguments of a clause. They differ in animacy of the inquired referent: *kanema* ‘who’ refers to human referents, *medep* ‘what’ refers to non-human and inanimate referents.

The use of clause final interrogative elements, such as illocutionary force clitics, is less often attested with content questions than with polar questions. Nonetheless, there are some instances of *=e* and *=ko* attached to content questions. In general, a question word seems to be sufficient to indicate interrogative meaning.

Unlike polar questions, intonation in content questions is not characterised by a final rise. For details on prosody, the reader is referred to Section 2.4.3.

The remainder of this section discusses content questions classified according to the interrogative words used in them. First, we turn to basic interrogative words *kanema* ‘who’ (§9.5.2.1), *medep* ‘what’ (§9.5.2.2) and *kede* ‘where’ (§9.5.2.3). Then we discuss complex interrogatives based on *medep* (§9.5.2.5) and finally a complex interrogative based on *kede* (§9.5.2.4).

9.5.2.1 Interrogative word *kanema* ‘who’

The basic interrogative *kanema* ‘who’ asks for human referents. In a verbal clause, it can be one of the core arguments, producing either a subject question or an object question. The following examples are transitive subject questions, which means that *kanema* is the subject of the clause and asks for the actor of an event:

- (148) *Ne=go kon-an-an, kanema=bet nin-e*
 1SG=PTC give-IRR-1SG who=OBL hold:SG.O-SM
komb-e ambangg-an-on?
 put:SG.O-SM work-IRR-3SG.M
 [Trying to form a music group:]
 ‘I will give (ideas) but who can take (them) and work with them?’
 [muyu012:045]
- (149) *Tana, ne tinggi wangga kanema=bet nin-e*
 child 1SG hand there who=OBL hold:SG.O-SM
alabe-d-en=ga?
 wait-DUR-3SG.M=PTC
 [Several children try to grab a rat in a hole. One of them accidentally grabbed the speaker’s hand:]
 ‘Children, who is holding on to my hand there?’ [muyu039:040]

Example (148) contains two clauses of which the second is a subject question. The object is omitted since it is retrievable from context. In contrast, (149) has its object in first position while the interrogative subject directly precedes the predicate.

The following examples illustrate *kanema* in object position:

- (150) *Tamanggi ogo kanema komb-ep?*
 insult DEM who put:SG.O-2SG
 ‘Who are you insulting? (lit. on whom do you put the insult)’
 [Dictionary]
- (151) *Jack=ko kanema tem-o-den?*
 PN=PTC who see-3SG.M-PFV
 ‘Whom did Jack see?’ [elicited]

The clauses in (150) and (151) both begin with the subject, followed by the interrogative words in pre-verbal position. Muyu clause syntax tends to have interrogative words in the same position as the corresponding phrase of a declarative sentence. However, as was shown for declaratives, constituent order is not rigid. Compare (150) and (151) with example (149) above. The latter shows the order OAV.

Comparing subject questions and object questions, we see a difference in marking. Both subjects in (148) and (149) are followed by the oblique marker =*bet*, whereas this is not the case for the objects in (150) and (151). In Section 9.3.4.7, we discussed contexts in which this marker is applied to agentive subjects. (148) can be explained through the contrast of *kanema* ‘who’ to *ne* ‘I’ in the preceding clause, while the subject in (149) is used to single out a referent from a contextually given group of potential referents. Although these discourse contexts serve well to explain the emergence of =*bet* in (148) and (149), they are probably not the sole factors. In our corpus, all subject questions mark *kanema* ‘who’ with =*bet*, whereas *kanema* as an object is never marked. This seems to call for a general rule such as: “interrogative words always bear an agent marker in subject position”²⁹. However, the problem with this interpretation is that there are no instances of *kanema*=*bet* that could not be explained by one of the triggering factors outlined in §9.3.4.7. Further data is needed for a clearer understanding of this topic.

Kanema ‘who’ is also used in non-verbal clauses. Such non-verbal interrogatives obligatorily employ a copula element:

- (152) *Aeh mok, edo kanema=n=ga?*
 INTJ INTJ DEM who=COP=PTC
 ‘Oh, who is this?’ [muyu010:035]
- (153) *Kep=ko kanema=an?*
 2SG=PTC who=COP
 ‘Who are you?’ [Dictionary]

The question in (152) has a final clitic =*ga* with rising intonation. Clause clitics as interrogative elements are commonly used in polar questions (see Section 9.5.1). However, in content questions the interrogative word is sufficient as seen in (153) and the verbal-clause questions above. Still, clause

²⁹Note that this is the same as to say that interrogatives in Muyu have ergative case.

clitics can be used to highlight that a clause is a question.

Kanema ‘who’ in grammatical relations other than subject and object is rare. The examples in (154) and (155) are non-verbal clauses. Both are dictionary examples, so further data is needed.

(154) *Anon mana kudok edo kanema yeman=an?*
 dog animal.offspring good DEM who for=COP
 ‘Who does this pretty puppy belong to?’ [Dictionary]

(155) *Tana mendemkono kudok odo kanema ye tana=an?*
 child calm good DEM who 3SG.M child=COP
 ‘That calm and kind child, whose child is it?’ [Dictionary]

Both examples above illustrate that the distribution of the interrogative word is similar to nouns/pronouns. *Kanema* ‘who’ in (154) is a complement of the postposition *yeman* ‘for’ which together form a non-verbal predicate (see Section 9.4.4). In (155) the interrogative word occurs in the possessor slot of a noun phrase: *kanema ye tana* ‘whose child’.

9.5.2.2 Interrogative word *medep* ‘what’

The basic interrogative *medep* ‘what’ asks about non-human and inanimate referents. In a verbal clause, it is most often used as an object. There is no instance of *medep* being used as a subject in the corpus, which is not too surprising considering the low frequency of inanimate subjects in general. Furthermore, *medep* is found in non-verbal clauses and in complex interrogatives combining with other elements (see Section 9.5.2.4).

The following two examples show *medep* as an object in verbal clauses:

(156) *Mok ta ma wanu (o)do medep olal-e kol-up=ke?*
 INTJ and but down DEM what talk-SM stop-1PL=PTC
 [Resuming a conversation from before:]
 ‘Oh, but what did we discuss before we stopped?’ [muyu019:088]

(157) *Medep engg-an-on.*
 what say-IRR-3SG.M
 [Expecting a negative reaction:]
 ‘What will he say?’ [muyu019:231]

Both questions in (156) and (157) have *medep* ‘what’ in the object position directly preceding the verb. Clause clitics as interrogative elements are optional; in (156) we see *=ke*, whereas there is no such element in (157).

Medep ‘what’ is also used in non-verbal clauses:

- (158) *Nonggibi ma medep=an?*
 medicine other what=COP
 [Outlining the most important traditional medicines:]
 ‘What would be another medicine (to talk about)?’
 [muyu045:039]
- (159) *Wom=ko medep=an=e?*
 inside=PTC what=COP=Q
 [Exploring an electric device (blender):]
 ‘What is inside?’
 [muyu030:110]

Medep in (158) and (159) is complemented by the copula particle *=an*. As was the case with *kanema* ‘who’ in the previous section, the copula is obligatory in questions. This is not the case for clause final interrogative elements, which are always optional for content questions. In (159), the whole clause is marked as a question by the illocutionary force clitic *=e* and rising pitch. In contrast, (158) is not marked as a question beyond the interrogative word itself.

Medep ‘what’ is frequently used in combination with light verbs *kuni* ‘do’ and *kemi* ‘do’, asking for a predicate:

- (160) *talep yanop ege, medep kun-an-up?*
 big there.is DEM what do-IRR-1PL
 [When a person dies:]
 ‘When there’s much (she has left), what can we do with it?’
 [muyu019:102]
- (161) “*Ai mok, amunggun edo mok medep*
 INTJ INTJ afternoon DEM INTJ what
kemo-d-ip=ki?”, *engg-on=go* (...)
 do-DUR-2/3PL=EMPH say-3SG.M=PTC
 [Someone bringing an invitation:]
 ‘ “Oh, what are you doing in this afternoon?” , he said and ...’
 [muyu035:007]

The answer to a question as in (160) and (161) is most likely a verbal clause. However, it could also be a simple negation.

The basic interrogative *medep* ‘what’ is rarely found in contexts other than those presented so far. Dictionary examples reveal further functions. As was the case with *kanema* ‘who’, the interrogative *medep* ‘what’ can stand in the possessor slot of a noun phrase:

- (162) *Odo medep ye aninggo=on?*
 DEM what 3SG.M name=COP
 ‘What does it mean? (lit. that, the name of what is it?)’
 [Dictionary]

Further data is needed to uncover more contexts in which *medep* ‘what’ can occur.

9.5.2.3 Interrogative word *kede* ‘where’

The basic interrogative word *kede* ‘where’ asks for locations. Like all other interrogatives, it can stand either in a verbal clause or a non-verbal clause. *Kede* ‘where’ is compatible with all sorts of locational information, whether they are static locations (163), goals of movement (164), or sources of movement (165). Here are some examples:

- (163) *Oni, kup=ko wen-e kede al-ep?*
 sister, 2SG.F=PTC go-SM where stand-2SG
 [Man on a tree, before throwing something down:]
 ‘Sister, where do you stand?’ [muyu007:085]
- (164) *Kep odo kede townen-ep?*
 2SG.M DEM where pass-2SG
 ‘Where do you go?’ [muyu010:060]
- (165) *Kaduk=ko kede=bet ni-∅-en?*
 man=PTC where=OBL 1SG.O-hit-3SG.M
 [From the point of view of a cassowary:]
 ‘From where did the human shoot at me?’ [muyu037:028]

Formally, the interrogatives in these examples are embedded differently in their respective clauses, depending on whether the verb requires a locational

argument or not. For the unmarked case in (164), *kede* refers to the goal of movement and is placed without any other element before a motion verb. This is the typical position of locational arguments (see Section 9.2.1.1). In contrast, the verb in (163) does not include a locational argument, since *ali* ‘stand’ is not a motion verb. As a consequence, it is not compatible with the unmarked *kede*. Rather, there must be an additional motion verb *wene*. This proposed motion verb introduces a locational argument to the clause, which now can be filled with the interrogative *kede*. Literally, the clause in (163) means something like ‘you go where stand?’ In other words, Muyu speakers never ask where something happened, but rather where the subject went before the event happened.

Additionally, the interrogative word following a motion verb can be marked with *=bet*. Compare (163) with (166). Finally, sources are marked with *=bet* and do not require a preceding motion verb, as illustrated in (165).

- (166) *Ap=ko wen-e kede=bet alebal-an-an?*
 tree=PTC go-SM where=OBL stand-IRR-1SG
 [Trying to hide from an approaching cassowary:]
 ‘At which tree can I stand (to hide)?’ [muyu037:022]

Kede ‘where’ is frequently found in non-verbal clauses too:

- (167) ***Kede=bet=an?***
 where=OBL=COP
 [Asking for sago:]
 ‘Where is it?’ [muyu006:036]

In non-verbal clauses, the oblique marker *=bet* is obligatory and the copula cannot be omitted.

9.5.2.4 Complex interrogatives based on *medep* ‘what’

The basic question word *medep* ‘what’ combines with other words to form complex interrogatives. The available complex forms are listed in Table 9.4. The first two interrogatives complement *medep* with a postposition, *yeman* ‘for’ and *adep* ‘like’, respectively. The third interrogative makes use of the clause conjunction *kot* ‘and then’.³⁰

³⁰Note the contrast in word separation between the complex interrogatives. Whereas in *medep yeman* and *medep adep*, the elements are separated with a space, *medepkot*

1st element	2nd element	Resulting form
<i>medep</i> ‘what’	<i>yeman</i> ‘for’	<i>medep yeman</i> ‘what for’
<i>medep</i> ‘what’	<i>adep</i> ‘like’	<i>medep adep</i> ‘how much, how many’
<i>medep</i> ‘what’	<i>kot</i> ‘and then’	<i>medepkot</i> ‘why’

Table 9.4: Complex interrogatives with *medep* ‘what’.

The following example illustrates *medep yeman* ‘what for’ in a non-verbal clause:

- (168) *Ah, oya (o)do medep yeman?*
 INTJ there DEM what for
 [Criticising a government program for gardening:]
 ‘Oh, what is it (good) for?’ [muyu029:160]

The postposition *yeman* ‘for’ is also used for purposive meaning in declarative clauses. Hence, its function in the complex interrogative is fully transparent. In contrast, *medep adep* ‘how much/many’ is less transparent, since its postposition *like* ‘like’ is a similitive marker with no obvious relations to numbers and quantities. As a complex interrogative, it is found in relation to times of the day and money:

- (169) *On=ko adon medep adep=bet Merauke man-an-un?*
 bird=PTC sun what like=OBL Merauke come-IRR-3SG.F
 ‘When will the plane arrive in Merauke?’ [Dictionary]
- (170) *Ton edo ot=ko medep adep kin-ip-ten?*
 fish DEM money=PTC what like do-2/3PL-PFV
 ‘How much are these fish?’ [Dictionary]

The complex interrogative *medep adep* in (169) is a modifier to the noun *adon* ‘sun’ to convey the meaning ‘at what hour’ (i.e. ‘at what time/when’). The whole phrase is marked as oblique with *=bet*. In (170), the noun *ot* ‘money’ is not part of the same phrase as the interrogative, which is separated by

is written as one word. There are two reasons for this orthographic decision, First, the separated forms can be still considered as postpositional phrases. Such an interpretation is not available for *medepkot* which has a more idiosyncratic meaning and does not contain a postposition. Second, the proposed orthographic separation is also preferred by the native speakers themselves.

the clitic =*ko*. Nonetheless, the question is about the money rather than the fish.

The interrogative *medepkot* ‘why’ asks for causes and reasons. Unlike the first two complex interrogatives with *medep*, this interrogative is not a postpositional phrase and seems much more lexicalised. The complementing *kot* is a clause clitic and the meaning of *medepkot* ‘why’ is not transparently derived from its components. Examples include non-verbal clauses (171) and verbal clauses (172).

- (171) ***Medepkot***=*an*.
 why=COP
 ‘Why is that?’ [muyu019:260]
- (172) *Kep*=*ko* ***medepkot*** *ne* *aninggo kabademn-ep-ten?*
 2SG.M=PTC why 1SG name forget-2SG-PFV
 ‘Why did you forget my name?’ [Dictionary]

To sum up, complex interrogatives with *medep* are lexicalised to a different degree. Two of them are postpositional phrases with more or less transparent semantics, while one has lexicalised to a single question word.

9.5.2.5 The complex interrogative based on *kede* ‘where’

The previous section presented complex interrogatives based on *medep* ‘what’. Muyu has one further complex interrogative: *kede* ‘where’ + *adep* ‘like’. Unlike the other complex interrogatives, its semantics is less determinate, and Muyu speakers can use *kede adep* to ask for different kinds of information. This will be illustrated by some examples in this subsection.

Firstly, we find questions for reasons or causes:

- (173) ***Kede adep***=*an?* *Ahh, omodom odo okune balin kole*
 where like=COP INTJ before DEM like.that NEG CONJ
yah.
 INTJ
 [The soil has become less fertile and full of fungus:]
 ‘Why is it (like that)? Oh, it was not like that before!’
 [muyu017:109]

- (174) *Aii, anon kip=ko ede kede adept=an=ga ih?*
 INTJ dog 2PL=PTC DEM where like=COP=Q INTJ
 [Dogs are sticking out their tongues. Asking them:]
 ‘Oh, you dogs, what shall this mean? (lit. dog you this why is?)’
 [muyu031:022]

Both examples above are questions in non-verbal clauses. The non-verbal clause subject in (174) is the demonstrative *ede* (rather than the dogs) which refers to the gesture of sticking out the tongue. Immediately following this utterance, the speaker imitates the gesture by sticking out the tongue himself.

Comparing the meaning of *kede adept* in (173) and (174), we find that both are somehow translatable with Engl. ‘why’. However, the difference between these questions is considerable. In (173), *kede adept* asks for the cause of a given fact, whereas the interrogative in (175) asks for the motivation of an actor.

Secondly, *kede adept* is used to ask ‘how’ certain things are done:

- (175) “*Ton kede adept kel-an-up=ko? Wip=bet*
 fish where like become-IRR-1PL=PTC middle=OBL
mondokb-an-up nea?”, *engg-an=go (...)*
 share-IRR-1PL or say-1SG=PTC
 [Having caught a fish collaboratively:]
 ‘ “How can we do with this fish? Shall we share it from the middle?”’, I said and then ...’
 [muyu035:060]
- (176) ***Kede adept onongm-an-up?***
 where like make-IRR-1PL
 [Myth. Three brothers want to construct wings in order to become bats:]
 ‘How can we make them?’
 muyu032:040

Both clauses have *kede adept* as the interrogative in a verbal clause but not as a core argument. The derived meaning ‘how’ seems to have nothing in common with the original locative meaning of *kede* ‘where’. Furthermore, ‘how’ in (175) and (176) is quite distant from ‘why’ in (173) and (174). We expect to find further semantic variants of *kede adept* with more data. It seems that *kede adept* is a vague interrogative, whose meaning is open to be determined by pragmatic factors.

9.6 Imperative clauses

This section deals with the second type of non-declarative clauses. Imperative clauses are clauses in which the final verb is in imperative mood. This mood is marked via the subject suffixes which have an extra set for imperative mood (for morphological details see Section 7.3.1). The imperative set of subject suffixes is given in Table 9.5.

Number	Person	Forms
SG	1	<i>-a</i>
	2	<i>-e</i>
	3 masc	<i>-ok</i>
	3 fem	<i>-uk</i>
PL	1	<i>-em</i>
	2	<i>-ime</i>
	3	<i>-imok</i>

Table 9.5: Subject suffixes in imperative mood.

The exact function of the imperative mood depends on the person and number of the subject. Most frequently, we find *-e* ‘2SG.IMP’ which, together with its plural counterpart *-ime* ‘2PL.IMP’, constitutes a direct command toward the addressee(s) (§9.6.1). First person conveys cohortative meaning (“Let’s ...”) or a kind of self-commitment (“I shall .../I will .../I must ...”), the latter of which is either addressed to oneself or someone else (§9.6.2). Finally, third person expresses obligations of some non-addressee (“He shall/must ... / She shall/must ...”) and is discussed in 9.6.3. Besides these basic functions, we find various other functions, especially in combination with quotative constructions. Details for each person are discussed in the respective subsections.

Although the functions of imperatives outlined above seem to diverge quite widely, the imperative suffixes as given in Table 9.5 are treated here as belonging to one and the same paradigm. There are two main reasons for this: Firstly, our consultants seem to relate these forms to each other and regard all seven suffixes as a set.³¹ Secondly, there are some examples in which the different suffixes are used to direct related commands to different participants. Consider the order given by a father to his son in the following

example:

- (177) *Yal-a=go* *ni-ngg-on* *kanet,*
 lay.down:PL-1SG.IMP=PTC hold-2/3SG.O-3SG.M if
okun-e Yanu kep men-e, taman wano
 like.that-SM PN 2SG.M come-2SG.IMP younger.brother down
mon-ok.
 come-3SG.IMP
 [Teaching his two sons Yanu and Leo how to hunt. Speaking to
 Yanu:]
 ‘Let me set (the traps), then if one catches (a pig), Yanu, you come
 and (your) younger brother shall come down (with you).’
 [muyu010:028]

The sequence in (177) contains quoted speech from the protagonist (father) directed at his oldest son (Yanu). Here, we have imperatives in all three persons: *-a* ‘1SG.IMP’, *-e* ‘2SG.IMP’, and *-ok* ‘3SG.IMP’. As expected, the first person refers to the speaker himself and the second person is a command to the addressee. Interestingly, the third person is also a command, although a mediated one: The younger son shall also come down to the place where the pig will be trapped. Nonetheless, this imperative is not a direct command to the younger son, for the addressee is also the older son who has to pass the command on to his brother.

Examples given in the following subsections often contain quoted speech, i.e. the imperative clause is subordinated under a verb of speech like *enggi* ‘say’. This exceeds simple clause syntax as presented in this chapter but is necessary for the presentation of imperative clauses. For details on complex clause syntax and embedded quotatives, the reader is referred to Chapter 12.

³¹This is independent of the degree of education. Some speakers, when asked for a specific translation (“How would you say: ‘Cook this rice?’”), spontaneously went through the whole paradigm. Thus, in elicitation, we can ask through the whole paradigm without any noticeable break. The consultants indicate that it is only person and number that change. This is similar to Engl. “I must do ...”, “You must do ...”, “He must do ...”, “We must do ...”, ...

9.6.1 Commands (2nd person)

The most common use of imperative mood is for commands directed at one or several addressees, attaching the suffixes *-e* ‘2SG.IMP’ or *-ime* ‘2PL.IMP’ to the verb. The singular form of these suffixes must not be confused with the serial marker *-e*. There is no indication that commands are perceived as harsh or have to be attenuated for reasons of politeness. Generally, politeness in the Muyu community is not well understood at our present state of knowledge.³²

The following examples illustrate singular commands:

- (178) *yem adep wudel-e, yem adep wudel-e.*
 quiet like enter-2SG.IMP quiet like enter-2SG.IMP
 [During a recording session, someone enters the room:]
 ‘Come in quietly, come in quietly!’ [muyu031:098]
- (179) *Ambonkim tak-e.*
 door close-2SG.IMP
 ‘Close the door!’ [Fieldnotes]
- (180) *Aih, nup otbop=bet olal-e.*
 INTJ 1PL language=OBL talk-2SG.IMP
 [Conversation. The interlocutor unconsciously switched to Indonesian:]
 ‘Oh, talk in our language!’ [muyu009:022]

The commands in (178) to (180) are straightforward. Someone was ordered to come in quietly, close the door or talk in their own language. The imperative subject, i.e. the addressee, is marked via verb suffix. Optionally, an overt free pronoun *kep* ‘you (masc.)’ or *kup* ‘you (fem.)’ can occur:

- (181) *Yanu, kep men-e!*
 PN 2SG.M come-2SG.IMP
 ‘Yanu, come down!’ [muyu010:028]

The personal name *Yanu* and the free pronoun *kep* in (181) both refer to the

³²There is one important exception, however. During my time in the field, I learned that it is considered rude to request something directly, e.g. *Ok ne aip kade.* - ‘Give me water’. Rather, I was instructed to use an indirect speech act, e.g. *Ok yanop an e?* - ‘Do you have water?’, or - if one already witnessed that there is water - a question, e.g. *Ok ko ne aip kadanep e?* - ‘Will you give water to me?’.

same individual.

The following examples illustrate plural commands:

- (182) *Wen-e wonggo kumungg-ime=yo,*
 go-SM there talk-2PL.IMP=QUOT
 [Asking some relatives to negotiate a wedding with the prospective
 bride's parents:]
 'Go there to talk!' [muyu018:055]
- (183) *"otbop aip yal-e kol-ime" engg-ok*
 language there.is lay.down:PL.O-SM leave-2PL.IMP say-SBJV
balin
 NEG
 [About the time when the first missionaries arrived:]
 'They did not tell (us) to leave the language also (lit. You lay down
 and leave the language!, not saying)' [muyu019:032]
- (184) *"karet aip alume-d-ime=yo",*
 rubber there.is plant:PL.O-1SG.BEN-2PL.IMP=QUOT
engga-en.
 say-3SG.M
 [Commanding the women of his family:]
 ' "Plant some rubber trees for me!", he said.' [muyu028:010]

Plural commands do not differ much from singular commands, except that more than one person is addressed. Most examples in the corpus are from quoted speech in narratives as can be seen in (183) and (184). The command can be complemented by a quotative marker as in (182) and (184) or not as in (183), without any obvious semantic difference.

9.6.2 Self-commitment and cohortatives (1st person)

Imperative mood in first person is mostly used to express self-commitment or cohortatives³³, depending on the number value. The singular, marked with *-a* '1SG.IMP', denotes that the speaker intends to do something, wants to do

³³The term 'cohortative' was chosen instead of the more common term 'adhortative', since the Muyu construction designated by this term always invites other referents to follow the speaker in some action. This side-by-side action is best captured by the latin prefix *co-*.

something, or is about to do something. The speech act can be directed at himself or towards an interlocutor. When reporting about his intentions post factum (for example in narratives), the imperative clause is most likely embedded in quoted speech as in (185). Another example in which the speaker committed himself to do something while giving commands to his son has already been shown in (177) above.

- (185) *“Yon=bet nolon-a=ye”,* *engg-an.*
 foot=OBL touch.once-1SG.IMP=QUOT say-1SG
 [Story. Having found the nest of a rat:]
 ‘I wanted to touch it with (my) foot.’ [muyu040:034]
- (186) *Bat wan-a,* *ton bat wan-a,* *tinggan bat wan-a,*
 hunt go-1G.IMP fish hunt go-1SG.IMP cuscus hunt go-1SG.IMP
awon bat wan-a. *Yongbon mo an-in an-in kole.*
 pig hunt go-1SG.IMP garden only eat-1SG eat-1SG CONJ
 ‘I want to hunt, I want to find some fish, I want to hunt cuscus,
 I want to hunt some pigs. Because (all too often) I only consume
 (some fruits from) the garden.’ [muyu044:186-187]

The imperative in (185) is embedded in quoted speech, but since the speaker of the quote and the narrator of the story are identical, one can easily infer that he is reporting about his intentions. It does not matter if he really uttered the imperative clause in the reported situation. In contrast, (186) coordinates four imperative clauses asyndentically without any embedding.

In example (185) above, the quoted speaker and the narrator were identical. This is not obligatorily the case. The verb of speech can refer to someone other than first person but still have *-a* ‘1SG.IMP’ in the embedded imperative clause. Such constructions are used to report about the intentions of someone else:

- (187) *yato tol-a* *engg-un=go* *ap oto ok-e*
 up step.on-1SG.IMP say-3SG.F=PTC tree DEM be.broken-SM
komb-on=go,
 put:SG.O-3SG.M=PTC
 [Myth. A woman fleeing from a man whose pandanus fruit she
 stole:]
 ‘She wanted to step on (the branch) but the tree broke and ...’

[muyu065:065]

Note that the quote is not represented in the translation. Literally, the first part of the example is ‘ “I want to step up there on it”, she said ...’. However, such constructions are actually about that person’s intentions rather than about what she said in that situation. The clause is considered true even if she did not utter anything at all. To sum up, imperative clauses with *-a* ‘1SG.IMP’ in embedded quoted speech are the most important means to refer to someone’s intentions in Muyu.

Imperatives with *-em* ‘1PL.IMP’ convey cohortative meaning, i.e. the speaker requests an action from a group to which he/she counts himself/herself as well. Here are some examples:

- (188) “*Nak-ok ga anon men-e komb-e*
 day.break-SBJV PTC dog come-SM put:SG.O-SM
a-∅-em=o” *engg-an.*
 kill:3SG.M.O-1PL.IMP=QUOT say-1SG
 [Having lost track of a pig while hunting:]
 ‘ “Let’s come back tomorrow with a dog to kill it”, I said.’
 [muyu004:049]
- (189) “*Om=ko an-em=o*”, *engg-on.*
 sago=PTC eat-1PL.IMP=QUOT say-3SG.M
 [Myth. Having chopped sago all day with his sister:]
 ‘ “Let us eat the sago”, he said. (But she refused.)’
 [muyu007:055]
- (190) *Yom benyop oya=go mok kan-e negg-em.*
 meat small there=PTC INTJ take:SG.O-SM cook-1PL.IMP
 [Having killed a cassowary:]
 ‘Come on, let’s roast the small (piece of) meat over there!’
 [muyu037:083]

Morphosyntactically, imperative mood in first person plural suffices to convey cohortative meaning. Additionally, we often find interjections like *mok* ‘come on’ (as in (190)) and some others. For interjections see Section 4.9.1.

Pragmatically, cohortatives as exemplified in (188)-(190) are less compulsive than commands. The other members of the group can see them as mere suggestions. Consequently, cohortatives are frequently rejected in the

narratives recorded so far. For example, the central topic of the myth of which (189) was taken is that the woman constantly withholds sago from her brother.

9.6.3 Obligations of a third party (3rd person)

Imperative clauses in third person denote obligations of a party different from the speaker and the addressee. In short, A tells B that C ought to do something. C can be a single person or a group. The purposes of uttering obligations of a third person to somebody can be diverse. Sometimes it is used to influence the behaviour of the addressee (“Let him/her ...”) as in example (191). In other cases, it is simply the speaker’s opinion about what someone should do, as in (193) below.

The obliged person/group is referred to by the subject of the clause. Third person singular is the only person-number combination in the imperative paradigm that distinguishes gender: *-ok* ‘3SG.M.IMP’ and *-uk* ‘3SG.F.IMP’. The former must not be confused with the homophonous subjunctive suffix *-ok* (see Section 7.6.2). Additionally, we find *-imok* ‘3PL.IMP’ for more than one person.

Here are a couple of examples with *-ok* ‘3SG.M.IMP’:

- (191) *Amot ok bon won-o-den odo, oyip*
 market market market go-3SG.M-PFV DEM also
mon-ok=get, om=ko an-an-up=o.
 come-3G.IMP=and.then.SS sago=PTC eat-IRR-1PL=QUOT
 [Myth. Two siblings. Man insists to eat sago but his sister rather
 waits for husband to join them:]
 ‘He went to the market, let him come as well, then we can eat the
 sago.’ [muyu007:028]
- (192) *Kaduk ma (e)ge won-ok, ta kaduk ma=go e(ge)*
 man other DEM go-3SG.M.IMP and man other=PTC DEM
won-ok, engg-e nekwa-gol-up=ko,
 go-3SG.M.IMP say-SM prepare-SS.SEQ-1PL=PTC
 [Three men went hunting. Before heading into the forest:]
 ‘ “One man shall go this way and one man shall go that way”, we
 arranged like that and then we ...’ [muyu037:009]

In (191), the speaker appeals to the addressee to wait for someone. Such an appeal can be expressed with a third person imperative clause: ‘let him ...’. The example in (192) contains two coordinated imperative clauses which are both marked with *-ok* ‘3SG.IMP’. However, the subjects of these clauses are not co-referential but refer to two different people.

The following pair of examples contain *-uk* ‘3SG.F.IMP’:

- (193) *Animan b-e wen-e wen-e ot yeman o(go)*
 food take:PL.O-SM go-SM go-SM money for DEM
yal-e=go, ta keyap=mo kolo men-e
 put:PL.O-SM=PTC and quick=ADV back come-SM
*kem-**uk**=o, engge-n-i=t,*
 do-3SG.F=QUOT say-SS-1SG=and.then.SS
 [Gossip about her daughter-in-law who spends too much time in town:]

‘I mean she has to take the food there to sell it and then come back quickly.’ [muyu009:020]

- (194) *Jadi anyan kamun-**uk** odo, nanggan kedo*
 so(BI) older.sister come.up-3SG.F.IMP DEM younger.sister out
*wun-**uk** oye.*
 go-3SG.F.IMP there
 [Before a wedding the bride price is picked up by the prospective bride’s younger sister. Having done that:]
 ‘So let the older sister (=bride) come in and the younger sister go out.’ [muyu018:100]

The feminine imperatives in (193) and (194) are analogous to the masculine imperatives discussed above. The woman whose obligation is denoted appears as the subject of the clause. (194) contains two imperative clauses with two different referents, i.e. they are not co-referential.

Finally, we give two examples with *-imok* ‘3PL.IMP’:

- (195) *Tana kanggon yi kat kil-**imok**, iya.*
 child also 3PL knowledge become-3PL.IMP yes(BI)
 [About teaching the children how to catch animals:]
 ‘The children must know that also, yes.’ [muyu010:157]

- (196) “*Benban-imok=o*”, *engg-e kumungg-on jadi*, (...)

carry-3PL.IMP=QUOT say-SM tell-3SG.M so(BI)

[Two women want to share food with all workers in a garden. Some-

one denies:]

‘ “Let them bring foods (for themselves)”, he told (us), so ...’

[muyu023:034]

Similarly to singular imperatives, the plural imperatives in (195) and (196) denote obligations of some third party. In (196), the imperative is meant to affect the behaviour of the addressee, whereas the imperative in (195) just denotes a general cultural expectation.

9.7 Negation

Muyu has two lexemes that are involved in negation: *balin* and *nowan*. The former, *balin* ‘NEG’, is a clause final particle that is used for the negation of both verbal (§9.7.1) and non-verbal clauses (§9.7.2). Besides declaratives, we also find negated questions (§9.7.3). The second negative lexeme, *nowan* ‘nothing’, is an indefinite pronoun that often occurs as a non-verbal predicate (§9.7.4).

9.7.1 Negation of verbal clauses

Verbal clauses are negated by appending the negation particle *balin* clause finally. It is only applicable after final verbs but not after medial verbs, which cannot be negated at all. In other words, clauses inside clause chains cannot be negated.

Negation of verbal clauses affects the inflection of the preceding final verb. The verb must be either in its subjunctive form (i.e. suffixed by *-ok*) or in irrealis mood (i.e. suffixed by *-an*). Common verb inflection in realis mood is not available in negative clauses. Semantically, the inflectional distinction subjunctive/irrealis is employed to distinguish negative declaratives about non-future events (=subjunctive) and future events (=irrealis) with some exceptions (see below). Both structures will be discussed in turn.

Negative clauses with subjunctive final verbs refer to events that did not take place:

- (197) *Awon=ko ne=go teme-d-ok balin.*
 pig=PTC 1SG=PTC see-1SG.O-SBJV NEG
 [Hiding on a tree from a pig:]
 ‘The pig did not see me.’ [muyu004:024]
- (198) *Jadi kumun tipn-ok balin, kumun=mo nin-ok*
 so(BI) all finish-SBJV NEG all=just hold:SG.O-SBJV
balin.
 NEG
 [Muyu males should be experts either on plants or on animals. Criticising someone who has failed both:]
 ‘So he has not completed either one, he has not mastered either one.’ [muyu010:243]

In both examples above, the verb ends on the suffix *-ok* ‘SBJV’ which is incompatible with subject suffixes. The subject referent must be either expressed as an overt noun phrase as in (197) or inferred from previous discourse as in (198). Note that object suffixes are not affected as can be seen by *-d* ‘1SG.O’ in (197).

Negated clauses in irrealis mood are commonly used to express that an event will not take place in the future:

- (199) *Ne=bet mo an-an-an balin=o.*
 1SG=OBL only eat-IRR-1SG NEG=QUOT
 [Explaining the importance of sharing food with friends and neighbours:]
 ‘I will not eat all by myself (they say).’ [muyu044:199]
- (200) *Wot kibik odo tit aip kan-an-up balin.*
 month now DEM product there.is take:SG.O-IRR-1PL NEG
 [Caterpillars have ruined the peanuts:]
 ‘This month we will not get any harvest.’ [muyu029:100]

Unlike subjunctive *-ok*, the irrealis suffix *-an* is compatible with subject suffixes and the verbs in (199) and (200) inflect with *-an* ‘1SG’ and *-up* ‘1PL’ accordingly.

Since future is only one of several possible readings of irrealis mood (see Section 7.4.3), there is some ambiguity about negation of irrealis verbs. Reconsider (200) in which the translation suggests a pure future interpretation

of the irrealis. Another possible reading would be that the event cannot take place, suggesting a translation like: ‘I cannot eat all by myself.’ Another instance of this reading is (201) which was uttered in a narrative about selling peanuts:

- (201) *Eyuk, tapi kadap yanop=ko b-an-up*
 yes but(BI) many there.is=PTC take:PL.O-IRR-1PL
 balin=o”, engg-ip.
 NEG=QUOT say-2/3PL
 [A ordered peanuts. B delivers but A rejects them. B reminds A of
 their order. B answers:]
 ‘ “Yes, but we cannot take that many (sacks of peanut)”, they
 said.’ [muyu025:035]

The context in (201) allows for both readings of the irrealis: future or potential modality. These interpretations are also present when the clause is negated.

Finally, negative clauses in irrealis mood can refer to past events. As is the case in affirmative declaratives, these occurrences of irrealis mood are interpreted as habituals.

- (202) *Okem-e kim-ip odo keyap a yowol-an-ip balin.*
 do.that-SM do-2/3PL DEM quick ? die:PL.S-IRR-2/3PL NEG
 [Discussing the health advice not to pass around cigarettes in order
 to prevent the spreading of infectious diseases:]
 ‘(Although) they (=the ancestors) used to do that, they would not
 die quickly.’ [muyu019:082]

The event described in (202) is clearly in the past since its participants are the ancestors of the current speakers. To sum up, negated irrealis mood keeps its full functional range in negative clauses.

9.7.2 Negation of non-verbal clauses

Non-verbal clauses, as discussed thoroughly in Section 9.4, have different kinds of predicates: noun phrases, postpositional phrases, as well as quantifiers. Furthermore, additional markers like oblique *=bet* or existential *aip/yanop* can be applied. All of these non-verbal predicates can be negated

by simply adding clause final *balin* ‘NEG’. Syntactically, *balin* is incompatible with the copula particle =*an* but can negate the copula verb *keli* ‘become’. For reasons of space, we will not give a negative counterpart to each kind of non-verbal clause discussed in Section 9.4 above. Two particular constructions, however, are outlined in separate subsections, §9.7.2.1 and §9.7.2.2, for they have no corresponding affirmative construction.

Here are some examples of simple non-verbal clauses with *balin*:

- (203) *Tit yanop onet, talep talep balin.*
 product there.is but big big NEG
 [Discussing infertile soil:]
 ‘There are some results but they are not big.’
 [muyu017:083+085]
- (204) *Edo ok wem balin.*
 this river PN NEG
 ‘This isn’t Wem river.’
 [muyu017:174]
- (205) *Ambip aip balin.*
 house there.is NEG
 [Working in a new garden that is remote from the village:]
 ‘There was no house.’
 [muyu027:012]

The clause in (203) has an adjectival predicate. It simply states that an attribute (‘big’) is not predicated of a referent (‘results’). In (204), an identity clause is negated, which means that two referents are not identical (the ‘river Wem’ and the river present in the situation). Finally, (205) is a negated existential clause and declares the non-existence of a referent (‘house’).

Additionally to attaching *balin* to a bare non-verbal clause, we also find instances with the copula verb *keli* ‘become’ as in (206). Strictly speaking, this is negation of a verbal clause. However, since we treat copula verbs as cases of non-verbal predication (see §9.4), it is sensible to give a negative example here as well:

- (206) *Tit aip kel-an-on balin.*
 product there.is become-IRR-3SG.M NEG
 [Discussing the infertile soil:]
 ‘It will not produce any fruits.’
 [muyu017:080]

Note also that in (206) the copula verb is inflected for irrealis mood to trigger a future interpretation.

Negated existentials are also used to express negative possession:

- (207) *Ne Yanu yom odo tit aip balin.*
 1SG Yanu CONJ DEM product there.is NEG
 [Heavy rain ruined their crop:]
 ‘Yanu and I do not have any fruits.’ [muyu029:065]

Contrary to proper existential clauses as in (205), the clause in (207) has a non-verbal clause subject *ne Yanu yom odo* ‘Yanu and I’ which refers to the (potential) possessor of the fruits.

Finally, nominal predicates are often used in conversation to negate the involvement of certain referents:

- (208) *Nup balin.*
 1PL NEG
 [Parents claim that their daughter must decide herself if she wants to marry:]
 ‘(It’s) not on us.’ [muyu018:032]
- (209) *Yetweng balin, Olokmaip oyen.*
 PN NEG PN that.is.it
 [Who was the expert on tree animals?]
 ‘Not Yetweng, it was Olokmaip.’ [muyu010:146]

The negation marker acts like a copula in (208). The positive counterpart would be *nup an* ‘It’s us’.³⁴ The two clauses in (209) contrast a negative clause with a positive clause.

9.7.2.1 The prohibitive construction

Prohibitives are formed with an infinitive verb + *balin*. Since infinitives are treated as verbal nouns in Muyu, the prohibitive construction is a kind of non-verbal predication. Since infinitives do not take subject suffixes, the

³⁴This can be seen as evidence that *=an* ‘COP’ and *balin* ‘NEG’ fill the same syntactic slot. They never co-occur in the same clause. Diachronically, the form of *balin* probably stems from a monosyllabic proto-element contracting with a copula. Evidence comes from Mian, where the negation marker is *=ba* (Fedden 2011).

addressee of the prohibition remains implicit if it is not explicitly encoded by a subject NP. The corpus mostly contains prohibitives directed at a second person ('do not ...') rather than general proscriptions ('it is not allowed ...') or self directed commands ('I must not ...'). However, further data is needed for a clearer picture.

- (210) *Oya wedambele-y-i balin.*
 there hear-PL.O-INF NEG
 [Criticising a governmental program of planting certain crops:]
 'Do not listen to them!' [muyu029:163]
- (211) "*Okun-e kumungg-i balin=a*", *engg-up.*
 like.that-SM tell-INF NEG=QUOT say-1PL
 [Reacting to the refusal of a peanut delivery:]
 ' "Do not say that!", we said.' [muyu025:037]

The infinitive verb in (210) carries an object suffix that refers to the people to whom the addressee must not listen. The prohibitive in (211) is embedded in quoted speech. Note that the negation marker *balin* is host to the quotative clitic *=a*.

Prohibitives can be more complex than the examples given above. The following example also includes a preposed condition:

- (212) *Kole on yom bat wen-em engg-i=go om aip*
 CONJ bird bat hunt go-1PL.IMP say-INF=PTC sago there.is
an-i balin.
 eat-INF NEG
 [The myth about the origin of the bat motivates an ancient prohibition:]
 'So when going to hunt bats, do not eat sago.'
or
 'When someone goes to hunt bats, he/she must not eat sago.'
 [muyu032:101]

The complex prohibitive in (212) is one of the rare instances in our data that can be interpreted as a general proscription rather than an utterance directed at a second person addressee. Crucial is here the condition in the first clause. The prohibitive applies to everyone who fulfils the condition.

9.7.2.2 The inability construction

The inability construction is used to express that a referent is unable to perform a certain action. It is formed with a negated postpositional phrase headed by *adep* ‘like’ and complemented with an infinitive verb. Since the postpositional phrase is the predicate of the clause, this is a kind of non-verbal clause. Interestingly, however, there is no affirmative counterpart to this construction. As was discussed in Section 9.4.3, infinitive verb + *adep* denotes similatives.

- (213) *Adimbon=ko talep balin kole, kebet kel-i adep*
 bridge=PTC big NEG CONJ side go.through-INF like
balin.
 NEG
 [Two goats meeting on a bridge:]
 ‘The bridge is not wide enough so, they could not pass each other.’
 [muyu003:005]

- (214) *Kinkin otbop=ko keyap opko-ngg-i (a)dep balin.*
 spirit language=PTC quick think-2/3SG.O-INF like NEG

[Writing songs for the local church:]

‘We cannot understand the words of the Holy Spirit quickly.’
 [muyu019:144]

- (215) *Ambikin=bet kudok ka-y-i (a)dep balin.*
 soil=OBL good give-PL.RCV-INF like NEG
 [Discussing infertile soil:]
 ‘The soil cannot give us enough (food).’ [muyu017:121]

The first thing to note in the examples above is that the initial vowel of *adep* ‘like’ is often omitted in these constructions, since the infinitive ending on the verb would lead to a vowel hiatus; hence the bracketed *(a)dep* in (214) and (215).

The term ‘inability’ in the label of this construction has to be understood in a broad sense. Compare the meanings of the examples above. In (213), the referents are unable to pass each other because of physical restrictions (the bridge is too narrow), while in (214) this inability is more of a cognitive

or even metaphysical inability to understand. Finally, the subject in (215) differs from the previous two in that it is inanimate. Its inability is of a very different kind, since the denoted event (giving food) is not an action of a volitional agent. All these meanings (and probably more) are subsumed under the inability construction.

9.7.3 Negation of non-declarative clauses

From the two types of non-declarative clauses discussed in this Chapter, only questions are compatible with negation. In contrast, imperatives are never found with negation. Instead, we find a dedicated prohibitive construction (see §9.7.2.1). Keep in mind that although questions can be negated, this is clearly not a preferred discourse strategy of Muyu speakers and corpus data is very scarce.

Questions are negated like declarative clauses with the particle *balin* ‘NEG’. All morphosyntactic mechanisms discussed in the sections on negated verbal clauses (see §9.7.1) and negated non-verbal clauses (see §9.7.2) also apply to questions. What is different is that questions are marked as questions by some interrogative element. The following example shall suffice:

- (216) “*Kup=ko inwal-ep-ten nea, inwal-ok*
 2SG.F=PTC wear.clothes-2SG-PFV Q wear.clothes-SBJV
 balin=go?”, *engg-on*.
 NEG=PTC say-3SG.M
 [Picking up someone who was supposed to change clothes at home:]
 ‘ “Have you dressed up or not yet?”, he said.’ [muyu023:044]

In (216), a question is formed with the clause final particle *=ko* in combination with rising pitch. This particle is cliticised to the negation marker. Therefore, the negation marker is treated as part of the clause that is marked as a question. The question in (215) actually contains two clauses coordinated with *nea* ‘or’, i.e. an alternative question. However, the negation marker only has scope over the last clause.

9.7.4 Indefinite pronoun *nowan* ‘nothing’

The second strategy of negation, besides clausal negation with *balin* ‘NEG’ (see above), makes use of the indefinite pronoun *nowan* ‘nothing’. The mean-

ing of *nowan* is broader than the English gloss suggests, since it also conveys meanings corresponding to ‘nowhere’, ‘nobody’ and simply ‘no’.

Nowan is mainly found in two syntactic contexts: extra-clausal, i.e. outside of syntactic structure (§9.7.4.1), and as predicate in non-verbal predication (with copula particle: §9.7.4.2; with copula verb: §9.7.4.3). In contrast, *nowan* is not found as an argument in a verbal clause as e.g. Engl. ‘She did not see anything.’

9.7.4.1 Extra-clausal *nowan*

In discourse, *nowan* does not need to be part of a clause and in fact often stands on its own. The meaning of extra-clausal *nowan* depends largely on the discourse context.

- (217) *Wadi won-on, ta ne=go wen-e nong=ma*
 up go-3SG.M and 1SG=PTC go-SM rattan=other
nin-an - nowan - ta wen-e nong=ma
 hold:SG.O-1SG - nothing - and go-SM rattan=other
nin-e tem-an (...)
 hold:SG.O-SM see-1SG
 [On a hunting trip:]
 ‘While he went up there, I went to check one trap - (but) nothing - then I went to check the other trap and saw ...’ [muyu004:009]
- (218) *Konop tubun-on, nowan.*
 eye cover-3SG.M nothing
 [Myth. Trying to perform magic to make the moon come closer:]
 ‘He shut his eyes, (but) nothing (happened).’ [muyu007:069]

In (217), *nowan* stands between two clauses neither of which it takes part in syntactically. Nonetheless, semantically it is determined by the surrounding clauses. The hunter went to check traps. *Nowan* in this context comments on the result, i.e. what he found in the traps. Similarly, *nowan* in (218) stands outside the clausal boundaries. The addressee has to retrieve from context that the protagonist of the myth expects a result from his action. Therefore, *nowan* means ‘nothing happened’ in this context.

Besides the non-existence of physical entities and events, *nowan* can also mean that a location is not present:

- (219) *Men-e eyani belek-m-an-on, kido kede wan-an-on* -
 come-SM here roll.up-IRR-3SG.M down where go-IRR-3SG.M -
nowan.
 nothing
 [Setting a trap for a pig:]
 ‘It will come and will be stuck here, where can it go? - Nowhere.’
 [muyu004:055]

In (219), the indefinite pronoun is the answer to a question. Since the question is about a location, employing the interrogative word *kede* ‘where’, the pronoun refers to a non-existing location: ‘nowhere’.

During everyday interaction with Muyu speakers in the field, I often heard *nowan* in the sense of ‘Okay/No worries’, even in situations when the primary language used was Indonesian. This usage of *nowan* is probably elliptical for the following idiomatic expression:

- (220) *Otbop nowan.*
 language nothing
 ‘No problem.’ [overheard]

9.7.4.2 *Nowan* as non-verbal predicate I: non-existence of a referent

The indefinite pronoun *nowan* ‘nothing’ is often used as a non-verbal predicate. In this context, the copula *=an* can optionally occur.³⁵ For *nowan* co-occurring with the copula verb *keli* ‘become’, see Section 9.7.4.3.

Nowan ‘nothing’ as a non-verbal predicate denotes that the referent of the non-verbal clause subject does not exist. The following examples simply juxtapose *nowan* without any copula:

- (221) *But ton nowan.*
 shrimp fish NEG
 [Discussing the water quality of the river:]
 ‘There are no shrimps or fish.’ [muyu017:186]

³⁵The formal similarity between *nowan* ‘nothing’ and *=an* ‘COP’ is suspicious. There may be a diachronic relation of the kind where a proto-form of the indefinite pronoun incorporated the copula.

- (222) *Okun-e adep odo nup otbop=bet odo nowan.*
 like.that-SM like DEM 1PL language=OBL DEM NEG
 [Wondering how to say “church” in Muyu:]
 ‘(A word) like that does not exist in our language.’
 [muyu019:156]

The non-verbal clause can consist simply of a non-verbal clause subject and the predicate *nowan* as in (221). This represents a frequently encountered structure. However, such clauses can be extended, e.g. by locative adjuncts, as in (222). In any case, *nowan* must be the final element of the clause.

As was mentioned above, the copula particle *=an* can cliticise to the predicate:

- (223) *Ih, emba=go nowan=an.*
 INTJ father=PTC NEG=COP
 [The dogs returned without the hunter. His wife wonders where he is:]
 ‘Oh, father is nowhere.’
 [muyu031:020]
- (224) *Aih, nowan=an.*
 INTJ nothing=COP
 [Diving for a fish in the river:]
 ‘Oh, there is nothing.’
 [muyu035:023]

Occurrences of the copula *=an* as in (223) and (224) are always optional. Furthermore, we see that the copula forms a clause with *nowan* when the non-verbal clause subject is missing as in (224). However, there seems to be no semantic difference between (224) and instances of extra-clausal *nowan* as discussed in the previous section.

Finally, the non-verbal clause subject can be an infinitive verb. The infinitive is treated as a verbal noun in Muyu, the whole construction means that there was no event of this kind:

- (225) *Kido min-i nowan.*
 down come-INF nothing
 [Myth. A woman waiting for her brother who had climbed a tree:]
 ‘(He) did not come down. (lit. there was no coming down)’
 [muyu007:101]

The infinitive + *nowan* as shown in (225) is rather infrequent, probably because its function is already carried out by the common clause negation *balin*. Semantic or pragmatic differences between these two constructions are not understood at the present state of knowledge.

9.7.4.3 Nowan as non-verbal predicate II: disappearance of a referent

A second way to employ *nowan* as a non-verbal predicate makes use of the copula verb *keli* ‘become’. In contrast to the constructions outlined in the previous section, *nowan* + *keli* refers to an event in which a referent R1 is disappearing, as illustrated in Figure 9.4.³⁶ The main axis is the timeline *t* on which the event denoted by *nowan keli* ‘become nothing’ is located in the middle. In the subinterval preceding *nowan keli*, the referent R1 does exist. In the subinterval following *nowan keli*, the referent R1 does not exist. Note that this is fundamentally different to *nowan* as a predicate without *keli* ‘become’ (see §9.7.4.2), which simply states the (temporally unbound) non-existence of a referent.

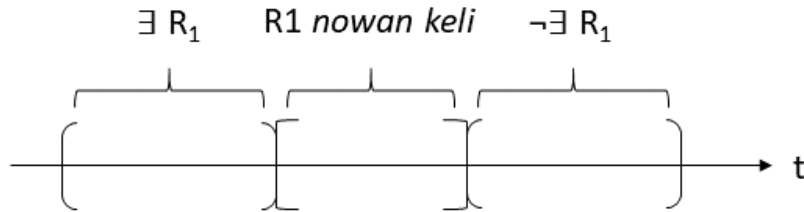


Figure 9.4: Semantics of *nowan keli* ‘become nothing’ on the timeline *t*.

Here are some examples:

- (226) *Otbop=ko nowan kel-an-on.*
 language=PTC NEG become-IRR-3SG.M
 [Worrying about the future:]
 ‘The language will disappear.’ [muyu012:008]

³⁶This diagram is based on similar diagrams used in formal semantics, e.g. Dowty (1977). However, we do not imply any exact truth conditions for the subintervals of the timeline *t*. In particular, the forms of the brackets do not indicate inclusion/exclusion of temporal boundaries as this is often the case in formal semantics.

- (227) *Embit-embed itu nowan kol-o-den.*
 leaf-leaf that(BI) NEG become-3SG.M-PFV
 [Having unwanted caterpillars in the garden:]
 ‘The leaves (of the peanuts) are gone.’ [muyu029:068]

Since the copula *keli* ‘become’ is a verb, it can be inflected for aspect and mood. The disappearing event of (226) is located in the future, while (227) denotes a completed event of the past. In both examples, we find an overt non-verbal clause subject that denotes the disappearing referent. In contrast, the following example leaves the disappearing referent implicit:

- (228) *Tipn-up, nowan kol-on.*
 finish-1PL NEG become-3SG.M
 [At the end of the recording:]
 ‘We have finished, it is over. (lit. it became nothing)’
 [muyu010:262]

What is disappearing in (228) is the story that has been told. This is a common way to end a story in my recordings.

Finally, the non-verbal predicate *nowan keli* ‘become nothing’ can be used to denote the completion of an event. As such, it is often found as part of a multi-verb construction (see Chapter 11).

Chapter 10

Complex Predicates I: Light verb constructions

10.1 Introduction

Complex predicates are constructions that are composed of a verb and at least one other lexical item which together form a predicate as a single unit. As a corollary, complex predicates belong to the same clause and have all the features that come with monoclausality. Myu syntax has three main types of complex predicates.

Types of complex predicates:

- (a) LIGHT VERB CONSTRUCTION (LVC): noun/adjective + light verb
- (b) AUXILIARY CONSTRUCTION (AVC): verb + auxiliary verb
- (c) MULTI-VERB CONSTRUCTION (MVC): verb + verb + (verb + ...)

Complex predicates must be distinguished from syntactic units that are composed of multiple elements but do not form a joint predicate. Examples are verb phrases (verb + object argument) or clause chains (multiple clauses).

The various kinds of complex predicates differ in composition. LVCs contain a noun/adjective and a verb, while both AVCs and MVCs have exclusively verbal elements. LVCs and AVCs are usually confined to two elements, whereas MVCs can be composed of more elements. Semantically,

both LVCs and AVCs have one element that is semantically weaker (auxiliary verb, light verb) than the other, while each element of an MVC can have the same semantic contribution to the predicate.¹ Another syntactic construction that can be interpreted as a complex predicate is the motion verb complex, consisting of a directional + a motion verb. For a discussion of such combinations, the reader is referred to Section 9.2.1.1.

The following examples illustrate the different kinds of constructions, all of them including the verb *wini* ‘go’:

- (1) *Awon bat wan-an.*
 pig hunt go-1SG
 ‘I hunted a pig.’ [Fieldnotes]
- (2) *Ane-n wan-an.*
 eat-N go-1SG
 ‘I started to eat.’ [Fieldnotes]
- (3) *Yum kan-e wan-an.*
 banana take:SG.O-SM go-1SG
 ‘I brought a banana.’ [Fieldnotes]

The noun-verb combination *bat wini* in (1) represents a light verb construction. Muyu does not have a verb like the English ‘to hunt’ but uses a complex predicate instead, which is composed of the noun ‘hunt’ and the verb ‘go’. The example in (2) is an auxiliary construction that denotes an inchoative. The first verb is in its N-participle form and the second verb is the auxiliary that is responsible for the inchoative meaning. Finally, in (3) we see a multi-verb construction that denotes a caused accompanied motion event. This construction is composed of the two verbal items ‘take’ and ‘go’.

Comparing the role of *wini* ‘go’ in all three examples above, we find that it is a light verb in (1), an auxiliary in (2) and a full verb in (3). Its full semantics, denoting a motion event, is only present in the full verb, whereas the event denoted in (2) is without any motion. The light verb construction in (1) does imply motion, but the focus is clearly on hunting and the clause can also denote an event in which the hunter sits on a tree and waits for the prey to come. In conclusion, one and the same verb can have different roles in

¹Notice, though, that characterisations such as “weak semantics” and “semantic contribution” are rather imprecise and notoriously hard to measure. They shall be understood as an intuitive approximation here.

different syntactic constructions. All three of them are complex predicates.

The remainder of this chapter discusses light verb constructions, while auxiliary constructions and multi-verb constructions are dealt with in Chapter 11. Here, we first outline the features of LVCs (§10.2) and then present an inventory of all known LVCs in groups according to their respective light verb (§10.3).

10.2 Features of Light Verb Constructions

A light verb construction (LVC) is a complex predicate that consists of a noun/an adjective and a semantically weak verb. Both elements are necessary to form the predicate. Since Muyu has a strong dichotomy between the word classes noun and verb, LVCs can be easily distinguished from other types of complex predicates, namely auxiliary constructions and multi-verb constructions.

The analysis of LVCs presented in this chapter is informed by Butt (2010). In particular, we agree with her that features of LVCs have to be established on language-internal grounds and structures need to be analysed based on language-internal grammatical tests. For Muyu, we propose the following features to define light verb constructions:

1. An LVC is a quasi-lexical unit that combines **a noun/adjective and a verb**.
2. LVCs show joint predication and are **monoclausal**.
3. LVCs can be **transitive or intransitive**. The argument structure is defined by the whole construction rather than by its component parts.
4. Nouns/adjectives and verbs are mostly **contiguous** but can be separated by adverbs.
5. The bulk of the **semantic content is on the noun/adjective**. In contrast, the verb is semantically weak.

Additionally, we find two features of Muyu LVCs that are not categorial but deserve attention nonetheless:

6. Some LVCs occur in pairs that denote **aspectual contrast**.

7. LVCs sometimes have **idiomatic meaning**.

Each feature is discussed in one of the following subsections.

10.2.1 The combination of noun/adjective and verb

Nouns/Adjectives and verbs are morphologically distinguishable in Muyu. Whereas nouns and adjectives are morphologically simple, verbs are inflected for aspect and mood and are affixed by argument indexes. In a light verb construction, a noun/adjective combines with a verb to form a joint predicate. Since verbs are always clause-final in Muyu, the noun/adjective of the LVC always precedes its related verb. However, they do not form a single word (see Section 10.2.4 below).

The choice of the light verb is highly restricted. To date, nine light verbs have been found, which are all listed in (4). In contrast, nouns are more variegated. The relation between verbs and nouns/adjectives is one-to-many, i.e. one light verb can combine with many nouns/adjectives. However, LVCs are not fully productive, i.e. speakers do not create hitherto unknown combinations spontaneously. Exceptions to this are constructions based on *tani* ‘die’ (see Section 10.3.2). Besides those, the common combinations seem to be lexicalised and speakers probably learn them during language acquisition.

- | | | |
|-----|-----------------|------------|
| (4) | <i>ali</i> | ‘wipe’ |
| | <i>bomi</i> | ‘walk’ |
| | <i>kemi</i> | ‘do’ |
| | <i>moni</i> | ? |
| | <i>nai~nali</i> | ‘put into’ |
| | <i>wai</i> | ? |
| | <i>wani</i> | ‘pick’ |
| | <i>wini</i> | ‘go’ |
| | <i>tani</i> | ‘die’ |

Butt (2010) suggests that light verbs are closely linked to formally equal full verbs, rather than being merely homophonous.² Indeed, we find that most verbs listed in (4) have clear lexical meanings when occurring as full verbs

²In particular, Butt (2010) rejects the idea that light verbs are passages from full verbs to affixes in grammaticalisation clines as proposed by Hopper & Traugott (1993:108). She notes as evidence that light verbs in many languages remain formally equal to a

rather than as light verbs. However, this is not the case with *moni* and *wai* whose full verb meanings are too distant to propose a relationship with the light verbs (see Section 10.3.6).

According to Butt (2010), light verbs should be glossed with a translation of their full verb meaning. We do not follow her in this respect, but rather gloss all verbs in (4) as ‘LV’ when they occur as part of an LVC. We have two reasons for this practice: First, it is easier to identify a sequence as LVC in the corpus/examples when its light verb is marked as such in the glosses. Second, there are no fitting full verb meanings that could be glossed for *moni* and *wai*. A common gloss for all light verbs seems suitable to solve these issues.

The proportion of nouns to adjectives in LVCs is dramatically skewed towards nouns. Most light verbs combine with nouns while adjectives are almost entirely constrained to constructions with *tani* ‘die’. This proportion is in accordance with the general frequencies in the Muyu lexicon, where nouns outnumber adjectives by far.

Finally, there are some elements that are not in use outside of LVCs. We consider them as having lexicalised with their respective light verb and eventually fallen out of use. Instances are given in the respective subsections of Section 10.3.

10.2.2 Joint predication and monoclausality of LVCs

The noun/adjective and the verb of an LVC form a quasi-lexical unit. They are part of the same predicate and of the same clause. Monoclausality depends on the features of the clause as discussed in Section 9.1. To summarise briefly: a clause is a syntactic unit that (1.) consists of one predicate and one or more arguments, (2.) has exactly one finite verb in clause final position, (3.) is host to clause clitics, (4.) is the maximum scope of negation and (5.) is the minimum domain of a subject. All these features apply to light verb constructions and show that they are part of a single clause. In the remainder of this section, we focus on the scope of negation, argument structure, as well as incompatibility of the noun with modifiers and determiners, in order to demonstrate that the noun and the verb are part of the same syntactic phrase and - by extension - the same clause.

corresponding full verb over time, rather than diachronically developing away, as e.g. auxiliary verbs. This leads her to the conclusion that a full verb and the formally equal light verb are actually one lexeme, fulfilling different functions in different constructions.

We start with the scope of negation. Negation always has scope over the full predicate. It is not possible to negate only one element of the combination, as the following examples show:

- (5) *Yu=go om ok na-ok balin.*
 3SG.F=PTC sago water LV-SBJV NEG
 ‘She did not water the sago.’ [elicited]
- (6) *Yu=go om ok *balin na-un.*
 3SG.F=PTC sago water NEG LV-3SG.F
 ‘(Intended:) It was not water, she put into the sago.’ [elicited]
- (7) *Nup otbop nowan kel-an-on.*
 1PL language NEG become-IRR-3SG.M
 ‘Your language will disappear.’ [muyu012:008]
- (8) *Yu=go om ok *nowan na-un.*
 3SG.F=PTC sago water NEG LV-3SG.F
 ‘(Intended:) It was not water, she put into the sago.’ [elicited]

The negation marker *balin* has scope over the whole predicate as can be seen in (5). Since *balin* is a clause final particle, it cannot be moved to subparts of the predicate, like *ok* ‘water’ in (6). Hence, negation with *balin* is not a good indicator to test if the two elements can be negated separately. In contrast, the negative pronoun *nowan* is apt for the task, as seen in (7) where *nowan* occurs before the final verb. However, *nowan* cannot be used to negate elements within an LVC. The constructed sentence in (8) tries to negate only *ok* ‘water’ but not the light verb. Such constructions are strictly refused by our consultants. We conclude that both the noun and the verb are part of the predicate and cannot be negated separately.

The second point to show that the elements of an LVC are a quasi-lexical unit concerns the argument structure. The noun of an LVC cannot be analysed as an argument of the light verb. Compare the LVC in (9) with a similar looking clause in (10). The latter has a locational argument that is not part of the predicate:

- (9) *Kaduk=ko towot man-an-ip=ko kadap mo*
 person=PTC guest come-IRR-2/3PL=PTC many just

kan-e *man-an-ip=ko* ...
 take:SG.O-SM come-IRR-2/3PL=PTC

‘When people will come to visit (us), they will bring many (cigarettes)
 and ...’ [muyu017:005]

- (10) *Kaduk=ko* *ambip man-an-ip*.
 person=PTC house come-IRR-2/3PL

‘The people will come to the house.’ [overheard]

The LVC conveying the meaning ‘to visit’ in (9) is composed of *towot* ‘guest’ and *mini* ‘come’. As is clear from the translation, the clause as a whole is intransitive with a single argument *kaduk* ‘person’ which constitutes the subject. The clause in (10) is also intransitive but adds a locational argument *ambip* ‘house’ which is very different from *towot* in (9). If *towot* ‘guest’ was a clausal argument, we would expect the clause to include another participant that is not co-referential with the subject (e.g. ‘People will come to the guests’). Since such a participant does not exist in (9), the only valid analysis is that *towot* ‘guest’ is part of the predicate itself.³ Therefore, nouns in LVCs are semantically distinguishable from nominal arguments.

There is still a third argument for why nouns are part of the same syntactic unit as the verb in LVCs. If the noun was syntactically a unit on its own, we would need to analyse it as the head of an NP. As a consequence, we would expect to find all the syntactic properties of NPs. However, nouns of LVCs cannot be determined by demonstratives (11) or be quantified by a numeral (12). Furthermore, they cannot enter a possessive construction (13) or act as the head of a relative clause (see below).

- (11) *Kaduk mim=ko* ***tambang*** **ogo mon-ip-ten*.
 person one=PTC clapping DEM LV-2/3PL-PFV

‘(Intended:) They slapped someone.’ [elicited]

³An alternative interpretation of *towot mini* would be to interpret the noun as a secondary predicate. Hence, the meaning could be translated as ‘come as guest’ and the noun seen as co-referential with the clausal subject. However, if such constructions really included secondary predicates, we would expect that the noun could be freely interchangeable, e.g. **teman mini* ‘come as friend’, *kalet mini* ‘come as orphan’, etc. Since such combinations do not convey the intended meaning, we do not see why *towot mini* should be analysed as having a secondary predicate. Rather, the whole construction has lexicalised to the meaning ‘visit’.

- (12) *Kaduk mim=ko tambang *mim mon-ip-ten.*
 person one=PTC clapping one LV-2/3PL-PFV
 ‘(Intended:) They slapped someone.’ [elicited]
- (13) *Ne=go *kon yu tambang mon-u-den.*
 1SG=PTC woman 3SG.F slapping LV-3SG.F-PFV
 ‘(Intended:) I was slapped by some woman. (lit. woman’s slapping)’
 [elicited]

Besides that, the noun of an LVC is not compatible with phrase clitics like *=ko* and *=bet*. This is evidence that they are not NPs on their own:

- (14) *Kaduk mim=ko tambang=*ko mon-ip-ten.*
 person one=PTC clapping=PTC LV-2/3PL-PFV
 ‘(Intended:) They slapped someone.’ [elicited]
- (15) *Kaduk mim=ko tambang=*bet mon-ip-ten.*
 person one=PTC clapping=OBL LV-2/3PL-PFV
 ‘(Intended:) They slapped someone.’ [elicited]

Relative clauses are either pre-nominal and connected with *ye* to its head (see Section 12.5.1) or post-nominal and followed by a demonstrative (see Section 12.5.2). Both constructions are incompatible with nouns that are part of LVCs:

- (16) **Wingga-up ye opkon bom-un.*
 sing-1PL 3SG.M remember LV-3SG.F
 ‘(Intended:) She remembered what we sang.’ [elicited]
- (17) **Opkon wingga-up odo bom-un.*
 remember sing-1PL DEM LV-3SG.F
 ‘(Intended:) She kept a memory of what we sang.’ [elicited]

We conclude that nouns in LVCs lack all the syntactic features that are characteristic for heads of NPs. This is clear evidence that they do not constitute NPs on their own but syntactically belong to the verb.

Further grammatical tests are less applicable here because of some intervening syntactic properties of Muyu. In the remainder of this section, we shall mention them briefly. Firstly, monoclausality is related to the presence of final verbs. Generally, a clause allows only for one finite verb, while all

other verbs are non-finite. This test is particularly useful in contexts with more than one verb (e.g. multi-verb constructions, complex sentences). However, since LVCs contain only one verb, there is no point in applying this test here. The same is true for grammatical tests based on clause clitics.

Secondly, one of the most important language-internal criteria for monoclausality in Muyu is the minimum scope of subjects. A clause in Muyu always has one and the same subject referent. There are no constructions in which a referent can switch its subject (e.g. from subject to object) in subparts of the clause. LVCs are no exceptions to this, but this property is not really utilisable for grammatical tests. Since nouns do not take subject arguments, there is no point in constructing negative evidence for this criterion.

Before ending this section on syntactic properties of LVCs, we need to mention that LVCs can be embedded in more complex structures. The examples given so far have the light verb as the final verb of the clause. However, the following example shows an LVC that occurs as the first element of a multi-verb construction:

- (18) *Marry bot yinim konoduk mon-e kok-u-den.*
 PN stone on tip.of.toe LV-SM fall:SG.S-3SG.F-PFV
 ‘Marry stumbled on a rock and fell.’ [Dictionary]

The LVC in (18) is *konoduk mone* ‘stumble’. The final verb is an inflection of *koki* ‘fall (sg.sbj.)’. Both these elements are part of the same clause and form a multi-verb construction (see Chapter 11 for details). Hence, LVCs can enter the same syntactic constructions as full verbs. This is just one more evidence that an LVC syntactically is a single predicate.

10.2.3 Transitivity

LVCs in Muyu are either transitive or intransitive, whereas ditransitive LVCs are unattested yet. It is important to note that the argument structure of LVCs is determined by the whole construction rather than just the verb. This is clearly seen when transitive verbs occur in intransitive LVCs. Compare the following examples with *kombi*:

- (19) *Ok Widi ya kacang komb-up-ten, kacang*
 river PN at peanut(BI) put:SG.O-1PL-PFV peanut(BI)
alum-up.
 plant-1PL
 ‘We put peanuts at the (side of) Widi river, we planted peanuts
 (there).’ [muyu005:001]
- (20) *Kep tulum win-i balin. Wen-e bomot komb-an-ep.*
 2SG.M alone go-INF NEG go-SM harm LV-IRR-2SG
 ‘Don’t go alone. You will get harmed.’ [Dictionary]

In (19), *kombupten* is a full verb and the clause is transitive. The subject is 1PL and the object is *kacang* ‘peanuts’. In contrast, the LVC in (20) is intransitive and does not include an object argument.⁴

The opposite case is also attested, although more rarely. Intransitive verbs can be part of transitive LVCs. Compare the following couple of examples with *tani*:

- (21) *Kaduk kawen-e w-∅-ip=e, ta-un.*
 person climb-SM 3SG.F.O-kill-2/3PL=DS.SEQ die-3SG.F
 ‘People came up (to the house) and killed her so she died.’
 [muyu054:023]
- (22) *Ena=go nup olok tan-i yamo kemo-d-un.*
 mother=PTC 1PL longing LV-INF always do-DUR-3SG.F
 ‘Mother always misses us.’ [Dictionary]

The verb *tani* as a full verb means ‘to die’ and is intransitive, as in (21). LVCs based on *tani*, in contrast, denote that the subject is suffering from a certain circumstance or condition. In the case of *olok tani* ‘to miss’, as seen in (22), the LVC forms a transitive clause with *nup* ‘us’ as the object.

Transitivity also plays a role in LVCs that encode verbal number, namely constructions based on *kombi* ‘put (sg.obj.)’ and *yali* ‘put (pl.obj.)’. Only transitive constructions make use of the number opposition, whereas intransi-

⁴At first sight, it might look like *bomot* ‘harm’ is the object of the clause in example (20). However, this is not the case. If the clause really was transitive, we would expect the subject argument to refer to the actor of the event, but not the undergoer as in (20). For a clear argumentation that *kombi*-constructions really are LVCs rather than ordinary predicate-argument combinations, see Section 10.3.5.

tive constructions always employ the singular verb. For details and examples see Section 10.3.5.

10.2.4 Contiguity

The elements of an LVC mostly occur in juxtaposition, and the noun/adjective directly precedes the light verb. As we have seen in Section 10.2.2, the nominal elements of LVCs are incompatible with modifiers and determiners, which would intervene if present. Furthermore, core arguments and longer adjuncts generally precede the construction as a whole and do not interfere with contiguity. However, LVCs can be discontinuous since adverbs and adverbially used adjectives can intervene, as in the following examples:

- (23) *Nina ye tinggi alut-alut tap kem-o-den.*
 PN 3SG.M hand itching bad LV-3SG.PFV
 ‘Nina’s hand is badly itching.’ [Dictionary]
- (24) *upneng talep=mo nal-e, Enip ya kenengg-an*
 breath big=ADV LV-SM PN at look.at-1SG
 ‘I took a deep breath and looked at Enip.’ [muyu006:020]

In (23), the adjective *tap* ‘bad’ intervenes between noun and light verb and modifies the predicate as a whole. Similarly, *talep=mo* ‘big’ separates the elements of the LVC in (24). Notice that in this example, the English translation suggests a modification of the noun (‘deep breath’). However, the adverbial clitic *=mo* unequivocally indicates that *talep* occurs as adverb and modifies the whole predicate.

In a few instances, more complex adverbials can intervene. These cases are very rare and might be confined to locations:

- (25) *“ton~ton bat kedo oktikap eyanu wan-an-e*
 fish~RED hunt out downstream here LV-IRR-SM
kem-an=o”, engg-on.
 do-1SG=QUOT say-3SG.M
 ‘ “I want to go downstream to find some fish”, he said.’
 [muyu007:015]

In (25), the LVC *bat wini* ‘to hunt’ is interrupted by the locational phrase *kedo oktikap eyanu*. It is not clear yet which kinds of phrases can occur in

this position.

We conclude that LVCs are not obligatorily contiguous although in the majority of cases, the noun/adjective and light verb are juxtaposed. The possible discontinuity can also be seen as evidence that the elements of an LVC remain separate syntactic words.

10.2.5 Weak semantics of the verb

The term *light verb* indicates that the verb's semantic content is somewhat weaker than the content of full verbs. However, light verbs vary in their semantic transparency and a vague property of "weak semantics" is not easily generalisable (also because of idiomaticity, see Section 10.2.7). Most clearly, we see this feature with the verb *tani* which means 'die' as a full verb but 'suffer from' as a light verb:

- (26) *Ye komonggo=go ta-en.*
 3SG.M cousin=PTC die-3SG.M
 'His cousin died.' [muyu034:104]
- (27) *Kep olok ta-in.*
 2SG.M longing LV-1SG
 'I miss you.' [Fieldnotes]

Insofar as 'suffer' is often implied in 'die' but not vice versa, the light verb can be seen as semantically weaker than the full verb.

Similarly, the full verb *ali* 'wipe, sweep' (28) becomes semantically weaker in the LVC (29), although not fully opaque. A metaphoric relationship between sweeping leaves and slapping someone is still recognisable.

- (28) *Ne taman=ko nup ambip yitbon ayekon*
 1SG younger.sibling=PTC 1PL house yard leaf
ale-d-un.
 sweep-DUR-3SG.F
 'My sister is sweeping the leaves in our yard.' [Dictionary]
- (29) *Tana odo kenambun=mo kawan al-ip-ten.*
 child DEM strong=ADV slapping LV-2/3PL-PFV
 'They slapped the boy forcefully.' [Dictionary]

Insofar as most of the meaning in (29) is in the noun of the LVC, and the verb establishes only the metaphoric relation to sweeping, the light verb is semantically weaker than the full verb in (28) that carries all the semantic content about the event.

Less clear is the property of weak semantics in relation to the verb *kemi* ‘do’ which has very lean semantics in all its occurrences, be it as full verb (30) or as light verb (31). Furthermore, *kemi* ‘do’ is used as an auxiliary (see Section 11.6). It is highly doubtful that one of these uses of *kemi* ‘do’ can be interpreted as semantically richer/weaker than the other ones.

- (30) *Kele-n-e, nup=bet, medep kem-up?*
 become-SS-3SG.M 1PL=OBL what do-1PL
 [The language will disappear:]
 ‘It will happen and we, what have we done (to save it)?’
 [muyu012:031]

- (31) *Aleng kemo-d-en.*
 crying LV-DUR-3SG.M
 ‘He was crying.’
 [muyu006:042]

Finally, there are light verbs that are no longer transparent in meaning. *Moni* and *wai* are genuine light verbs, and the homophonous full verbs *moni* ‘buy’ and *wai* ‘pick (pl.obj.)’ are most likely not related.⁵ In such cases, the semantic contribution to the LVC cannot be compared to the meaning of the full verb, and the question of semantic weakness cannot be addressed at all.

10.2.6 Aspectual contrast

Some light verbs of Muyu are arranged in pairs that denote an aspectual contrast. This means that two contrasting light verbs are available for one and the same noun, and the resulting LVCs denote a similar kind of event, contrasting in aspectual meaning only. In an aspectual light verb pair, one member conveys bound aspect and the other unbound aspect. Bound aspect is related to single events that are confined in space and time, whereas unbound aspect rather relates to multiple events in various locations and at multiple times. However, the exact semantics depends on the respective LVC pair and must be interpreted individually.

⁵Which is not to say that we rule out diachronic relations.

Two types of aspectual light verb pairs are shown in Table 10.1. The former is *wini* ‘go’ vs. *bomi* ‘walk’. LVCs of this group all encode some kind of motion. The second group contrasts *moni* and *wai*, both of which are no longer transparent in their full verb meaning. In contrast to the *wini/bomi* group, LVCs within the *moni/wai* group do not form a semantically coherent class. For a detailed description of both pairs including examples, see the respective subsections in §10.3.4 for *wini/bomi* and in §10.3.6 for *moni/wai*.

	Bound	Unbound
LVCs of motion	<i>wini</i>	<i>bomi</i>
Various LVCs	<i>moni</i>	<i>wai</i>

Table 10.1: Aspectual contrast in two types of LVCs.

Finally, we need to note that the aspectual contrast is a feature of LVC pairs rather than of a single light verb. This is shown by the fact that *wai* also occurs in LVCs that do not have a corresponding *moni*-construction (see Section 10.3.9).

Muyu has another contrastive LVC pair, namely constructions with *kombi* ‘put (sg.obj.)’ vs. *yali* ‘put (pl.obj.)’. This pair is different from the two pairs shown in Table 10.1, since it encodes a contrast in verbal number rather than aspect (see Section 10.3.5).

10.2.7 Idiomatic meaning

LVCs in Muyu are often idiomatic, i.e. the meaning of an LVC cannot be fully computed from the meaning of its component parts. Two types of idiomaticity have been found so far: First, only a single aspect of meaning is selected from a member of the construction, e.g. when the full verb *tani* ‘die’ means ‘suffer from’ as a light verb. Second, the noun-verb combination of LVCs can also sum up to a meaning that is not included in its elements. Both types will be outlined with one example each in the remainder of this section.

The construction *itkang wai* ‘sharpen’ is a good case in point. An *itkang* ‘blade’ is a part of an instrument like a knife or machete. However, only one characteristic of a blade is expressed in the LVC, namely the property of being sharp:

- (32) *Nona nenggelek wa-i yeman pensil itkang*
 girl(BI) letter write-INF for pencil(BI) blade
wa-d-un.
 LV-DUR-3SG.F

‘The girl is sharpening a pencil to write a letter.’ [Dictionary]

As can be seen from this example, *itkang* ‘blade’ is used here to express something like Engl. ‘to sharpen’ without implying that the object has an actual blade. Thus a pencil can also be the undergoer. The fact that the lexeme for ‘blade’ is lexicalised to convey this meaning is motivated by the most prominent characteristic of blades. However, the fact that blades are not denoted in the LVC but their sharpness is a good example for idiomaticity of LVCs. Similar examples are *konoduk moni/wai* ‘to stumble’ from *konoduk* ‘tip of toe’ and *nek nai* ‘to crawl, advance slowly’ from *nek* ‘worm’.

Another kind of idiomaticity is given when a construction denotes more than the sum of its parts. A case in point is the LVC *ot kombi* ‘to pay a dowry/a fine’ (and its related plural version *ot yali*, see Section 10.3.5). From the lexical meaning of its elements (*ot* ‘money’, *kombi* ‘put (sg.obj.)’), one would expect that it can be used for all kinds of monetary transactions. After all, the act of paying is perfectly recognisable as “putting money somewhere”. However, this is not the case. For paying money to someone, Muyu speakers make use of the verb *ka-* ‘to give’:

- (33) *Ne woya ambang yom ot ka-y-a-den.*
 1SG grandmother grandfather and money give-PL.RCV-1SG-PFV

‘I paid money to my grandparents.’ [Dictionary]

In (33), *ot* ‘money’ is clearly the object of the clause. Thus, it differs from the LVC *ot kombi* with a more idiomatic meaning restricted to dowries and fines.

10.3 Groups of Light Verbs Constructions

In this section, we discuss different kinds of LVCs. They are grouped according to the light verb that occurs in them. For each group, the items known

so far are listed and examples are given. The lists must not be considered exhaustive.

10.3.1 Light verb *kemi* ‘do’

The verb *kemi* ‘do’ has generally weak semantics and occurs in various kinds of constructions, one of which is LVCs. As a light verb, it combines with nouns to form a complex predicate. For *kemi* ‘do’ as an auxiliary in periphrastic AM constructions, see Chapter 11.

As the meaning of the light verb implies, constructions with *kemi* ‘do’ express that the subject performs some kind of action. So far, the following constructions are attested:

(34)	<i>alambon kemi</i>	‘laugh’
	<i>aleng kemi</i>	‘cry’
	<i>elep-elep kemi</i>	‘whine’
	<i>haukmo kemi</i>	‘grunt (pigs)’
	<i>kabu kemi</i>	‘howl (dogs)’
	<i>kanon-kanon kemi</i>	‘donate’
	<i>kelep kalap kemi</i>	‘do wrong, make a mistake’
	<i>nenem kemi</i>	‘have sex’
	<i>onong kemi</i>	‘whistle’
	<i>otben kemi</i>	‘beg’
	<i>tetbo kemi</i>	‘bark (dogs)’
	<i>tokbut kemi</i>	‘lie (V)’
	<i>towong kemi</i>	‘whistle’
	<i>uluk aluk kemi</i>	‘make a chirping sound’

As expected, the first elements of the constructions in (34) are mostly nouns: *alambon* ‘laughter’, *aleng* ‘weeping’, *elep-elep* ‘whining’, *kanon-kanon* ‘donation’, *kelep kalap* ‘panic, mistake’, *nemen* ‘sexual intercourse’, *onong* ‘whistling’, *tokbut* ‘lie (N)’, *towong* ‘whistling’⁶, *uluk aluk* ‘a chirping sound’. The elements *haukmo*, *kabu* and *tetbo* are unclear in regard to their word classes.

⁶The difference between the two lexemes for ‘whistling’ is the following: *towong* designates regular whistling, either with rounded lips or by putting fingers between the lips. In contrast, *onong* is a special kind of whistling strongly connected with Muyu culture. It is performed by biting on the lower lip such that a small hole in the middle is left free for the release of breath. The upper lip is stiff and not rounded. This kind of whistling is performed during dancing the traditional Ketmon dance.

They generally designate animal sounds and are onomatopoeic. However, it is not clear yet if they can be heads of NPs and if they are therefore nouns. Finally, an unusual element is *otben* in *otben kemi* ‘to beg’. It probably goes back to a phrase *ot bi* ‘take money’ in the N-participle form.

LVCs from this group sometimes make use of full reduplication which is generally an unusual feature in Muyu, e.g. *elep-elep kemi* ‘whine’ or *uluk aluk kemi* ‘make a chirping sound’. This probably indicates that the designations of sound are meant to be onomatopoeic (compare also to *haukmo* as the sound of a grunting pig). However, this onomatopoeic explanation is less convincing in the instances of *kanon-kanon kemi* ‘donate’ and *kelep kalap kemi* ‘do wrong, make a mistake’.⁷ Generally, reduplication is not a salient feature of Muyu.

Here are some examples of LVCs based on *kemi* from the corpus:

- (35) *Kaduk mim=bet onong kemo-n-e ban-e*
 person one=OBL whistling LV-SS-3SG.M call.once-SM
kumungg-on.
 tell-3SG.M
 ‘One of the boys whistled and called her.’ [muyu011:032]
- (36) “Ah, *tokbut kem-ep=a*” *engg-on.*
 INTJ lie do-2SG=QUOT say-3SG.M
 ‘ “Oh, you are lying”, he said.’ [muyu034:061]
- (37) *Ambo Teo, [...] yang kibik tan-on oyen odo*
 older.brother PN [...] REL(BI) now die-3SG.M there.is DEM
aleng kem-o-den: “Bayang ne taman ah!”
 crying LV-3SG.M-PFV INTJ 1SG younger.sibling INTJ

⁷It is conceivable that *kanon-kanon kemi* ‘donate’ stems from a (formally equal) reciprocal construction based on the verb *kani* ‘take (sg.obj.)’. For details on this type of construction, the reader is referred to Section 12.7.

In our hypothesised scenario, the conjugation for 3SG.M of *kani* (with the suffix *-on*) has lexicalised to a noun *kanon-kanon* ‘donation’ before entering the LVC with *kemi*. However, the question arises why we do not interpret *kanon-kanon kemi* as a reciprocal construction in the first place. There are two reasons: Firstly, *kanon-kanon* exists as an independent noun which is not generalisable for verbs found in reciprocal constructions. Secondly, the semantics of the LVC diverges strongly from the original verb meaning. Whereas *kani* designates an act of taking, *kanon-kanon kemi* ‘donate’ means quite the opposite. In reciprocal constructions, the meaning of the element verb is preserved. Therefore, we need to posit an intermediate stage of lexicalisation in which the semantics has changed.

‘Brother Teo, Teo Mulop who has just passed away was crying:
 “Oh... my brother!” ’ [muyu006:042]

- (38) “*On kidim an-an-a kum-un kole, ninggi*
 bird kind.of.bird eat-IRR-SM do-3SG.F CONJ smile
katba-d-un=ki, alambon kemo-d-un=ki
 to.smile-DUR-3SG.F=EMPH laughing LV-DUR-3SG.F=EMPH
engg-on.
 say-3SG.M
 [Coming home from a hunting trip. Recognising his wife in front of
 the house:]
 ‘ “She wants to eat the bird (that I caught) so, she is smiling, she is
 laughing”, he said.’ [muyu054:016-17]

Constructions based on *kemi* ‘do’ are the only type of LVC that were also recognised by Christensen (2013:30) for the Yonggom dialect. He calls them “pro-verb object nouns” (pg. 29) and his list contains many more items than the instances from our corpus given in (34). Furthermore, his analysis differs slightly from ours (see below). The following list was adopted to match the orthography of this study⁸; elements in bold face have cognates in our corpus:

- (39) **LVCs with kame (=kemi) in Christensen (2013:30):**
- | | |
|--------------------------|-----------------------------|
| <i>ambon kame</i> | ‘to laugh’ |
| <i>ameng kame</i> | ‘to cry’ |
| <i>anduandan kame</i> | ‘to voice displeasure’ |
| <i>daanupdaanap kame</i> | ‘to criticize’ |
| <i>dabo kame</i> | ‘to bark’ |
| <i>dabokdabok kame</i> | ‘to gather’ |
| <i>dinggot kame</i> | ‘to sneeze’ |
| <i>duburukda kame</i> | ‘to fool around with’ |
| <i>erengarang kame</i> | ‘to make scrunching noises’ |
| <i>iningguk kame</i> | ‘to play’ |
| <i>inmuk kame</i> | ‘to nod’ |
| <i>kaang kame</i> | ‘to yell’ |
| <i>kabuk kame</i> | ‘to whoop’ |

⁸In particular, Christensen (2013) uses the grapheme <ŋ> where we write <ng> and <ɛ> for our <e>. Finally, he represents the tap with <r> where we simply write <r>. In contrast, the difference between his *kame* and our *kemi* is an actual difference in vowel quality.

<i>keeng kame</i>	‘to howl’
<i>kena karunga kame</i>	‘to show upset behavior’
<i>kerepkarap kame</i>	‘to be confused’
<i>kombemkayok kame</i>	‘to impede someone’
<i>koraaweng kame</i>	‘to whisper’
<i>kurungkarang kame</i>	‘to make scuffling noises’
<i>murun kame</i>	‘to grunt like a pig’
<i>nangotnangot kame</i>	‘to create problems’
<i>nuupnaan kame</i>	‘to plot to kill’
<i>owong kame</i>	‘to whistle’
<i>pikpik kame</i>	‘to struggle’
<i>wareki kame</i>	‘to groan’
<i>wengun kame</i>	‘to beg’
<i>wunonwanon kame</i>	‘to plot against’
<i>yorap kame</i>	‘to yawn’

Two tendencies are present in (39) that can also be seen in the data from our corpus. Firstly, there is a high amount of constructions that designate sounds, be it animal or human. And, secondly, some of the nominal elements in the constructions are obviously reduplicated.

There are four elements in (39) that have cognates in our corpus: *ambon kame* ‘to laugh’, *ameng kame* ‘to cry’, *kerepkarap kame* ‘to be confused’ and *owong kame* ‘to whistle’. Additionally, there are constructions in (39) which encode similar meanings but do not have etymologically related forms. These are the constructions for the animal sounds ‘grunt (pig)’, ‘howl (dog)’ and ‘bark (dog)’ as well as ‘to beg’.

As mentioned above, Christensen’s (2013:29-30) analysis differs from ours. First of all, Christensen analysed the nominal elements in (39) as direct objects of *kame* ‘do’. In Section 10.2, we gave ample evidence that this is not the case for LVCs and that the noun is part of the predicate instead. Secondly, he claims that the nominal elements cannot “appear by themselves” (pg. 30) by which he means that they are not heads of argument NPs. His example (69d), which shall represent evidence for this claim, is reproduced here as (40) (our glosses).

- (40) **ambon wenga-iin*
 laughter hear-1SG
 ‘(Intended:) I hear laughter.’ (Christensen 2013:30)

The noun *ambon* ‘laughter’ was not accepted as an argument for the verb of hearing by at least one of Christensen’s consultants.⁹ From this, he seems to infer that nominal elements of such constructions cannot occur as nouns without *kame* ‘do’. This is in stark contrast with our findings. Not only did we find ample evidence for nouns of LVCs occurring as ordinary nouns in NPs, we also found a variation of (40) in our data. Compare Christensen’s (40) with (41) from our corpus:

- (41) *Yeni yu alambon weda-in.*
 PN 3SG.F laughter hear-1SG
 ‘I heard Yeni’s laughter.’ [Dictionary]

Given the features of LVCs we carefully examined in Section 10.2, we need to reject Christensen’s generalisation. Nouns in LVCs are part of the predicate rather than direct object arguments, and they typically behave as ordinary nouns when they occur outside of LVCs. However, we need to concede that LVCs are not fully productive and that there are also idiosyncrasies in our data. Some of the constructions in the following sections indeed have elements that cannot occur outside LVCs. All such cases are made explicit throughout this chapter. We conclude that the status of LVC lexicalisation varies between different constructions. In some of them, an erstwhile noun has probably been lost after the LVC was lexicalised. Maybe this was the case with *ambon* ‘laughter’ in the Yonggom dialect - but certainly not in Kawip.

10.3.2 Light verb *tani* ‘die’

The light verb *tani* ‘die’ takes either a noun or an adjective as a complement and designates that an undergoer subject is effected negatively. There are two types of this construction: one referring to human undergoers and the other to non-human undergoers. In both cases, the light verb conveys a meaning more like ‘suffer from’ or ‘hit by’ instead of the semantics of the full verb ‘die’. We start by looking at the construction referring to human undergoers. Below are all known instances of this construction type.

- (42) *kok tani* ‘to suffer from bitterness’
olok tani ‘to miss someone; to long for someone’

⁹There is no information about how Christensen elicited negative evidence.

<i>monop tani</i>	‘to feel tired’
<i>monopni tani</i>	‘to feel hungry’
<i>nimin tani</i>	‘to suffer from heat’
<i>telep tani</i>	‘to feel pain (when a wound is touched)’
<i>teng tani</i>	‘to feel itchy’
<i>yuluk tani</i>	‘to freeze’

The non-verbal elements in (42) comprise nouns (*olok* ‘longing, pity’, *telep* ‘pain from a wound’) and adjectives (*kok* ‘dry’, *teng* ‘itchy’, *monop* ‘tired’, *monopni* ‘hungry’, *nimin* ‘hot’, *yuluk* ‘cold’). Somewhat puzzling is the fact that *kok* ‘dry’ is used to denote ‘bitterness’ in the LVC.¹⁰ However, this is in accordance with the tendency to idiomaticity in LVCs (see Section 10.2.7 above).

LVCs of this type have a human referent in the subject function, and the adjective/noun of the LVC denotes either a negative emotion or an unpleasant sensation:

- (43) *Ronald ye amban monop ta-un.*
 PN 3SG.M wife **tired** LV-3SG.F
 ‘Ronald’s wife is tired.’ [Dictionary]
- (44) *Robert=ko kolem monopni ta-en.*
 PN=PTC MOD **hungry** LV-3SG.M
 ‘Robert is very hungry.’ [Dictionary]

Both constructions in (43) and (44) contain an adjective that expresses a bodily state. The semantic contribution of the light verb *tani* is that this state is experienced as being negative by the undergoer. The light verb may tentatively translate to ‘suffer from’. It is important to note that the light verb *tani* is incompatible with positive adjectives:

- (45) **Kup=go kudok tan-ep*
 2SG.F=PTC good LV-2SG
 ‘(Intended:) You are happy.’ [elicited]

Furthermore, this construction cannot be used metonymically, inferring negative emotions from certain experiences or states:

¹⁰The actual adjective denoting ‘bitter’ is *kokmaya*, which is probably related to *kok*.

- (46) **Paskal=go kolomtong tan-on.*
 PN=PTC shortness LV-3SG
 ‘(Intended:) Pascal suffers from being short.’ [elicited]

Examples like (45) and (46) show that LVCs based on *tani* are restricted to negative emotions or unpleasant sensations. They must be experienced directly.

The second type of this construction takes a non-human undergoer. Contrary to the type shown above, LVCs of this second type do not designate emotions/sensations but some other source of negative effect:

- (47) *Nup ambip=ko ok tan-an-un balin.*
 1PL house=PTC water LV-IRR-3SG.F NEG
 ‘Our area cannot be hit by floods.’ [Dictionary]

The examples in (47) demonstrates that the undergoer is non-human. The subject of *tani* is unambiguously the ‘house (here: area)’ as the verb agrees in gender and number with the feminine noun *ambip*. The negative effect is caused by some external event or referent, in this case *ok* ‘water’. The second type seems to be less frequent in our corpus. Some instances found so far are the following:

- (48) *alop tani* ‘to turn yellow/pale’
ok tani ‘to be hit by a flood’
kolang tani ‘to be blocked’

From the nominal elements in (48), only *ok* ‘water’ is transparent. The lexeme *kolang* is no longer in use outside of this construction. As for *alop*, it seems to be an abbreviation of the adjective *alopkono* ‘yellow’.¹¹ All three instances in (48), indicate that an inanimate referent was affected negatively. However, more data (both further constructions of this type and more corpus occurrences of the known constructions) is needed for a more thorough understanding. The remainder of this section will therefore focus on the human type of LVC only.

LVCs based on *tani* from the human type seem to be more productive than LVCs based on other verbs. This is evidenced by the fact that loans

¹¹In contrast, the homophonous *alop* ‘two’ is most likely not related to the LVC *alop tani* ‘to turn yellow/pale’.

from Indonesian can be combined freely with *tani* as long as they designate negative emotions or sensations:

- (49) *panas tani* ‘suffer from heat’
dingin tani ‘freezing’
 But: **kekurangan tani* ‘Intended: suffer from lack’ [elicited]

Kekurangan ‘lack, deficit’ in the last instance of (49) is an abstract noun and not something that a human can feel directly. Therefore it is not compatible with *tani*. However, Indonesian loans like *panas* ‘hot’ and *dingin* ‘cold’ are perfectly fine.

Most of the LVCs of this group are intransitive. However, with *olok tani* ‘to miss someone, to long for someone’ there is at least one transitive construction. The following example is repeated from (22) above:

- (50) *Ena=go nup olok tan-i yamo kemo-d-un.*
 mother=PTC 1PL **longing** LV-INF always do-DUR-3SG.F
 ‘Mother always misses us.’ [Dictionary]

In (50), the subject is *ena* ‘mother’ while the object is *nup* ‘we’. As is the case with other LVCs, the noun *olok* is part of the predicate itself rather than some argument to the verb. Therefore, the argument structure stems from the construction as a whole.

10.3.3 Light verb *ali* ‘wipe’

The light verb *ali* ‘wipe’ forms only a small group of rarely used LVCs. The following instances are attested so far:

- (51) *ambokok ali* ‘to become bald’
eledap ali ‘to dare’
kawang ali ‘to slap, to smack’
kodolok ali ‘to comb’

Most of the first elements of the constructions in (51) are clearly identifiable nouns: *ambokok* ‘bald head’, *kawang* ‘slapping’, *kodolok* ‘head’. The one exception is *eledap* ‘reckless, force’ of which our data is not clear.¹²

¹²*Eledap* could be an adjective ‘reckless’ or a noun ‘force, recklessness’. More data is needed. In the glosses, we decided for ‘reckless’.

Here are some examples in full sentences:

- (52) *Ne=go ambokok al-o-den.*
 1SG=PTC bald.head LV-3SG.M-PFV
 ‘I have become bald.’ [Fieldnotes]
- (53) *Kep=ko eledap al-e win-i balin.*
 2SG.M=PTC reckless LV-SM go-INF NEG
 ‘Don’t dare to go.’ [Fieldnotes]
- (54) *Kip tana kawang al-i yamo kol-ime.*
 2PL child slapping LV-INF always stop-2PL.IMP
 ‘Stop slapping your kids!’ [Dictionary]
- (55) *Ne ena=go yu kodolok ale-d-un.*
 1SG mother=PTC 3G.F head LV-DUR-3SG.F
 ‘My mother is combing her hair.’ [Fieldnotes]

Constructions based on *ali* ‘wipe’ can be intransitive as in (53) or transitive as in (54). The argument indexing in (52) is somewhat surprising. Although the subject is 1SG, the index on the verb is 3SG.M. This is probably because of the semantic role of the clause subject which is an undergoer with little volatility or control over the event.

10.3.4 Light verb *wini* ‘go’ and *bomi* ‘walk’

This section deals with *wini* ‘go’ and *bomi* ‘walk’ as part of LVCs. Besides being part of LVCs, they can be also part of auxiliary constructions (see Section 11.6.5). The difference between these two is that in an LVC, *wini/bomi* combines with a noun, whereas in a auxiliary construction, *wini/bomi* stands with a verb. However, the semantic contribution of *wini/bomi* is in both cases rather similar, making the distinction between LVCs and auxiliary constructions based on word classes somewhat artificial. In any case, both structures represent complex predicates as outlined in the introductory section of this chapter.

LVCs with *wini* ‘go’ and *bomi* ‘walk’ encode some kind of motion. In all constructions of this group, *wini* ‘go’ contrasts systematically with *bomi* ‘walk’. The difference is of an aspectual nature, as outlined in Section 10.2.6 above. For details regarding this pair of verbs, see below.

The following instances have been found so far:

- (56) *bat wini/bomi* 'to hunt'
edemtun wini/bomi 'to walk backwards'
kabam wini/bomi 'to get lost, go astray'
kilin wini/bomi 'to get lost, go astray'
milap wini/?bomi 'to hide oneself'
nemen wini/bomi 'to roll'
towot wini/bomi 'to visit'
wan wini/bomi 'to check, examine'

Elements that are clearly nouns in the constructions of (56) are *bat* 'a hunt', *edemtun* 'backside', *milap* 'hideout' and *towot* 'guest', whereas the two lexemes meaning 'wrong', i.e. *kabam* and *kilin*, are adjectives, since they can modify NPs as in *kim kabam/kilin* 'the wrong way'.¹³ More puzzling are *nemen* and *wan*, which occur in *nemen wini* 'to roll' and *wan wini* 'to check, examine'. They do not exist outside of these constructions. They were probably full nouns at an earlier stage and got lost after the corresponding LVCs lexicalised. In combination with *wini/bomi*, they behave like typical LVCs.

The most versatile noun in (56) is *milap* 'hideout'. It appears not only in *milap wini* 'to hide oneself (lit. hideout go)' but also in *milap balaki* 'to hide oneself (lit. hideout disappear)' and the transitive *milap kombi/yali* 'to hide sth. (lit. hideout put)'. Furthermore, the semantic contrast between *milap wini* and *milap bomi* deviates from all other pairs in (56) (see below).¹⁴

Here are some example sentences using LVCs based on *wini* 'go' and *bomi* 'walk':

¹³The semantic difference between *kabam* and *kilin* is rather subtle. Both are primarily related to locations, so one can be in the wrong garden (*yongbon kabam*) but not take the wrong child (**tana kabam*) with him. Regarding the LVCs, *kabam wini* 'go wrong' is neutral regarding the goal, i.e. one can go to the wrong house, the wrong village, etc., whereas *kilin wini* is used when someone gets lost in the jungle.

¹⁴One can claim that the combinations with *milap* 'hideout' are not LVCs at all. An alternative view would analyse *milap* as a locational argument of full verbs. Hence, *milap wini* is literally just 'go to a hideout', *milap balaki* 'disappear in a hideout', etc. There is not enough data yet to rule out such an analysis. We do, however, prefer an inclusive approach that includes combinations which might not actually belong to this category despite similarities. A less inclusive approach would render such combinations invisible for further scrutiny.

- (57) *ta kedo okun-e ton bat wen-en.*
 and then like.that-SM fish hunt go-3SG.M
 ‘and then he went to find fish like (the day before).’
 [muyu007:035]
- (58) *Galus=ko ye yongbon wan boma-d-en.*
 PN=PTC 3SG.M garden check LV-DUR-3SG.M
 ‘Galus is checking the traps in his garden.’ [Dictionary]
- (59) *Kaduk=ko towot man-an-ip=ko kadap mo*
 person=PTC guest come-IRR-2/3PL=PTC many just
kan-e man-an-ip=ko ...
 take:SG.O-SM come-IRR-2/3PL=PTC
 ‘When people will come visit (us), they will bring many (cigarettes)
 and ...’ [muyu017:005]

In (59), we see that *wini* can be replaced by *mini* to denote ventive motion. The directional contrast of itive vs. ventive motion is a fundamental feature of the basic motion verbs in Muyu (see Section 3.3.1) and also exploited in LVCs. Naturally, the frequency of *mini* ‘come’ in LVCs depends on the resulting meaning and in which contexts it is likely to be used. For example, *bat* is virtually always combined with *wini* ‘go’ rather than *mini* ‘come’, since speakers tend to talk about the hunter’s perspective (someone going out to hunt) rather than someone else’s point of view (someone who witnessed someone else coming to hunt, e.g. the perspective of the prey).

We now turn to the aspectual values encoded in these constructions. The contrast between *wini* ‘go’ and *bomi* ‘walk’ in LVCs represents an aspectual distinction that we call **bound** (*wini*) vs. **unbound** (*bomi*) aspect in this study. These aspectual values allow for several interpretations, depending on the context. Compare the following examples:

- (60) *Sekolah tana ye ambip wan win-in.*
 school(BI) child 3SG.M house check LV-1SG
 [A student did not show up in class today:]
 ‘I check on a student at his house.’ [Fieldnotes]
- (61) *Maria=go yu yongbon wan boma-un.*
 PN=PTC 3SG.F garden check LV-3SG.F
 [Mary has several gardens with each containing many plants:]

‘Maria checks her gardens.’ [elicited]

In (60), the checking event takes place once and at one location, hence it is expressed with the bound aspect. In contrast, the checking event of (61) is related to several locations and hence an extended temporal duration; the unbound aspect is needed here. Note that it is not possible to discern argument number (many gardens) from event number (many checkings) in (61). However, if she only has one garden, bound aspect is used:

(62) *Maria=go yu yongbon wan wun-un.*
 PN=PTC 3SG.F garden check LV-3SG.F

‘Maria checks her garden. (=1 garden)’ [elicited]

If a speaker wants to express that Maria is checking on one garden repeatedly, s/he can use the periphrastic habitual aspect construction with the auxiliary *kemi* (see Section 11.6.2) as in (63). Additionally, many gardens can also be checked repeatedly as in (64).

(63) *Maria=go yu yongbon wan wen-e kem-un.*
 PN=PTC 3SG.F garden check LV-SM do-3SG.F

‘Maria always checks her garden. (=1 garden)’ [elicited]

(64) *Maria=go yu yongbon wan bom-e kem-un.*
 PN=PTC 3SG.F garden check LV-SM do-3SG.F

‘Maria always checks her gardens. (>1 garden)’ [elicited]

The difference between (63) and (64) lies in the argument number, i.e. the number of gardens, rather than in the event number, since both instances denote several events. Therefore, we see that the interpretation of the aspectual value (bound vs. unbound) depends on the syntactic and semantic context. It can either relate to argument number or event number.¹⁵

Bound and unbound aspect are often ambiguous between argument-number

¹⁵However, an alternative analysis would be the following: We can distinguish between an inner aspect (relating to events) and outer aspect (relating to occasions). Then (62) denotes a single event on a single occasion, (61) denotes multiple events on a single occasion, (63) denotes separate single events at several occasions, and, finally, (64) denotes multiple events at several occasions (cf. Cusic 1981:58). We find such an approach attractive and a promising prospect for future research. However, it would require further detailed scrutiny of other parts of the Muyu verbal system, which goes clearly beyond the scope of this study.

and event-number interpretations. This has to do with the fact that Muyu NPs do not have number marking, making the arguments themselves ambiguous. However, number can be denoted explicitly by using quantifiers, in which case event number (marked by the choice of light verb) and argument number (marked by the quantifier) can be combined. Compare the following examples (since the predicate is intransitive, argument number is also marked on the subject index here):

- (65) *Bot mim alangbodim nemen wen-en.*
 stone one ravine roll LV-3SG.M
 ‘One rock rolled down the ravine. (1 rock, at once)’ [elicited]
- (66) *Bot kadap alangbodim nemen win-ip.*
 stone many ravine roll LV-2/3PL
 ‘Many rocks rolled down the ravine. (>1 rock, all at once)’
 [elicited]
- (67) *Bot mim alangbodim nemen boma-en.*
 stone one ravine roll LV-3SG.M
 ‘One rock rolled down the ravine. (1 rock, continued over a longer distance with stops)’ [elicited]
- (68) *Bot kadap alangbodim nemen boma-ip.*
 stone many ravine roll LV-2/3PL
 ‘Many rocks rolled down the ravine. (>1, not all at once)’
 [elicited]

The interesting cases are those where bound aspect meets plural arguments (66) and where unbound aspect meets singular arguments (67). In these cases, aspect cannot be interpreted as related to the argument number. In (66), all rocks roll down the ravine at once, whereas in (67), a single rock rolls down a longer path, making several stops along the way but eventually continuing to roll down. By being explicit about argument number, speakers gain full control of event number.

One constructional pair that deviates from this systematic distinction is *milap wini* vs. *milap bomi*. As we have seen above, the former is used to denote ‘hide oneself’ and its noun is also combined with other verbs, e.g. *milap balaki* ‘hide oneself (lit. hideout disappear)’, *milap kombi* ‘hide sth. (lit. hideout put)’. Presuming the bound-unbound distinction introduced

above, we would expect that *milap wini* relates to single events (i.e. ‘hide (once)’) or single arguments (i.e. ‘one person is hiding’). Furthermore, we would assume *milap bomi* to be used for multiple events (i.e. ‘hide (several times)’) or plural arguments (i.e. ‘many persons are hiding’). However, this is not the case. The variant with *wini* refers to any hiding event, independent of number of events or arguments. In contrast, *milap bomi* actually denotes an event in which a subject is walking around inside the hideout. This event is probably also aspectually unbound, but it does not contrast with *milap wini* in the same way as the other LVC pairs.

To summarise our findings: LVCs of this group all encode some kind of motion, hence the use of a motion verb as the light verb. The pairing of *wini* and *bomi* encodes an aspectual distinction of bound and unbound aspect. A similar aspectual pairing of LVCs is found with *moni* vs. *wai* (see Section 10.3.6).

10.3.5 Light verb *kombi* ‘put (sg.obj.)’ and *yali* ‘put (pl.obj.)’

This group of LVCs is based on the light verbs *kombi* ‘put (sg.obj.)’ and *yali* ‘put (pl.obj.)’. Compared to other light verbs, *kombi* and *yali* seem to be less semantically weak. In many of the constructions below, the use of a ‘put’-verb is still comprehensible, albeit sometimes in a more metaphorical manner. This raises the question if constructions with *kombi* are really LVCs or simply verb phrases with a full verb and an argument. This issue will be addressed at the end of this section.

The following instances have been found so far:

- | | | |
|------|-------------------------|-------------------------|
| (69) | <i>adut kombi</i> | ‘to prohibit’ |
| | <i>bomot kombi</i> | ‘to get harmed’ |
| | <i>madet kombi/yali</i> | ‘to store, save’ |
| | <i>milap kombi/yali</i> | ‘to hide sth.’ |
| | <i>nimin kombi/yali</i> | ‘to heat sth. up’ |
| | <i>nong kombi/yali</i> | ‘to set a trap’ |
| | <i>omkap kombi</i> | ‘somersault, salto’ |
| | <i>ot kombi/yali</i> | ‘to pay a dowry/a fine’ |
| | <i>towok kombi/yali</i> | ‘to invite’ |

With one exception, all first elements in the constructions listed in (69) are

well established nouns: *adut* ‘prohibition’, *bomot* ‘harm, bad luck’, *madet* ‘stock’, *milap* ‘hideout’, *nong* ‘string, rope’, *omkap* ‘sago offshoot’, *ot* ‘money’, *towok* ‘invitation’. The only exception is *nimin* ‘hot’ which is an adjective rather than a noun. Most of the nouns contribute to the overall meaning in a rather transparent fashion. Merely *omkap* ‘sago offshoot’ seems a little surprising since the overall LVC meaning is ‘somersault’.¹⁶ The high flexibility of *milap* ‘hideout’ to occur in several LVCs is addressed in Section 10.3.4.

Considering the choice of light verb, i.e. whether *kombi* or *yali* is used, the constructions listed in (69) show a clear regularity. If the LVC is transitive, both *kombi* and *yali* are available and denote the same verbal number distinction as their full verb variants. However, if the LVC is intransitive, only the singular verb *kombi* can be used as its light verb. For example, someone can heat up one object (*nimin kombi*) or many objects (*nimin yali*), whereas someone somersaults with no object at all (hence, *omkap kombi*).¹⁷

Here are some examples with LVCs based on *kombi* and *yali* in full sentences:

- (70) *Yulia yu ot kan-e wen-e ot ambip=tem*
 PN 3SG.F money take:SG.O-SM go-SM money house=in
madet komb-u-den.
 store LV-3SG.F-PFV
 ‘Yulia saves her money at the bank.’ [Dictionary]
- (71) *Yoap ye woya=go yemen nimin kombe-d-un.*
 PN 3SG.M grandmother=PTC taro hot LV-DUR-3SG.F
 ‘Yoap’s grandmother was heating a taro.’ [Dictionary]
- (72) *Yi=go yi ambip win-i yeman nup towok yal-ip-ten.*
 3PL=PTC 3PL house go-INF for 1PL guest LV-2/3PL-PFV
 ‘They invited us to their house.’ [Fieldnotes]

¹⁶The compound *omkap* consists of the nouns *om* ‘sago’ and *kap* ‘offshoot, seed’. There is obviously a metaphor at work that seems to be not unattested in other languages. Compare Muyu *omkap kombi* to German *Purzelbaum* ‘somersault’ which is composed of *purzeln* ‘to tumble’ and *Baum* ‘tree’. The same metaphor is probably used in *muduyonkap moni* ‘to somersault’ discussed in Section 10.3.6.

¹⁷The case of *adut kombi* ‘to prohibit’ is more complex. Although it is not strictly intransitive, it seems to be compatible with complement clauses only, but not with NP objects.

- (73) *Monwan-e ok=tem omkap komb-i=mo=go*
 jump-SM water=in somersault LV-INF=always=PTC
kolongg-e.
 stop-2SG.IMP
 ‘Stop jumping and somersaulting into the water.’ [Dictionary]

The LVCs in (70) and (71) are transitive and use the singular verb *kombi* as a light verb. Hence, *ot* ‘money’ as a singular mass is saved and a single piece of *yemen* ‘taro’ is heated. In contrast, the invited persons in (72) are numerous and require the plural verb *yali*. Finally, (73) makes use of an intransitive LVC for which only *kombi* is available as a light verb. Note that the denoted event (i.e. somersaulting) is not singular since the construction denotes an iterative event. Therefore, the restriction to *kombi* really depends on the transitivity of the LVC rather than aspect.

As mentioned at the beginning of this section, there is an alternative analysis to constructions based on *kombi/yali*. This view claims that the predicate consists in the full verb *kombi* ‘put (sg.obj.)’ or *yali* ‘put (pl.obj.)’ that is complemented by an ordinary object argument. The rationale behind this view is that these verbs are less semantically weak compared to other light verbs and the event of putting is still transparent. For example, *ot kombi* ‘to pay’ is better translated as ‘put money’ which better fits the literal meaning of its parts. However, we will argue in the remainder of this section that such an analysis runs into certain problems with the syntactical behaviour of *kombi/yali*-based structures. These problems are avoided by analysing them as LVCs. For the sake of brevity, we will present our argumentation mostly with the singular verb *kombi*. It is equally valid for *yali*.

Firstly, the argument structure of LVCs is such that the noun of the LVC cannot be analysed as an argument (see also Section 10.2.2 above). This is also the case with *kombi*-constructions. Take a look at example (70) again, in which *madet kombi* ‘to save’ contains the noun *madet* ‘stock’. The clausal subject is *Yulia* while *ot* ‘money’ represents the object being saved. Since the core arguments of the clause are already filled, they are not available as possible functions of *madet* ‘stock’. A conceivable function for *madet* would be to denote the location where the money is put. However, this function is already occupied by *ot ambip=tem* ‘in the bank’. There is simply no slot in the clause available where *madet* could go. Therefore, *madet* is part of the

predicate itself by forming an LVC together with *kombi*.

Secondly, some constructions do show idiomaticity. The meaning of *bomot kombi* ‘to get harmed’ is somewhat surprising. Considering the semantics of *kombi* ‘put (sg.obj.)’, we would expect the subject of *bomot kombi* to be the actor, i.e. the person who inflicts harm on a patient. This is not the case, however. Examples like the following (repeated from (20) above) show the subject of *bomot kombi* in the semantic role of undergoer:

- (74) *Kep tulum win-i balin. Wen-e bomot komb-an-ep.*
 2SG.M alone go-INF NEG go-SM harm LV-IRR-2SG
 ‘Don’t go alone. You will get harmed.’ [Dictionary]

The fact that the subject of the LVC *bomot kombi* is an undergoer while the subject of the full verb is an actor is evidence for its idiomatic meaning. Idiomaticity is one of the features of LVCs (see Section 10.2.7). The sum is more than its parts; argument structure and lexical meaning must be attributed to the construction as a whole. Therefore, *bomot kombi* ‘to get harmed’ is analysed as an LVC rather than an ordinary verb phrase.

Thirdly, verbal number does not relate to the noun inside the LVC but to an actual argument outside the predicate. To demonstrate this, we look at the contrast between *ot kombi* and *ot yali* ‘to pay a dowry/a fine’. Compare the following examples:

- (75) *Ne amban yu tit=ko ot komb-a-den.*
 1SG wife 3SG.F dowry=PTC money put:SG.O-1SG-PFV
 ‘I have paid the dowry of my wife.’ [Fieldnotes]
- (76) *Lukas ye taman-a yi tit=ko ot*
 PN 3SG.M younger.sister-PL 3PL dowry=PTC money
yal-ip-ten.
 put:PL.O-2/3PL-PFV
 ‘They have paid the dowry of Lukas’ sisters.’ [elicited]

The relevant object noun in both examples above is *tit* ‘dowry’. In (75), the object is in singular and the subject pays a single dowry for one wife. In contrast, the object in (76) is marked plural by the choice of verb and the dowries paid relate to several women. The noun inside the LVC, *ot* ‘money’, is not affected by the verbal number alternation. One could object that the multiple dowries require *ot* ‘money’ in plural too. However, *ot* is a mass noun

and usually does not trigger plural verbs. Moreover, dowries in Muyu culture are always composed of many items, like tobacco, arrows, sago, bananas, pork and (nowadays) cash. In short, the singular/plural distinction reflected in the choice of verb in the examples above relates to *tit*, not *ot*. Therefore, *ot* is part of the predicate rather than the argument.

The three points outlined above demonstrate that *kombi/yali* are light verbs in the constructions listed in (69). However, most of the time these two verbs are used as full verbs in our corpus. They are highly frequent verbs and lexicalisation seems to affect only a few noun-verb combinations. Moreover, even as light verbs they remain rather transparent semantically.

10.3.6 Light verbs *moni* and *wai*

This group of LVCs is based on the light verbs *moni* and *wai* whose meanings as full verbs are no longer transparent.¹⁸ The opposition of the two verbs marks an aspectual distinction, as outlined in Section 10.2.6. Bound aspect is covered by *moni*, while unbound aspect is denoted with *wai*. So, for example:

- (77) *konoduk moni* ‘to stumble (once)’
 konoduk wai ‘to stumble (several times)’

Since our data for the aspectual pair *wini* vs. *bomi* is more complete and our space here limited, the reader is referred to Section 10.3.4 to see details on this aspectual distinction.

However, not all LVCs that have *wai* as their light verb belong to this group. There is a larger group of LVCs based on *wai* that do not involve aspect, hence they are incompatible with *moni*. This other group of LVCs is covered in Section 10.3.9.

The members of the *moni/wai* group do not seem to form a semantically coherent class. The following instances have been found so far:

- (78) *ikbot moni/wai* ‘to dip/submerge, to cook food covered by
 hot coals’
 kawet moni/wai ‘to cook food covered by banana leaves and
 stones’
 kibik kabak moni/wai ‘to squirm’

¹⁸The meanings of the homophonous *moni* ‘buy’ and *wai* ‘pick (pl.obj.)’ seem too distant to establish a relation to the light verb.

<i>konoduk moni/wai</i>	‘to stumble’
<i>muduyonkap moni/wai</i>	‘to somersault’
<i>tambang moni/wai</i>	‘to slap’
<i>yedo moni/wai</i>	‘to build a house/hut from yedo (=Nibung leaves)’

The constructions in (78) all have straightforward nouns: *ikbot* ‘submersion’, *kawet* ‘leaf oven’¹⁹, *kibik kabak* ‘squirming’, *konoduk* ‘tip of toe’, *tambang* ‘clapping’, *yedo* ‘leaf of a Nibung palm’. The only possible exception is *muduyonkap*, whose meaning is not clear. It might be a compound from the elements *mudu* ‘tip of a boat’, *yon* ‘foot’ and *kap* ‘offshoot’. If this is the case, it may have some sort of metaphoric relation to the event denoted (i.e. somersault).²⁰

Here are some sentential examples:

- (79) *Pius ye adi=go niyap kawet mon-o-den.*
 PN 3SG.M father=PTC cassowary leaf.oven LV-3SG.M-PFV
 ‘The father of Pius cooked cassowary (with a traditional leaf oven).’
 [Dictionary]
- (80) *Kaduk mim kaduk kodonidep=bet tambang mon-ip-ten.*
 person one person not.known=OBL clapping LV-2/3PL-PFV
 ‘Someone was slapped by unknown people.’ [Dictionary]
- (81) *Tana belon mim ap kobi ombet kok-e muduyonkap mon-o-den.*
 child small one tree on OBL.DEM fall:SG.S-SM somersault
 LV-3SG.M-PFV
 ‘A small child fell from a tree and somersaulted.’ [Dictionary]

¹⁹A leaf oven is a package of food wrapped in banana leaves. This package will be cooked on glowing coals.

²⁰This might sound far fetched at first, but compare this hypothetical compound to the German compound denoting the exact same event: *Purzelbaum* ‘somersault’ is composed of *purzeln* ‘to tumble’ and *Baum* ‘tree’. If trees can be likened to somersaults, why not tips of boats and offshoots? Compare this construction to *omkap kombi* ‘to somersault’ in Section 10.3.5 which seems to be based on the same metaphor.

10.3.7 Light verb *nai* ‘put into’

A small group of LVCs is based on the light verb *nai* ‘put into’ or its allomorph *nali*. In some cases, the full verb semantics is still transparent, while in others it is not. The group as a whole does not have particular semantic coherence.

Here are the instances that have been found so far:

- | | | |
|------|-------------------------|----------------------------|
| (82) | <i>nek nai</i> | ‘to crawl, advance slowly’ |
| | <i>ok nai</i> | ‘to water’ |
| | <i>towong nai</i> | ‘to whistle’ |
| | <i>upneng nai/(wai)</i> | ‘to breathe’ |
| | <i>tibit nali</i> | ‘to support’ |

The LVCs listed in (82) make use of the nouns *nek* ‘kind of worm’, *ok* ‘water’, *towong* ‘whistling’, *upneng* ‘breath’ and *tibit* ‘pole’. As can be seen, the meaning of *nek nai* ‘to crawl, advance slowly’ is based on a metaphor, likening the subject to a worm. The LVC *upneng nai* ‘to breathe’ is the only instance in this group that has a variant *upneng wai*. We could not find any semantic difference between the two.

Here are some examples with LVCs of this group in whole sentences:

- | | | |
|------|--|---------------|
| (83) | <i>Om ok na-a engg-an-un.</i> | |
| | sago water LV-1SG.IMP say-IRR-3SG.F | |
| | ‘She would water the sago.’ | [muyu013:049] |
| (84) | <i>Amnom jadi kaduk tabin ege towong na-en</i> | |
| | night so(BI) person clear DEM.here whistle LV-3SG.M | |
| | <i>ini awon wedambol-ok balin.</i> | |
| | this(BI) pig hear-SBJV NEG | |
| | ‘It was night so the man whistled clearly but the pig did not hear.’ | [muyu005:046] |
| (85) | <i>Ayi ap kobi kawan-a engg-e nek na-i adep</i> | |
| | lizard tree on climb-1sG.IMP say-SM crawl LV-INF like | |
| | <i>kemo-d-un.</i> | |
| | do-DUR-3SG.F | |
| | ‘The lizard was crawling slowly on the tree.’ | [Dictionary] |

- (86) *On odo momb-ip-ten onet mokalik upneng*
 bird DEM shoot-2/3PL-PFV but still breath
na-d-en.
 LV-DUR-3SG.M
 ‘The bird has been shot but it is still breathing.’ [Dictionary]

10.3.8 Light verb *wani* ‘pick (sg.obj.)’

A small group of LVCs are based on the light verb *wani* ‘pick (sg.obj.)’. Constructions of this group do not occur in pairs, although the full verb *wani* ‘pick (sg.obj.)’ forms a pair with the plural verb *wai* ‘pick (pl.obj.)’. This can be seen as evidence that light verbs lexicalise independently of their lexical origin.

Here are the instances that have been found so far:

- (87) *batbat wani* ‘to be fresh’
bengmot wani ‘to pinch’
kaweng wani ‘to become hoarse’
yimin wani ‘to limit, restrict’

The nouns occurring in these constructions are *bengmot* ‘a pinch’, *kaweng* ‘hoarse(ness)’²¹ and *yimin* ‘boundary, limit’. However, *batbat* is not used outside the light verb construction. It was probably an earlier noun that was lost after the LVC lexicalised.

One of our consultants points out that in three of the four pairs in (87), the semantics of the full verb (*wani* ‘pick (sg.obj.)’) is still transparent. For example, pinching is a similar motion as picking, and becoming hoarse is as if someone was squeezing your throat. However, these relations are clearly metaphorical and the combinations in (87) are fully lexicalised LVCs.

Here are some examples of these LVCs in full sentences:

- (88) *Kep emba batbat wan-ok engg-e angg-o-den.*
 2SG.M father become.fresh LV-SBJV say-SM lie-3SG.M-PFV
 ‘Your dad is resting to refresh himself.’ [Dictionary]
- (89) *Kot okun-e, “Ah emba ya, ola-ngg-in,*
 CONJ like.that-SM INTJ father yes(BI) advice-3SG.EXP-1SG

²¹At the moment, it is not clear whether *kaweng* ‘hoarse(ness)’ belongs to the word class of nouns or adjectives.

ola-ngg-in *ogo, wedambil-i adep balin gole,*
advice-3SG.EXP-1SG DEM listen-INF like NEG CONJ

bengmot wan-an-an” *engga-un.*

pinching LV-IRR-1SG say-3SG.F

[Upon hearing criticism that she should give her sister-in-law better advice:]

‘ “Oh father yes, I advised her many times but she just would not listen, so I will pinch her.”, she said.’ [muyu009:075]

(90) *Ne tinggi kenambun bengmot wan-u-den.*

1SG hand strong pinch LV-3SG.F-PFV

‘She has pinched my hand strongly.’ [Dictionary]

(91) *Awon kop kadap an-i=go kep otbob kaweng*

pig fat much eat-INF=PTC 2SG.M language hoarseness

wan-an-on.

LV-IRR-3SG.M

‘Your voice will become hoarse if you eat a lot of lard.’

[Dictionary]

(92) *Ambikin=ko eyani embet yimin wan-ep=ko?*

land=PTC down.here OBL.DEM.this limitation LV-2SG=Q

‘Do you limit the land from here?’ [Dictionary]

10.3.9 Light verb wai

Light verb constructions based on the verb *wai* constitute the largest group of LVCs in our corpus. The origin of the light verb is unclear and no full verb meaning can be given here.²² The light verb *wai* as found in the constructions listed below must not be confused with the light verb that is a member of the aspectual pair *moni* vs. *wai* (see Section 10.3.6). None of the nouns listed in (93) are compatible with *moni*. There is probably a diachronic relationship

²²There is a verb *wai* ‘pick (pl.obj.)’ which would fit with *wani* ‘pick (sg.obj.)’ outlined in Section 10.3.8. However, there does not seem to be a relation here. Firstly, there is no systematic contrast in verbal number in the LVCs, as for example with *kombi* ‘put (sg.obj.)’ and *yali* ‘put (pl.obj.)’ (see Section 10.3.5). Secondly, as mentioned in 10.3.8, (metaphorical) relations of the LVCs based on *wani* ‘pick (sg.obj.)’ to the action of picking are still transparent to our consultants. This is not the case with LVCs based on *wai*.

between all LVCs based on *wai*, but we decided to analyse them as two different groups: one with aspectual alternation and the other without.

The following light verb constructions with *wai* are known so far:

(93)	<i>alun wai</i>	‘to admire, praise’
	<i>angginot wai</i>	‘to complain’
	<i>anggokono wai</i>	‘to coddle, pamper’
	<i>itkang wai</i>	‘to sharpen’
	<i>kibiyum wai</i>	‘to dream’
	<i>kidinok wai</i>	‘to sweat’
	<i>kinkin wai</i>	‘to pray’
	<i>konobin wai</i>	‘to blink (eyes)’
	<i>kulungot wai</i>	‘to growl’
	<i>madan wai</i>	‘to sharpen’
	<i>napnap wai</i>	‘to drive away, cast out’
	<i>nengneng awot wai</i>	‘to swear an oath’
	<i>otkaden wai</i>	‘to complain’
	<i>tabulu wai</i>	‘to turn, make so. turn around’
	<i>tinggi tambang wai</i>	‘to clap hands’
	<i>tinggi yut wai</i>	‘to sign (a document)’
	<i>tonggoleng wai</i>	‘to groan, snore’
	<i>umkan wai</i>	‘to bleed’
	<i>upneng (nai)/wai</i>	‘to breathe’
	<i>wanggin wai</i>	‘to praise, support’
	<i>webuk wai</i>	‘to hit with a stick (sago processing)’
	<i>yedonombin wai</i>	‘to fizz’
	<i>yibi wai</i>	‘to wag (animal tail)’

Most of these LVCs contain transparent nouns as their first elements. Semantically, we can see several groups: bodily processes or activities that lead either to the emission of sound (clapping, groaning/snoring, growling, fizzing) or bodily fluids (blood, sweat) or gas (breath). As a close semantic neighbour, we have specific activities that are also characteristic of sound emissions like admiring, complaining, swearing an oath, praying and praising. Then there are other bodily processes that are not related to the emission of sound (blinking, wagging one’s tail, dreaming). Finally, there are several seemingly unrelated constructions that are actions and have a certain impact on the undergoer (sharpen, sign a document, drive away, turn something, hit

with a stick). In contrast to the other groups, these last LVCs are neither bodily processes nor refer to the emission of sound (at least not directly). There is only one element that cannot occur outside the LVC: *tabulu* from *tabulu wai* ‘to turn, make s.o. turn around’. The original noun was probably lost after the LVC lexicalised.

The LVC *upneng wai* ‘to breathe’ is in free alternation with *upneng nai* (see Section 10.3.7). We were not able to find any semantic difference between the two.

Here are some examples from the corpus:

- (94) *Kedo ne tinggi ya tob-un go kenambun umkan*
 and.then 1SG hand at bite-3SG.F PTC strongly **blood**
wa-in go ambo, ambo Lukas odo ne alambon
 LV-1SG PTC brother brother PN DEM 1SG laughing
belewa-en o
 make.efforts-3SG.M PTC
 [After putting his hand in a mousehole:]
 ‘It bit my hand and I bled strongly and then brother Lukas laughed
 at me.’ [muyu040:039]
- (95) *Ne ya mo ipmon-e, kulungot wa-n-e,*
 1SG at only snuffle-SM **growling** LV-N-SM
okemo-d-ip kole yo
 do.like.that-DUR-2/3PL CONJ PTC
 [Expressing frustration about disobedient dogs at hunt:]
 ‘They were always snuffling and growling at me, so ...’
 [muyu031:015]

Further instances include the following:

- (96) *Kibik amnom kup kibiyum wa-in.*
 tiday night 2SG.F dream LV-1SG
 ‘I dreamed of you last night.’ [Dictionary]
- (97) *Selus=ko Kuli ye ambip=tem kinkin wa-d-en.*
 PN=PTC lord 3SG.M house=in spirit LV-DUR-3SG.M
 ‘Selus is praying in the church.’ [Dictionary]

- (98) *Nong kan-e* *tabulu wa-ime!*
 rope take:SG.O-SM turn LV-2PL.IMP

‘Twist that rope!’

[Dictionary]

10.4 Summary

To summarise, light verb constructions are complex predicates in which a noun/adjective combines with a light verb to form a unitary predicate. Syntactically, we found several grammatical tests to prove that both elements form a quasi-lexical unit. Semantically, they can form idiomatic meanings, but in many cases, the meanings of the parts are quite transparent.

LVCs can be grouped according to their light verb. We distinguished nine groups of light verb constructions. In three of them, the constructions are ordered pairwise with opposing verbs for one and the same nominal element. There are two possible oppositions: an aspectual contrast between bound and unbound aspect and a verbal number contrast between singular and plural argument number.

Only in one group of LVCs do the constructions seem to be productive. All other LVCs are lexicalised and represent fixed combinations that speakers must learn during language acquisition. In a minority of cases, single elements are no longer in use outside the respective light verb construction.

Chapter 11

Complex Predicates II: Multi-Verb Constructions and Auxiliary Constructions

11.1 Introduction

Complex predicates are constructions that are composed of a verb and at least one other lexical item which together predicate as a single unit. Muyu syntax has three main types of complex predicates:

Types of complex predicates:

- (a) LIGHT VERB CONSTRUCTION (LVC): noun/adjective + light verb
- (b) AUXILIARY CONSTRUCTION (AVC): verb + auxiliary verb
- (c) MULTI-VERB CONSTRUCTION (MVC): verb + verb + (verb + ...)

The introductory section to Chapter 10 already gave an outline and a few examples of these three types. As a short summary: light verb constructions consist of a nominal element and a verb, whereas both auxiliary and multi-verb constructions are composed of verbs only.

Light verb constructions are discussed in Chapter 10; the present chapter deals with the two remaining types of complex predicates: auxiliary constructions and multi-verb constructions. Both of them are highly frequent in Muyu discourse and can be considered major topics in Muyu grammar.

MVCs are of special interest because along with having a broad range of functions, they also vary in their syntactic complexity. In this chapter, we describe MVCs as a radial category which has constructions that are more central to the category and others that are more peripheral. Central constructions can be seen as being prototypical for the category as a whole, while peripheral constructions are similar to the central ones but differ in one way or another. The analysis we offer here deliberately avoids a too static categorisation that depends on criterial features.¹

The difference between AVCs and MVCs lies in the status of the final verb. In an MVC, all verbs are full verbs with transparent semantics that can be applied outside of MVCs as single predicates as well. In contrast, the final verb of an AVC is an auxiliary verb which either has weak semantics or contributes only a part of its meaning to the construction. In this respect, AVCs are more similar to LVCs than to MVCs. Furthermore, the functions of AVCs are those which are more commonly seen as grammatical functions cross-linguistically, e.g. aspect and modality, although some of them are also found in MVCs, e.g. in aspect MVCs.

The remainder of this chapter is organised as follows: The initial section presents MVCs as a category with gradient centrality, which means that some constructions are more central than others (§11.2). Then we give an overview of specific construction types (§11.3) and more general types (§11.4). In a next step (§11.5), we broaden our perspective: after discussing two alternative interpretations of Muyu MVCs, we contextualise them cross-linguistically and within the Ok language family. The final section deals with auxiliary constructions (§11.6).

11.2 The Multi-Verb Construction as a radial category

Generally speaking, multi-verb constructions are syntactic units that have multiple verbs within one and the same clause. Here are some examples (the

¹The literature on this topic, mostly discussed under the label ‘serial verb constructions’, is a notoriously harsh battleground for arguments about which features shall be considered in definitions. We will outline the discussion briefly in Section 11.5.3. However, our approach differs from standard approaches in that we do not see the category as a checklist of features but as being organised around prototypes.

component verbs of the constructions are highlighted in bold face throughout the chapter):

- (1) *Ah, **ane-komb-e** **an-em** engg-ip-ten=ki!*
 INTJ, 3SG.M.O-kill-SM eat-1PL.IMP say-2/3PL-PFV=EMPH
 ‘Oh, they wanted to kill and eat him!’ [muyu112:069]
- (2) ***Men-e** ayop ogo **b-e** **kan-ip.***
 come-SM fruit DEM take:PL.O-SM take:SG.O-2/3PL
 ‘They came and collected those fruits.’ [muyu008:014]
- (3) *Ko, **okun-e** **kan-e** **wen-e komb-e,***
 PTC like.this-SM take:SG.O-SM go-SM put:SG.O-2SG.IMP
kol-i balin!
 stop-INF NEG
 [Showing someone how to give water to the chicken:]
 ‘Alright, so take it there and put it down like this, don’t stop!’
 [muyu082:023]

The examples above show clauses that consist mainly of verbs, which is quite common in Muyu. In (1), the first two verbs form an MVC that is a complement clause of the last verb. In contrast, all three verbs in (2) pertain to the same clause but have an additional object NP. Finally, the MVC in (3) contains four verbs, and another clause is juxtaposed to it.

Note that not all verbs in (1) and (3) are part of the MVC, since there are clause boundaries that separate them from the other verbs. Apart from monoclausality, there are further features that distinguish MVCs from other types of constructions. This section deals with core properties by which we define the category MVC for Muyu. Our analysis offers a constructional approach to MVCs and organises them as a radial category.

11.2.1 Overview and key ideas

This chapter proposes an analysis of the Muyu multi-verb construction as a radial category.² By this we mean that constructions in this category are

²The most prominent proposal for a radial category of grammatical constructions was Lakoff’s (1987) analysis of English *there*-constructions. We follow the basic idea of structuring categories in what Lakoff calls a ‘non-classical’ category. However, we do not adopt further assumptions and tenets of cognitive linguistics in general or construction grammar

structured in a way that is illustrated in Figure 11.1. They have a core and a periphery in such a way that particular instances (i.e. tokens) can be located according to their centrality. Some instances are more central than others. There are only a handful of sine-qua-non conditions that must be fulfilled so that we can count the instance as an MVC. In contrast, there are many typical features that are often fulfilled but can be absent in any single instance. Hence, we distinguish between core properties (see Section 11.2.2) and non-core properties (see Section 11.2.3).

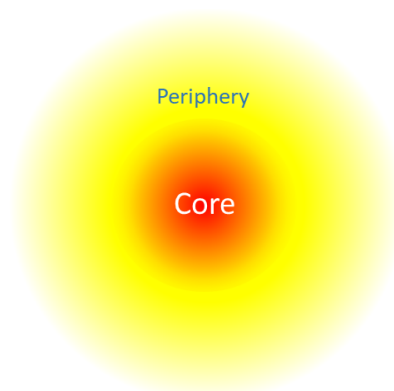


Figure 11.1: Gradient centrality of a multi-verb construction. With a continuous transition from core to periphery.

Furthermore, the category is not defined by only one prototype to which individual instances are compared, but rather, it is characterised by a multitude of construction types that interact with each other. Various kinds of construction types are discussed in Section 11.3 and Section 11.4. Each type has its own core and periphery. The sum of all construction types add up to the category MVC.

Our analysis of the Muyu MVC as a radial category is motivated by the flexible use speakers make of verbs inside a clause. Utterances with multiple verbs simply cannot be carved up in well defined categories that are (a.) broad enough to cover all the existing data, (b.) narrow enough to have some descriptive value and (c.) do not overlap. Naturalistic data tends to be messy. We will discuss our motivation for this analytic decision more thoroughly when we look at the Muyu data in a broader typological

in particular, since this is definitely beyond the scope of this thesis.

perspective (see Section 11.5.3).

One important terminological distinction in this chapter is between ‘composition’ and ‘structure’. We speak of **composition** when we focus on the verb classes which make up a certain type of construction. For example, the caused accompanied motion construction is composed of a verb of taking and a motion verb; the aspect construction is composed of a general verb and an aspectual verb etc. In contrast, the notion of **structure** is reserved for discussing the grammatical and prosodic marking that occurs in particular instances of these constructions. For example, the structure of example XY can be such that two verbs are simply juxtaposed whereas in example YZ the two verbs are separated by an intervening adjunct. Both examples are instances of the same constructions but are realised with a different structure. Composition and structure are orthogonal insofar as the same composition can occur in different structures and the same structure can be found across many different compositions. However, not all compositions are compatible with all structures. Such issues will be discussed according to each construction type individually in Section 11.3.

Another key idea is that we do not make use of semantic features for the definition of the category. All core and non-core properties we propose below are from morphology or syntax. There are two main reasons for this: Firstly, the meanings of different construction types are too variegated, ranging from more “grammatical” meanings such as aspect to more “lexical” meanings such as sequential events. Secondly, more general semantic concepts such as eventhood³ are notoriously hard to define and highly controversial in the literature. Therefore, there are no semantic features that span the category as a whole and would fit as core or non-core property. This does not mean that semantics is completely disregarded. Each construction type is of course defined as a pairing of form and meaning.

11.2.2 Core properties

This section deals with core properties of multi-verb constructions. Each instance of an MVC has these properties, regardless of whether it is more central or more peripheral. Non-core properties are dealt with in Section 11.2.3.

³Eventhood roughly refers to the question of whether the verbs of a given construction refer to a single event or to separate events.

The following properties define the core of the radial category **Multi-verb Construction**:

1. **MULTIPLE VERBS**: MVCs consist of two or more lexical items, all of which are verbs.
2. **SERIAL MARKER -e/-o**: All but the last verb obligatorily end in *-e/-o*, whereas the last verb can be inflected (i.e. finite).
3. **SHARED SUBJECT**: The construction as a whole has a subject argument that is the same for all component verbs.
4. **MONOCLAUSAL**: The construction is part of one and the same clause and has all the properties attributed to clauses.

Each of these properties are elaborated on in the following subsections. The first three of them are simple, while the property **MONOCLAUSAL** is a complex property that includes all important features of clauses. These clause features partly overlap with the core properties of MVCs (see Section 11.2.2.4).

It is crucial to note that the multi-verb construction as presented in this chapter is an analytic category that has been established as an analytic tool to deal with a number of occurrences in our data. This has two very important implications: Firstly, the choice of core properties (and non-core properties for that matter) is motivated by certain analytic decisions and is by no means the only possible way to interpret the given data. Take as an example our first property: **MULTIPLE VERBS**. This property is apt to separate MVCs from light verb constructions (LVC), which are composed of a noun/adjective and a verb. Both MVCs and LVCs share many features and it is conceivable to combine them in a category ‘complex predicate’. Such a category would not have the property **MULTIPLE VERBS** but rather something like **MULTIPLE LEXEMES**.⁴ But other properties such as **SHARED SUBJECT** and **MONOCLAUSAL** would still apply. Secondly, the core and non-core features proposed in this chapter work best for analysing Muyu data.

⁴Of course a category based on the property **MULTIPLE LEXEMES** would need additional properties to distinguish complex predicates from all multi-word combinations that are not joint predicates. Not to mention, a category like this might also necessitate us to take on the difficult task of defining what constitutes a word.

Although similar constructions may be found in other languages, we do not make claims about cross-linguistic features.⁵

11.2.2.1 Property 1: Multiple verbs

As the name of the category indicates, an MVC must consist of multiple verbs. This word class is clearly defined in Muyu via morphological and syntactic features (see Chapter 3 and 7). Prototypical MVCs consist of exactly two verbs but longer sequences are also frequently found.

The verbs that partake in an MVC construction as non-final verbs are as a rule not restricted to this position, but can also occur as final verbs in other constructions. Compare (4) to the examples with simple predicates (5)-(7):

- (4) *kan-e komb-e wan-e, kedo alum-an-on.*
 take:SG.O-SM put:SG.O-SM finish-SM then chop.sago-IRR-3SG.M
 [Having chopped down a sago tree:]
 ‘He makes it free (of leaves and lichens), and then he chops it.’
 [muyu013:022]
- (5) *ye=go katma kan-on=e, nup=ko katma*
 3SG.M=PTC side take:SG.O-3SG.M=DS.SEQ 1PL=PTC side
kan-up=e
 take:SG.O-1PL=DS.SEQ
 [The government provided them with land to plant rubber trees:]
 ‘He took one side and we took the other side and ...’
 [muyu027:011]
- (6) *Ok Widi ya kacang komb-up-ten,*
 river PN at peanut(BI) put:SG.O-1PL-PFV
 ‘We planted peanuts at the Widi river.’ [muyu005:001]
- (7) *Jadi, odo amtobon belon wane-n-ip=ket*
 so(BI) DEM hut small finish-SS-2/3PL=and.then.SS
 ‘So, they finished (building) a small hut and then ...’
 [muyu057:006]

⁵In particular, we do not think that our radial category is apt as a comparative concept (Haspelmath 2010). We do believe, however, that much descriptive work on other languages would benefit from offering similar accounts on multi-verb constructions.

Each of the verbs in (4) is attested as medial or final verb: *kane* as *kanon* and *kanup* in (5), *kombe* as *kombupten* in (6), and *wane* as *wanenip* in (7).

The property MULTIPLE VERBS distinguishes MVCs from light verb constructions (LVCs) and auxiliary constructions (AVCs). LVCs consist of a noun/adjective and a verb, whereas AVCs have auxiliaries that are more restricted as final verbs in simple predicates.

11.2.2.2 Property 2: Serial marker -e/-o

This property concerns the morphological form of the verbs. In an MVC, maximally one verb is inflected as a final or medial verb, i.e. has a subject suffix and can be marked for aspect, mood and switch reference (for details on verbal morphology see Chapter 7). All other verbs of an MVC end in a serial marker *-e/-o* ‘SM’. It appears that there is no semantic difference between the two variants of the serial marker, but *-e* is by far more frequent than *-o*. For further discussion about the status of the serial marker, see Section 11.5.3.

This is the only core property to which there are exceptions. Irregular verbs with vowel roots, i.e. roots ending in /a/, either include an epenthetic *-n* before the serial marker (8) or do not employ a serial marker at all (9).⁶

- (8) *Alop **tanggala-n-e** wan-e,*
 two stick.into:PL.O-N-SM end-SM
 [Making the filter for cleaning the sago:]
 ‘After sticking the two (pieces of wood) into it, she ...’
 [muyu013:031]
- (9) ***Tangga** ane-komb-an.*
 shoot 3SG.M.O-kill-1SG
 [Hunting for pig:]
 ‘I shot and killed it.’
 [muyu004:071]

The verbs *tanggalai* ‘stick into (pl.obj.)’ in (8) and *tanggai* ‘shoot’ in (9) are both irregular verbs with vowel roots. It is not clear yet, under which conditions the epenthetic *-n* is used, but our consultants agree that there is no semantic difference between using the serial marker or uttering the mere

⁶Another possible analysis is that the serial marker *-e/-o* is indeed added to a vowel root, but is later deleted for some phonotactical reason, i.e. /e/ → ∅, /o/ → ∅.

root of these irregular verbs. Only the later represents an exception to the MVC core property SERIAL MARKER *-e/-o*.

The property SERIAL MARKER *-e/-o* distinguishes MVCs from some types of AVCs, in which one verb ends in *-n* or an infinitive form (see Section 11.6).

11.2.2.3 Property 3: Shared subject

This property determines that each verb in an MVC has the same subject argument. As mentioned before, the subject is only marked morphologically on the last verb. All preceding verbs refer to the same subject. Muyu does not allow switch function within MVCs.⁷ In contrast, SHARED OBJECT ARGUMENT is a non-core property (see below), which means that transitive verbs within an MVC can, but need not refer to the same object.

The property SHARED SUBJECT distinguishes MVCs from clause chains, in which subject continuity/discontinuity are both equally possible (see Chapter 12).

11.2.2.4 Property 4: Monoclausal

The property MONOCLAUSAL is actually a complex property, since monoclausality is defined by a whole bundle of features. These features are discussed in Section 9.1, but we will summarise them here briefly: a clause is a syntactic unit that (1.) consists of one predicate and one or more arguments, (2.) has exactly one finite verb in clause final position, (3.) is host to clause clitics, (4.) is the maximum scope of negation and (5.) is the minimum domain of a subject. All these features apply to MVCs and show that they are part of a single clause.

Note that two of these features are already covered by a core property of MVC: clause feature 2 implies the core property SERIAL MARKER *-e/-o*, since only one verb per clause is inflected; clause feature 5 implies the core property SHARED SUBJECT, since ‘minimum domain of a subject’ means that no subpart of a clause can have its own subject. Furthermore, clause feature 4 is related to the non-core property SINGLE DOMAIN OF NEGATION. In contrast to the domain of subject, the scope of negation can be a subpart of

⁷Switch function is often found in languages with serial verb constructions, e.g. when the object of one verb becomes the subject of the second, as in Pseudo-English ‘I hit vase breaks’. Indeed, such constructions are attested in Mian and Fedden (2011:418) discusses them as causative serialization.

the clause (see Section 11.2.3 below). However, the scope of negation cannot exceed clause boundaries.⁸

The property `MONOCLAUSAL` distinguishes MVCs from clause chains, complement clauses and relative clauses (see Chapter 12).

11.2.3 Non-core properties and the periphery of MVCs

The location of a given construction at the center or periphery of the category is determined both by its composition and its structure. In this section we will focus on structure, since structural features are more or less similar across constructions. The composition of a construction, in contrast, is dependent on the construction type (see Section 11.3).

The core properties outlined in Section 11.2.2 are considered *sine-qua-non* conditions for MVCs. If a given multi-word expression does not have all of the core properties, it is not analysed as an MVC. In contrast, the non-core properties are not criterial. Rather they are used to distinguish the center from the periphery, since the category has a radial structure as outlined in 11.2.1 above. A given MVC that has all non-core properties is considered to be at the center. Each lack of a non-core property pushes the construction further to the periphery.

Here are the non-core properties of Muyu MVCs:

1. `CONTIGUOUS ELEMENTS`: The verbs of an MVC tend to be juxtaposed.
2. `SINGLE DOMAIN OF NEGATION`: Negation tends to have scope over the whole MVC, i.e. all verbs of the construction are negated.
3. `SHARED OBJECT ARGUMENT`: Transitive verbs of an MVC tend to share the same object argument.
4. `SINGLE INTONATION UNIT`: All verbs of an MVC tend to occur in a single intonation unit.

The non-core properties can be violated in different ways. Each of the following elements can be found in a given utterance, and there can also be a combination of them:

⁸Hence the need for `MONOCLAUSAL` as an additional property. The properties `MULTIPLE VERBS`, `SERIAL MARKER -e/-o` and `SHARED SUBJECT` alone are not sufficient to distinguish MVCs from chains of multiple clauses when they share their subject.

- Prosodic breaks between the verbs (violates SINGLE INTONATION UNIT)
- Coordinators between the verbs (violates CONTIGUOUS ELEMENTS)
- Phrase clitics between the verbs (violates CONTIGUOUS ELEMENTS)
- Arguments between the verbs (violates CONTIGUOUS ELEMENTS and possibly SHARED OBJECT ARGUMENT)
- Narrow scope of the negation marker (violates SINGLE DOMAIN OF NEGATION)

The elements listed above must be understood as factors that shift a given construction more to the periphery and make it less prototypical. For example, all verbs of a prototypical MVC are realised within the same intonation unit. However, speakers are free to set prosodic breaks between the verbs for various reasons and hence produce a less common structure. Although the semantic and pragmatic effects implied by the elements in the list above are variegated, they all ~~to~~ decrease the construction's typicality.

The MVCs in the following examples differ according to their non-core properties (a comma in the first line represents a prosodic break):

- (10) *Ambikin yeng=bet b-e men-e*
 soil dry=OBL take:PL.O-SM come-SM
yal-up=e
 put.down-1PL=DS.SEQ
 'We brought some dry earth and then ...' [muyu036:028]
- (11) *Tama ban-e kedo wom won-o-den.*
 termite.hill open-SM then inside go-3SG.M-PFV
 'He (cut) the termite hill open and then went inside.' [muyu007:142]
- (12) *Kabangg-o wan-e, win-in.*
 check-SM finish-SM go-1SG
 'After checking (the tree), I went.' [muyu004:034]

All three examples above show multi-verb constructions with varying structures. The construction in (10) simply juxtaposes three verbs which together share a single intonation unit. Since the non-core properties are fulfilled, this

MVC has a quite prototypical structure. In contrast, the two verbs in (11) are interrupted not only by the locational argument *wom* ‘inside’ but also by the sequential marker *kedo* ‘then’.⁹ The final example (12) shows an MVC with an intervening prosodic break. Three verbs are grouped into two intonational units. Both (11) and (12) have MVCs that are less typical according to their structure. Nonetheless, they are members of the category since they have all the core properties explained above.¹⁰

This way of interpreting the category MVC has several crucial benefits. Firstly, it avoids the exclusion of less typical instances in the corpus data. Many studies on this topic suffer from defining their categories too narrowly (for a discussion see Section 11.5.3). Secondly, it avoids over-classification that happens when too many categories are needed. For an example, *kane wini* ‘bring’ is a caused accompanied motion (CAM) construction that is composed of a verb of taking (*kane* ‘take (sg.obj.)’) and a motion verb (*wini* ‘go’). The construction itself is clearly defined via its composition. However, it can be realised structurally in different ways, e.g. juxtaposing the verbs or with an intervening locational argument, with an intervening phrase clitic or adjunct, etc. In a classical approach, in which categories are solely defined via features, we would need to come up with a category for each realisation.¹¹ In our approach, each of these realisations are CAM constructions, but some are more similar to the prototype than others. Thirdly, this approach distinguishes form and meaning without separating them entirely. Some features that are typically counted as “form”, e.g. the serial marker *-e/-o* on the non-final verbs, are more central to the category than others, e.g. juxtaposition of verbs. Additionally, there are also functions that are more central to the category of MVCs, e.g. MVCs including motion events are more common than MVCs including static positions (see Section ?? below). Centrality of structure and centrality of composition must be regarded as independent, although related, phenomena.

⁹Elements like *kedo* ‘then’ are very controversial in the SVC literature, since they can be interpreted as VP coordinators. For our stance on this problem, see Section 11.5.3.

¹⁰This is not the same as to say that structural elements like prosodic breaks and intervening sequential markers do not have grammatical and semantic consequences. They most certainly do. But all these effects can be explained within the category MVC. Hence, our category MVC is maximally inclusive.

¹¹This may sound odd but it is a logical consequence of too narrow definitions and causes major controversy in the literature. See Section 11.5.3.

11.3 Kinds of Multi-Verb constructions

The category MVC is actually a network of constructions, each of which has a core and periphery on its own. This section deals with several construction types defined by their composition, i.e. by the verb types they are typically composed of. The type is then named after its dominant meaning/function, e.g. the aspect construction type is composed of a main verb and an aspectual verb and encodes aspectual information.

The kinds of MVCs in this section must not be seen as exhaustive. The following types are discussed: aspect constructions (§11.3.1), caused accompanied motion constructions (§11.3.2), caused motion constructions (§11.3.3), associated motion constructions (§11.3.4), inanimate actor constructions (§11.3.5), demonstrative constructions (§11.3.6) as well as some idiomatic constructions (§11.3.7).

As can be seen from the construction types listed above, motion plays a crucial role in many MVCs. In contrast, posture and body position is not found particularly often in Muyu MVCs, which is surprising, considering the important role of posture verbs in multi-verb constructions cross-linguistically.¹² However, it fits well with the minor role that posture and body position verbs generally play in Muyu. While the aforementioned kinds of MVCs represent specific construction types, the general multi-verb construction is discussed in Section 11.4. This general type of MVC is less central to the MVC category as a whole.

11.3.1 Aspect constructions

This section deals with aspect insofar as it is encoded in MVCs. All such constructions convey a kind of completive meaning, i.e. that a certain event comes to an end. Other aspect values are encoded morphologically (see Section 7.4.1 for durative; see Section 7.4.2 for perfective) or as auxiliary constructions (see Section 11.6.2 for habitual; see Section 11.6.3 for continuative; see Section 11.6.5 for inchoative).

The prototypical composition of aspect constructions is given in (13). As we see, the first verb (V1) is open to any verb, whereas the second (V2) contains one of three possible aspectual verbs. Semantically, V1 conveys the kind of event and V2 adds the aspectual meaning.

¹²Verbs like ‘sit’, ‘stay’ or ‘live’ are often found in aspect constructions (see e.g. Crowley 1987:57).

(13) **Aspect construction:**

V1 = [open]

V2 = aspectual verb:

koli ‘stop, end’*tipni* ‘finish, complete’*wani/wali* ‘end’

Although all three aspectual verbs in (13) denote that the event in V1 ends, they imply different outcomes: *koli* ‘stop, end’ means that the event simply stopped without any accomplishment. In contrast, *tipni* ‘finish, complete’ signals that the intended outcome was reached satisfactorily. This is also reflected in the verb itself, which is derived from the adjective *tip* ‘good, suitable, enough’. The last verb, *wani/wali* ‘end’ is vague about the nature of the outcome. Similar to *tipni* ‘finish, complete’, the event was completed but the result can either be in line with the actor’s intention or run against her/his intention.

Here are some examples:

- (14) *Mok ta ma wanu odo medep olal-e kol-up=ke?*
 INTJ and but down DEM what talk-SM stop-1PL=Q
 [Trying to continue a previous conversation:]
 ‘Oh, what did we discuss before we stopped?’ [muyu019:088]
- (15) *Alum-e tipn-a-ten kole, kip oto kopomen-e*
 chop.sago-SM finish-1SG-PFV CONJ 2PL DEM squeeze.sago-SM
bil-ime.
 AUX.CONT-2PL.IMP
 [Man and women sharing work:]
 ‘Since I have chopped the sago, you go on squeezing it.’
 [muyu067:009]
- (16) *Kilingg-e, kilingg-e wano-gol-up=ko kan-e*
 pierce-SM pierce-SM finish-SS.SEQ-1PL=PTC take:SG.O-SM
teb-up-ten.
 move-1PL-PFV
 [A small cave in a river with a fish in it. Putting a stick in it to drive
 the fish out:]
 ‘(We) stuck (into the cave), we finished sticking it (into the cave)
 and took it out.’ [muyu035:020]

The semantic differences between the three aspectual verbs become apparent by comparing the examples above. In (14), the speaker refers to a previous conversation that was suddenly interrupted by an external event (note that the directional *wanu* ‘down’ means ‘before’ in this context). The speaker tries to resume the conversation since the topic was not discussed exhaustively. In contrast, the speaker in (15) has finished his job as intended. Now that all the sago has been chopped, he orders the woman to undertake the next step in sago processing. Finally, the construction in (16) is agnostic to the outcome of the event. At the time when the protagonists completed sticking the stick into the small cave, they did not know whether they got the fish in it successfully. To summarise, all three constructions in (14)-(16) signal that the event has ended, yet they differ in the nature of the outcome.

Aspect constructions often serve to signal the sequentiality of events. The examples above all involve a subsequent event. The subsequent event in (14) is the event that interrupted the conversation, although it is left implicit. In contrast, both (15) and (16) show examples where the subsequent event is expressed overtly in the following clause. Hence the need for clause coordinating/chaining markers (the conjunction *kole*, the enclitic =*ko*, the same subject suffix *-gol*). Such syntactic contexts are often found in relation to aspect constructions, since people tend to speak about the completion of one event more commonly in relation to another event, rather than about the completion for its own sake.

Less prototypical aspect constructions deviate in various ways from the composition shown in (13). Compare (14)-(16) above with the following examples:

- (17) *Om nengg-e an-e wal-e,*
 sago cook-SM eat-SM finish-SM
 ‘After cooking and eating the sago ...’ [muyu006:036]
- (18) *Kedelem tan-e wan-e, kedo win-an-on.*
 lichens.and.fronde peel-SM finish-SM then cut.down-IRR-3SG.M
 [Processing a sago tree:]
 ‘After cleaning it from lichens and fronds, he will cut it down.’
 [muyu013:019]

Both (17) and (18) have MVCs with more than two verbs. They differ in the position of the aspectual verb. In (17), the aspectual verb is V3 and has

scope over V1 and V2, since both cooking and eating have been finished. The aspectual verb in (18) is still V2 (as in the prototype) but is followed by another verb. V3 is separated from the previous verbs by a prosodic break and the coordinator *kedo* ‘then’. Semantically, the event conveyed by V3 is subsequent to the previously completed event (V1+V2). The typical way to express this order of events is by two separate clauses (as in (16)). However, a construction as in (18), with all three verbs within a single clause, is also possible. Its structure is highly peripheral.

11.3.2 Caused accompanied motion constructions

Caused accompanied motion (CAM) constructions denote that (1.) a theme object is moved, (2.) its movement is caused by an actor and (3.) the actor moves along the same path as the theme object. This meaning becomes clearer with an example from English:

(19) *Billy brings the flowers from the market.*

The English sentence in (19) fulfils all three conditions given above. The theme object in motion is *the flowers*, the movement is caused by *Billy* and *Billy* moves along the same path (i.e. *from the market*) as the flowers. Unlike English, Muyu encodes such events in CAM constructions. In contrast, similar events in which the actor does not move along the same path as the theme object are encoded in caused motion (CM) constructions (see Section 11.3.3).

The prototypical composition of a CAM construction is given in (20). As we see, the first verb (V1) is a verb of taking, whereas the second (V2) contains a motion verb. The construction as a whole is transitive, while one of its components (V2) is intransitive. Semantically, the combination of verbs is transparent, since events such as in (19) above typically require the actor to take the theme object and move. Similar constructions are cross-linguistically well attested.¹³

(20) **Caused accompanied motion (CAM) construction:**

V1 = verb of taking
kani ‘take (sg.obj.)’

¹³The recently published volume Margetts et al. (2022) offers a comprehensive overview of the topic caused accompanied motion.

bi ‘take (pl.obj.)’
 V2 = motion verb
wini ‘go’
mini ‘come’

The choice of verbs in (20) denotes two contrasts. Firstly, the verb of taking in V1 encodes verbal number and refers either to singular objects (*kani*) or plural objects (*bi*) (for details on verbal number see Chapter 8). Secondly, the motion verb encodes the direction of motion and is either itive (i.e. away from the deictic center) or ventive (i.e. towards the deictic center). All possible combinations are listed (21). These prototypical CAM constructions are among the most frequent MVCs in our corpus.

- (21) *kane wini* ‘take sth. somewhere’
be wini ‘take many things somewhere’
kane mini ‘bring sth.’
be mini ‘bring many things’

The following examples show typical CAM constructions for itive motion:

- (22) *ma kok-e Bian kubun-o-den, Bian=bet ok*
 CONJ fall:SG.S-SM PN descend-3SG.M-PFV PN=OBL water
kan-e wen-en.
 take:SG.O-SM go-3SG.M
 [A coconut tree was growing at the river:]
 ‘When it (=a coconut) fell into the Bian river, the Bian river took it away.’ [muyu031:082]
- (23) *Yum a, yemen a=go b-e bonkane-n-up=a*
 banana and taro and=PTC take:PL.O-SM collect-SS-1PL=LNK
b-e wen-em.
 take:PL.O-SM go-1PL.IMP
 [Working in the garden:]
 ‘Let’s collect the bananas and taros and take them (with us).’ [muyu023:017]

The itive motion verb *wini* ‘go’ denotes the direction of motion away from the deictic center. In (22), the deictic center is the location of the coconut tree or, more precisely, the point where the coconut falls into the water. In

(23), it is the garden where the women have been working. Both (22) and (23) differ in the number of objects taken, indicated by the choice of V1.

The following examples show typical CAM constructions for ventive motion:

- (24) *Kedo ambulok wan-e, ambulok tem komb-e*
 then rib pick:SG.O-SM rib kind.of.tree put:SG.O-SM
yenengga-n-u kan-e mun-u-den.
 tie-SS-3SG.F take:SG.O-SM come-3SG.F-PFV
 ‘Then she picked a rib of a palm tree and tied it and brought it (back home).’ [muyu031:038]
- (25) *Ton=ko opnon=ko b-e men-en.*
 fish=PTC late.afternoon=PTC take:PL.O-SM come-3SG.M
 [Going out to catch some fish:]
 ‘He brought the fish in the late afternoon.’ [muyu007:040]

The ventive motion verb *mini* ‘come’ denotes the direction of motion towards the deictic center. In both (24) and (25), the deictic center is the home of the respective actor. The actor went out to get something (a rib of a palm tree, some fish), but the deictic center does not shift. Compare (25) with (23). In the latter, the work of the speaker and her friends takes place in the garden which is also the deictic center of the CAM construction. In contrast, the deictic center in (25) is not the place where the fish had been caught but where the actor brought them afterwards.

The **compositional periphery** of CAM is well attested in our corpus data. Peripheral CAM constructions can use verbs other than those shown in (20). Less typical verbs occur both as V1 and as V2. Starting with V1, we sometimes find *nini* ‘hold (sg.obj.)’ in this position. An example is given in (26). The meaning of *nini* ‘hold (sg.obj.)’ is similar to that of *kani* ‘take (sg.obj.)’ in that an actor has a theme object in his hand(s), but unlike verbs of taking, *nini* does not convey the beginning of the event (i.e. when the actor takes the theme object). Another similarity is that both *kani* and *nini* encode verbal number with a singular value. The plural verb *nigi* ‘hold (pl.obj.)’, though logically possible, is not attested in a CAM construction yet.

- (26) *Kaweno-n-u, wan-e nin-e*
 climb-SS-3SG.F pick:SG.O-SM hold:SG.O-SM
mun-un=gi.
 come-3SG.F=EMPH
 ‘She climbed (the tree) and picked (the fruit) and brought it.’
 [muyu015:008]

Notice that the MVC in (26) actually has three verbs, since the CAM construction is preceded by *wani* ‘pick (sg.obj.)’. This verb denotes the beginning of the event, namely the part not covered by *nini* ‘hold (sg.obj.)’. Since picking is more specific than taking, we conclude that the speaker deliberately chose *wane* over *kane* in (26). However, *?wane mini* is not a full CAM construction, since one part of its full meaning is missing, namely that the actor and theme object move along the path together. Therefore, *nine* is included. It seems that the semantics of *kani* in the prototype is distributed over *wane* and *nine* in the more peripheral construction used in (26).

Additionally, we also find *tene wini* ‘pull sth. somewhere’ and *tene mini* ‘pull sth. hither’ which both encode that the actor affects the location change of the object by pulling it. Note, however, that the first verb of this construction is no longer in use outside of this construction, i.e. there is no verb **teni* attested for this meaning.

Peripheral CAM constructions can also deviate from the prototype regarding V2. Consider the following examples in which V2 is *towini* ‘pass’ (27), *kabani* ‘run’ (28) or the semantically weak verb *kemi* ‘do’ (29) respectively:

- (27) *Amnom kole neka kan-e towin-in.*
 night CONJ 1SG.REFL take:SG.O pass-1SG
 [Having killed a pig. Bringing home the prey but having a quick stop at his brother’s house:]
 ‘It was night, so I passed by taking (a pig) myself.’
 [muyu004:093]
- (28) *kido ayun aip omb-e kal-e kido*
 then bamboo there.is break:SG.O-SM throw:SG.O-SM then
Widanggun kidit aip kan-e kaba-en.
 PN long there.is take:SG.O-SM run-3SG.M
 [A pig caught in a sling on a Widanggun tree which was set as a trap

by the speaker:]

‘then it broke the trap and it carried the long Widanggun tree (with it).’ [muyu004:017]

- (29) *kono long boat ombet b-e Woropko mo*
 boat long(BI) boat(BI) OBL.DEM take:PL.O-SM PN only
kim-ip=ki.
 do-2/3PL=EMPH
 [Transporting peanuts on a boat. The boat cannot reach the final destination:]
 ‘They took them with a long boat no further than to Woropko.’
 [muyu025:026-27]

All three examples above include peripheral CAM constructions with untypical motion verbs. The verb *towini* ‘pass’ denotes a motion that crosses and passes a reference point. In (27), it refers to the house of the protagonist’s brother. The motion verb *kabani* ‘run’ in (28) does not include any direction.¹⁴ The overall meaning is similar to the prototypical CAM construction, with the difference that the manner of motion (i.e. running) is also conveyed, which is clearly lacking in the prototype. In (29), the semantically weak verb *kemi* ‘do’ occurs instead of the expected motion verb. However, the overt expression of the goal (the town *Woropko*) makes it clear that the event involves movement.

Finally, we take a look at the **structural periphery** of CAM. As can be seen in the examples above, V1 and V2 are typically juxtaposed. More peripheral instances have at least one intervening element between the verbs of the construction. This intervening element is usually related to V2 and denotes some aspect of the motion:

- (30) *ye tana yanop b-e kido*
 3SG.M child there.is take:PL.O-SM down
meno-n-e=get (...)
 come-SS-3SG.M=and.then.SS
 ‘he came together with his family and then he ...’ [muyu012:083]

¹⁴This is shown by the fact that it is itself often combined with basic motion verbs: *kabane wini* ‘run (away from deictic center)’ and *kabane mini* ‘run (towards deictic center)’.

- (31) *kan-e* *ambip wen-em=o*
 take:SG.O-SM house go-1PL.IMP=QUOT
 [Having caught a monitor lizard:]
 ‘Let us take it home!’ [muyu049:004]
- (32) *kedo kalapa kap odo kan-e, Bian wun-u-den.*
 then coconut(BI) seed DEM take:SG.O-SM PN go-3SG.F-PFV
 ‘and then she took the seeds of the coconut tree and went to Bian
 river.’ [muyu031:066]

In all three examples above, the verbs of the CAM construction are discontinuous. The intervening element in (30) is the directional *kido* ‘down’, whereas (31) has a locational argument, *ambip* ‘house’, between the verbs. Both elements add specific information to the overall event, i.e. either the direction or the goal of movement. Finally, (32) also has a locational argument preceding V2. Additionally, there is a prosodic break separating the verb of taking from the motion verb complex. Thus, the final example is even more peripheral from the prototypical structure of CAM constructions.

11.3.3 Caused motion constructions

Caused motion (CM) constructions denote that (1.) a theme object is moved and (2.) its movement is caused by an actor. In contrast to CAM constructions (see Section 11.3.2), the actor and the theme object do not move along the same path. In fact, most events that are expressed with a CM construction have the actor in a fixed position, e.g. when s/he takes a banana and puts it on the floor.

The prototypical composition of a CM construction is given in (33). As we see, the first verb (V1) is a verb of taking. This is similar to CAM constructions. However, V2 seems to be more variegated. Whereas CAM had the basic motion verbs as choices for V2, CM takes various verbs of transfer. It is not immediately clear which verb choices are more central and which are more peripheral. The construction as a whole is transitive and both of its components are transitive verbs. Semantically, the combination of verbs is transparent and both verbs can be interpreted as denoting subevents of an overall event.¹⁵

¹⁵Note that the term ‘subevent’ is used rather colloquially here and must not be understood as clearly circumscribed.

(33) **Caused motion (CM) construction:**

V1 = verb of taking

kani ‘take (sg.obj.)’*bi* ‘take (pl.obj.)’

V2 = verb of transfer

kali ‘throw (sg.obj.)’*nami* ‘throw (pl.obj.)’*ka-* ‘give to’*kombi* ‘put, lay down (sg.obj.)’*yali* ‘put, lay down (pl.obj.)’

...

The verbs in (33) denote contrasts in verbal number. Both V1 and V2 include verbal number pairs with one item singular and the other plural. Since both verbs of the construction are transitive and refer to the same object, the number values must agree obligatorily.¹⁶

- (34) *kane kali* ‘take and throw sth.’
be nami ‘take and throw many things’
 **kane nami* ‘(Intended:) take sth. and throw many things’
 **be kali* ‘(Intended:)take many things and throw sth.’

As can be seen from (34), singular verbs cannot be combined with plural verbs and vice versa. For more details on verbal number, the reader is referred to Chapter 8.

The following examples show typical CM constructions:

- (35) *jadi wen-e ap=bet kawen-e alo-n-i kedo*
 so(BI) go-SM tree=OBL climb-SM stand-SS-1SG then
adutbop kan-e kal-an, teb-ok balin.
 rotten.wood take:SG.O-SM throw:SG.O-1SG wake.up-SBJV NEG

[Approaching a sleeping pig:]

‘so I climbed a tree and stood on it, and threw a piece of rotten wood
 (at the pig), but it did not wake up.’ [muyu004:010]

¹⁶Some exceptions of verbal number agreement in MVCs are discussed in Section 11.3.7.

- (36) “*Taman, bedetkap=ko b-e nam-e*”, *engg-an.*
 brother, claw=PTC take:PL.O-SM throw:PL-2SG.IMP say-1SG

[Cutting up a dead pig:]

‘ “Brother, remove the claws”, I said.’ [muyu004:079]

- (37) *Wio-komb-e, kan-e kambul-e, men-en.*
 3SG.F.O-kill-SM take:SG.O-SM put.in.container-SM come-3SG.M
 [Man checking his traps. One of them caught a crowned pigeon:]

‘He killed it, put it in a bag and then he came.’ [muyu054:009]

A typical event of caused motion consists of taking a theme object and throwing it somewhere. Such an event is denoted in (35) and (36), with the only difference being in verbal number: the former example refers to a singular object, while the latter has a plural object. In (37), we find another common CM event, where a theme object is taken and put into some sort of a container.

The **compositional periphery** of CM constructions is a bit hard to determine since the prototype is less well entrenched regarding the choice of V2. Let us start with V1. The central choice for V1 verbs has to do with taking: *kani* ‘take (sg.obj.)’ and *bi* ‘take (pl.obj.)’ occur nearly without exception in our corpus. The only exception is *nani* ‘take (big obj.)’ as seen in (38), but this verb is closely related to *kani* and the resulting construction is probably only slightly more peripheral than the prototype.

- (38) *Topi=go telen-i=mo kem-in, baju=go eyen,*
 hat(BI)=PTC wear-INF=always do-1SG shirt(BI)=PTC this.is
adon kudu ege nan-e nomb-a-den
 sun watch DEM.here take:BIG.O-SM put:BIG.O-1SG-PFV
eyen.

this.is

[A speaker explaining his outfit, pointing at each item:]

‘I usually wear the hat, here is the shirt, and here is where I wear the watch.’ [muyu030:196]

The reason for the choice of *nani* ‘take (big obj.)’ as V1 of the CM construc-

tion (or of *nombi* ‘put (big obj.)’ as V2) in (38) is not clear yet. Generally, this verb selects for referents of large physical size, but a watch is not particularly large. Maybe this verb highlights the value of the watch metaphorically.

As mentioned above, the V2 of a CM construction is more open than, for example, in CAM constructions; the verbs listed in (33) above have not been studied according to their centrality. However, they all represent transitive verbs of transfer. In contrast, there are peripheral CM constructions that include intransitive motion verbs as V2. One instance is *tebi* ‘move’ in (39) and (40). Compare these two MVCs with the single verb in (41), where *tebi* ‘move’ occurs as a motion verb. In addition, we find *kawini* ‘climb’ in *kane kawini* ‘raise sth.’, *toni* ‘climb’ in *kane toni* ‘raise sth.’, and *yani* ‘climb onto’ in *kane yani* ‘lift sth. onto sth.’ in our data.

- (39) *Tamat, tamat kan-e teb-o-den odo, kedo*
 stone.adze stone.adze take:SG.O-SM move-3SG.M-PFV DEM then
wio-komb-o-den.
 3SG.F.O-kill-3SG.M-PFV
 ‘He picked up a stone adze, and then he killed her.’
 [muyu007:126-127]
- (40) *Kilingg-e, kilingg-e wano-gol-up=ko kan-e*
 pierce-SM pierce-SM finish-SS.SEQ-1PL=PTC take:SG.O-SM
teb-up-ten.
 move-1PL-PFV
 [A small cave in a river with a fish in it. Putting a stick in it to drive
 the fish out:]
 ‘(We) stuck (into the cave), we finished sticking it (into the cave)
 and took it out.’
 [muyu035:020]
- (41) *Kep=ko teb-e golo bot wonggo*
 2SG.M=PTC move-2SG.IMP CONJ stone there
kal-a.
 throw:SG.O-1SG.IMP
 ‘Move! So I can throw a stone there.’
 [Dictionary]

Both (39) and (40) are CM constructions with the motion verb *tebi* as the V2. This verb denotes movement with no specific direction, as shown in (41). Although combinations of verbs of taking and motion verbs are typical for CAM constructions, the examples above clearly represent CM constructions.

In a CAM construction, the actor would move along the same path as the theme object but in (39) and (40), the theme object is moved from a static actor position. Furthermore, there is a slight semantic difference between the two CM occurrences shown above. In (39), the theme object has not been in the actor's hands before the event took place, i.e. the stone adze is newly picked up. In contrast, the actors in (40) already handled the stick when the denoted event set in. Therefore, the CM *kane tebi* is ambiguous as to whether it denotes taking the object or simply handling it. In both cases, the combination is a peripheral CM construction.¹⁷

In the compositional periphery of CM constructions, we also find instances with more than two verbs. In (42), the verb *bodoni* 'tie at' is added between the verb of taking and the verb of transfer to add information about the manner of the CM. The construction in (43) is a blend of CAM and CM, since it contains a verb of taking (V1), a motion verb (V2) and a verb of transfer (V3). Therefore, it is peripheral in relation to two centers: CAM and CM.

- (42) *kan-e bodon-e komb-on, tip=mo.*
 take:SG.O-SM tie.at-SM put:SG.O-3SG.M good=ADV
 [Having made a fake bird's nest:]
 'He hung it up (on the tree), well.' [muyu007:065]
- (43) *Ot yeman ogo b-e wen-e yale-gol-ep,*
 money for DEM take:PL.O-SM go-SM put:PL.O-SS.SEQ-2SG
 [Sending her daughter-in-law to the market, to sell garden products:]
 'You take (the things) there for money and then you ...'
 [muyu009:030]

In both examples above, we find the verbs expected in the prototype at the edges of the construction and the additional verb in the middle. This ordering is probably due to iconicity and reflects the sequence of the subevents.

Finally, there are instances in the **structural periphery** of CM con-

¹⁷At the present stage, it is unclear whether there are further interpretations of *kane tebi*. Since the construction is ambiguous regarding the position of the theme object before the event, it is conceivable that there are further interpretations in which the actor moves along the same path as the theme object. Such cases would designate CAM and would mean that peripheral constructions can be peripheral relative to more than one center, i.e. construction. However, more data is needed to investigate this topic.

structions. Structurally typical CM constructions have the V1 and V2 juxtaposed. More peripheral occurrences have at least one intervening element between the verbs. Most commonly, the intervening element is an adjunct that specifies the goal of the object transfer:

- (44) ***Kan-e,*** *noggonokap belon yinim komb-e=go*
 take:SG.O-SM bicycle small on put:SG.O-SM=PTC
wun-un.
 go-3SG.F
 [Pear Story. Having picked up the fruit basket:]
 ‘She put it on the small bicycle and then she went.’
[muyu011:012]
- (45) *Tipn-on gole kedo b-e,* *karung=bet*
 finish-3SG.M CONJ then take:PL.O-SM sack(BI)=OBL
watm-up.
 pick:PL.O-1PL
 [The women finished the harvest of the peanuts:]
 ‘It was finished so then we put (the peanuts) into some sacks.’
[muyu029:055]

Both examples above do not only show an intervening phrase but also a prosodic break between the verbs, in such a way that the additional adjunct shares an intonation unit with V2. In (44), the goal of transfer is *noggonokap belon yinim* ‘on the small bicycle’¹⁸, while the goal in (45) is *karung=bet* ‘into some/a sack(s)’¹⁹.

11.3.4 Associated motion constructions

Muyu makes extensive use of motion verbs in complex predicates. The resulting constructions vary in function and meaning, one of them being associated motion. MVCs of this category denote that a main event is associated with a motion event. This section deals with associated motion (AM) only. Other

¹⁸Notice that the MVC in (44) is not only structurally but also compositionally peripheral, since it includes a motion verb as the V3.

¹⁹The choice of verb for V2 in (45) is not fully clear yet. Obviously, *watmi* can denote an event of putting in such contexts, whereas as a single verb, it means ‘pick (pl.obj.)’, like picking fruits from a tree.

MVCs with motion verbs are caused accompanied motion (CAM) constructions (see Section 11.3.2) and caused motion (CM) constructions (see Section 11.3.3). Before describing the peculiarities of Muyu AM constructions, we briefly outline key findings of the current literature on associated motion.

Associated motion has drawn attention of both typological and descriptive work recently (Guillaume 2016, Guillaume & Koch 2021, Ross 2021). Cross-linguistic studies are beginning to recognise the similarities between languages that encode associated motion as a morphological category and languages in which a motion verb is part of a multi-verb construction (Lovestrand & Ross 2021). Of particular interest from this area of research are three parameters: (1.) the temporal relation between motion and main event (prior, concurrent, subsequent), (2.) the direction of motion (itive vs. ventive, upward/downward/across), and (3.) the argument role of the moving figure (subject vs. non-subject).²⁰ Languages vary according to which values are grammaticalised according to these parameters.

Turning to AM constructions in Muyu, we find instances of all three temporal relations, but they are not all central to the AM constructions. Prior motion is typical, whereas concurrent motion and subsequent motion are more peripheral. Evidence for this ranking comes from two sources: (a.) prior motion constructions are by far more frequent than the other two types, and (b.) prior motion constructions can have any verb denoting the main event, whereas the other types are more restricted (see below). These findings from Muyu are in line with the typological research. Lovestrand & Ross (2021) find that prior motion outnumbers concurrent and subsequent motions cross-linguistically.²¹ In the remainder of this section, we will explicate the composition of all three types and then discuss each type in turn.

As for the second parameter, Muyu has two main directions encoded in AM constructions: itive (i.e. away from the deictic center) and ventive (i.e. towards the deictic center). The respective direction depends on the choice of motion verb, namely *wini* ‘go’ or *mini* ‘come’.

The third parameter is straightforward: Muyu AM constructions always have the subject argument referring to the moving figure. This is expected since all verbs in an MVC must share the same subject.

²⁰Another urgent issue is how to disentangle associated motion and directionals since many languages turn out to have mixed systems (Ross 2021: Ch.5).

²¹The sample of Lovestrand & Ross (2021) includes 101 languages, of which 68 have prior motion SVCs, but concurrent motion and subsequent motion are found only in five and six languages respectively.

The composition of the three types of AM constructions are shown in (46), (47) and (48). As can be seen, they differ in the order of verbs. While the motion verb is V1 in prior motion, it is V2 in concurrent and subsequent motion.

- (46) **Associated motion 1 (AM1), prior motion:**
 V1 = basic motion verb
wini ‘go’
mini ‘come’
 V2 = [open]
- (47) **Associated motion 2 (AM2), concurrent motion:**
 V1 = [open(?)]
 V2 = basic motion verb
wini ‘go’
mini ‘come’
- (48) **Associated motion 3 (AM3), subsequent motion:**
 V1 = verb of leaving
koli ‘stop, end’
kolo- ‘leave s.o.’
kolonggi ‘leave’
 V2 = basic motion verb
wini ‘go’
mini ‘come’

The following paragraphs discuss each of these AM types in turn.

Prior motion

Prior motion AM constructions denote that a subject moves somewhere before the main event sets in (i.e. “go and do” or “come and do”). The composition is shown in (46) above. As can be seen, V1 is a basic motion verb, while V2 is open to any verb.

Here are some examples:

- (49) *Salak ye yongbon odo wen-e*
 kind.of.tree 3SG.M garden DEM go-SM
tem-up-ten=got,
 look-1PL-PFV=and.then.DS

‘We went and looked at the Zalacca palm garden, and then ...’

[muyu030:127]

- (50) *Amit mim=a, katuk men-e kumungg-ip,*
day one=PTC person come-SM tell-2/3PL

‘One day, people came and told (them): ...’

[muyu065:013]

- (51) *Ne men-e keyap kene-y-i aip balin.*
1SG come-SM quickly see-PL.O-INF there.is NEG

‘I can’t just come and see you quickly.’

[muyu030:204]

The construction in (49) expresses itive prior motion. The subject moves away from the deictic center and to the location of the main event. Note the status of the MVC’s object argument *salak ye yongbon* ‘zalacca palm garden’ which is both the goal of the movement and the object of the event of seeing. Ventive prior motion is shown in (50) and (51). They both denote movement towards the deictic center. In (51), both verbs are in the scope of negation: neither coming nor seeing takes place.

Lovestrand & Ross (2021) emphasize the difficulty in distinguishing prior motion (‘go and do’) from purposive motion (‘go to do’).²² In Muyu, however, purposive motion is never denoted by an AM construction but expressed differently: (a.) with the postposition *yeman* ‘for’ and an infinitive (see Section 9.4.4) or (b.) with a subordinate clause in the subjunctive mood.

The **compositional periphery of prior motion AM** is well attested, mostly with constructions that have more than two verbs. In such cases, the motion event (V1) is followed by the main event that is also denoted by multiple verbs. The following examples are representative for many instances:

- (52) *jadi wen-e ap=bet kawen-e alo-n-i*
so(BI) go-SM tree=OBL climb-SM stand-SS-1SG

‘so I went (there), climbed a tree and was standing on it and I ...’

[muyu004:010]

²²They propose to distinguish these constructions by which events are actually asserted and which can be cancelled. A sentence like *He went and caught a fish* (=prior motion) asserts that both events have happened. Thus, the last part cannot be cancelled: **He went and caught a fish but didn’t find any*. In contrast, its purposive counterpart *He went to catch a fish* only asserts that the motion event has happened. The last part can be cancelled: *He went to catch a fish but did not find any*.

- (53) *Ah, eyuk=a engg-e, an-e wan-e, **wen-e om***
 INTJ yes=LNK say-SM eat-SM finish-SM go-SM sago
kan-e** **wen-e, ayob-in.
 take:SG.O-SM go-SM squeeze-1SG
 [Processing sago, having a lunch break. Her husband orders to go
 back to work:]
 ‘Oh yes, I said, then finished eating and I went to take the sago and
 then squeezed it.’ [muyu026:019]

The MVC in (52) consists of three verbs, of which V1 denotes the movement towards the event location, i.e. the tree. Note that V2 is also a motion verb, hence the combination of V2 and V3 can be interpreted as prior motion AM itself. The main event is denoted in V3, i.e. standing on the tree. Similarly, the part that interests us in (53) (in bold face) also has three verbs, of which a motion verb (V1) is combined with two further verbs.²³ V2 and V3 also combine to an MVC, namely a CAM construction. Both examples together show that prior motion is often found in more complex constructions that can include more than one kind of MVC.

The compositional periphery of prior motion AM is not restricted to instances with more than three verbs, but the choice of verbs also plays a role. Since V2 is open for any verb in the prototype, centrality issues concern only the choice of V1. However, instances of motion verbs deviating from *wini* ‘go’ and *mini* ‘come’ are rare. One example is (52), in which *kawini* ‘climb’ (V2) can be interpreted as a prior motion verb. Climbing as the prior motion event is obviously less central, since people usually move on the ground.

The **structural periphery of prior motion AM** is also well populated, mainly with constructions that have intervening arguments or adjuncts between V1 and V2. Instances have already been shown in (52) and (53) above. However, in these cases, the intervening elements belonged to V2 respectively. In contrast, the adjunct *tin=bet* ‘near’ in (54) is related exclusively to the preceding motion verb:

- (54) ***Wen-e wen-e tin=bet ningg-an-an** *nea, kol-an-an**
 go-SM go-SM near=OBL catch-IRR-1SG or refuse-IRR-1SG

²³All in all, (53) has seven verbs. The overall structure can be analysed as conjoined structure, as discussed in Section 11.4.3.

nea?

or

[Approaching the nest of a mouse:]

‘I went closer and hesitated if I should catch it or not?’

[muyu040:033]

The intervening adjunct is not the only phenomenon that is unusual in (54). In contrast to prototypical constructions, the motion event and the main event are not asserted equally. While the movement takes place, the protagonist is hesitant if he should catch the mouse. From this we see, that the irrealis mood does not have scope over the motion verbs and the coordination of main verbs is independent of them also.

Finally, notice that the motion verb in (54) occurs twice. Repetition of prior motion verbs occur quite frequently in our corpus and is more often found with *wini* ‘go’ than with *mini* ‘come’. Such iterations of prior motion verbs are probably the source of the ongoing lexicalisation of *wene* ‘until’ (see Section 4.7.8). Furthermore, peripheral prior motion AM constructions, in which the intervening element relates to V1 exclusively, as in (54), are probably the source for the grammaticalisation of the right-dislocated motion construction (see Section 12.2.11).

Concurrent motion

Concurrent motion AM constructions denote that the motion event and the main event take place simultaneously (i.e. “do while going” or “do while coming”). The composition is shown in (47) above. As can be seen, the basic motion verb is V2. The status of V1 is less clear. Theoretically, it should be open to any verb. However, the construction as a whole is quite peripheral and concurrent motion is not often expressed in natural discourse. It is, therefore, not clear yet whether this kind of construction is fully productive and if V2 is unrestricted.

Due to its peripheral position within AM, instances of concurrent motion MVCs in our corpus are few. Here are a couple of examples:

- (55) *olal-e mun-up-ten=o*
 talk-SM come-1PL-PFV=QUOT
 [Conversation. Letting her know that he already knows what she is telling him:]

- ‘We talked (about it) while coming.’ [muyu009:066]
- (56) *bio-n-e* *kedo ton wano way-e*
 take:PL.O-SS-3SG.M then fish down look.for.animal-SM
wen-en.
 go-3SG.M
 ‘He took (bow and arrows) and went down while looking for fish.’
 [muyu007:017]
- (57) *katuk awan-em* *yeman ye* *otpotom* *okun-e*
 man marry-1PL.IMP for 3SG.M conversation like.that-SM
olal-e boma-n-ip
 talk-SM walk-SS-2/3PL
 [Two young women on the road:]
 ‘Their conversation was about their desire to marry a man, that’s
 what they talked while walking and they ...’ [muyu065:030]

In all the examples above, the main event and the motion event take place simultaneously. Although concurrent motion MVCs are rather infrequent and clearly not central to AM constructions, instances like those given above do not provoke misunderstanding, since the denoted events typically co-occur: talking while walking as in (55) and (57) is (probably) a universal human activity. Similarly, looking for prey and moving along a path as in (56) seem to naturally belong together.

In conclusion, the few instances of concurrent motion MVCs in our corpus probably emerged from the high frequency of such combinations. Nonetheless, the productive means to express concurrent motion is converb constructions.²⁴

Since concurrent motion constructions are themselves at the periphery of AM, we cannot offer instances from the **compositional periphery of concurrent motion**. Moreover, examples are too few to confidently discuss the **structural periphery** of these constructions.

²⁴The idea of frequency playing a role in the development of complex predicates is well known in the SVC literature. In some languages, culturally salient event combinations are more likely encoded as SVCs. The classic example is an SVC in White Hmong that serialises ‘dance’ and ‘blow bamboo pipes’, whereas other activities during dancing are not typical and cannot be expressed with SVCs (Jarkey 2015:117-118). Of course, cultural saliency goes hand in hand with frequency.

Subsequent motion

Subsequent motion AM constructions denote that a movement takes place after the main event (i.e. “do then go” or “do then come”). The composition is shown in (48) above. As can be seen, this construction is quite restricted in Muyu, since V1 can only be a verb of leaving. V2 is typically a basic motion verb, i.e. *wini* ‘go’ or *mini* ‘come’.²⁵ Due to this restriction, subsequent motion is less central than prior motion for AM constructions in Muyu.²⁶

Here are some examples:

- (58) *Kim talep nangge-n-up. (...) Kolongg-e wun-up.*
road big arrive-SS-1PL ... leave-SM go-1PL
[A long way home from the garden:]
‘We arrived at the main road and we (...) We left (the main road)
and went on.’ [muyu023:026+28]
- (59) *ta kedo kolongg-e mun-up.*
and then leave-SM come-1PL
[Having finished the work in the garden:]
‘so we left and came back home.’ [muyu027:033]
- (60) *Kip=bet kabaka-y-e yen-ban-i yanop*
2PL=OBL become.angry.at-PL.O-SM 3PL.O-hit-INF there.is
kole kolo-y-e mun-up.
CONJ leave-PL.O-SM come-1PL
[Children justifying why they left work:]
‘You got angry and hit us so we left you and came here.’

²⁵This restricted composition of subsequent motion is a peculiarity of Muyu. One cannot express meanings such as “eat then go” or “sleep then come” with mere juxtaposition of two verbs as in other languages (Lovestrand & Ross 2021).

²⁶One could argue that this kind of construction does not really express associated motion as found in the literature, since V1 does not refer to a main event but merely to the fact that the subject is leaving a place/person/thing. This is of course true and caution should be exercised when comparing such constructions cross-linguistically. Nonetheless, within the AM constructions of Muyu, it makes sense to label the constructions discussed here as “subsequent motion” since they always presuppose that the subject has been somewhere and/or done something before, even though the preceding event is not part of the same MVC.

[muyu044:049]

The MVCs in (58) and (59) have in common that *kolonggi* ‘leave’ as V1 refers to a place (rather than a person or thing). However, this is left implicit in the examples. In contrast, V1 in (60) is the transitive *kolo-* ‘leave someone’ and has an object suffix attached to it to indicate who is left. This argument index is only available with human referents.

As was the case with concurrent motion, we find subsequent motion constructions at the periphery of AM and, therefore, cannot offer instances from the **compositional periphery of subsequent motion**. Also, examples are too few to confidently discuss the **structural periphery** of these constructions.

11.3.4.1 Some remarks on AM and the deictic center

As we have seen in Section 11.3.4, associated motion denotes that an event is accompanied by a movement that is prior, concurrent or subsequent to it. The question arises whether this movement shifts the deictic center to the new location. There are two logical possibilities: (1.) there is no shift and the deictic center remains where it was before the AM construction was uttered or (2.) the center does shift and all following events are construed from the new location. In our data, we find evidence for both possibilities.

Since motion verbs often express the movement of the protagonists of a story, the location of the deictic center will often move along with them. This is the case in many AM constructions with itive prior motion. Consider again example (49) above. The protagonists set out to see the zalacca palms and the deictic center of the story simply changes to this new location. Furthermore, we find a deictic shift to be one of the main functions for the subsequent motion constructions outlined above. Such subsequent motion always has a verb of leaving in the V1 position in Muyu, which focuses on leaving some location. Take a look at example (60) again. The children were hit by the adults and left them. Later the adults found them in another place. The children justified their leaving with the utterance in (60) directed at the adults. The motion verb is ventive and shifts the deictic center from the old place (where they were hit) to the new place (where they are now). Unlike in the English translation, there is no adjunct that points towards the new

location ('here'). The ventive motion verb is enough.

On the other hand, although motion verbs often do shift the deictic center with the movement of a protagonist, AM constructions can be used to skip this shift. In many instances, the deictic center remains at the original location. This can be seen in constructions that denote a “roundtrip motion” (Guillaume & Koch 2021:10), i.e. ‘go and come back’ or ‘come and go back’. It seems that such AM constructions are often used to denote some kind of fetching:

- (61) *Nowan=an, wen-e momb-e kan-e man-an-ip.*
 nothing=COP go-SM shoot-SM take:SG.O-SM come-IRR-2/3PL
 [Nowadays, Muyu use guns to hunt bats:]
 ‘It is easy, they can just go, shoot and bring it back.’
 [muyu032:121]
- (62) *Mon.wangg-e men-e angg-i=mo, ta wen-e*
 cut.down-SM come-SM sleep-INF=HAB again go-SM
mon.wangg-e men-e angg-i=mo, mon.wangg-e men-e
 cut.down-SM come-SM sleep-INF=HAB cut.down-SM come-SM
angg-i=mo.
 sleep-INF=HAB
 [Preparing a garden by cutting down all trees:]
 ‘(We used to) clean the location then come back to sleep, again go to
 clean the location then come back to sleep, clean the location then
 come back to sleep.’
 [muyu028:012]

The motion verbs in (61) complement each other. V1 is the itive prior motion verb, while the last verb is ventive and leads the subject back to the deictic center.²⁷ Together, they constitute a roundtrip motion (‘go, do, and come back’). Similarly, we find three roundtrip motions in (62). Here, the motion starts at the remote place but the deictic center is the home of the speaker. The sentence consists of three chained clauses including infinitive constructions. Strictly speaking, only the second clause has both an itive and a ventive motion verb. Nonetheless, the missing itive verb seems to be implicit at least in the third clause, since they continue the work in the garden and not at home. To sum up, Muyu supports roundtrip motions by combining two motion verbs with opposite directions. Between these motion

²⁷Note that the final motion verb in (61) is part of a CAM construction.

verbs, the deictic center does not shift; the subject comes back to where s/he set out.

The observations reported in this section are rather superficial. A detailed examination goes beyond the scope of this study. The topic of deictic shift inside MVCs deserves more attention in future research.

11.3.5 Inanimate actor constructions

A minor kind of construction is used to introduce an inanimate actor (IA). This construction seems to occur with main verbs that require an animate referent as its subject. In our data, we often find forces of nature (e.g. earthquakes, wind, landslides) to be subjects of IA constructions.

The prototypical composition of an IA construction is given in (63). V1 is restricted to the verb of putting *kombi* ‘put (sg.obj.)’. This verb has weak semantics since no event of putting is involved in typical IA constructions. It serves solely to introduce the inanimate subject referent. Note also that the corresponding plural verb *yali* ‘put (pl.obj.)’ is not available as the V1 in IA constructions. In contrast, V2 seems to be unrestricted. However, there is too little data yet to confirm whether V2 is open to any verb or has restrictions.

- (63) **Inanimate actor (IA) construction:**
 V1 = *kombi* ‘put (sg.obj.)’
 V2 = [open(?)]

IA constructions are virtually absent from the corpus of natural speech. Here are some examples of IA constructions from the dictionary:

- (64) *Up komb-e ami amek-o-den.*
 wind put:SG.O-SM betel.nut.tree collapse-3SG.M-PFV
 ‘The wind knocked down the betel nut tree.’ [Dictionary]
- (65) *Bim komb-e ambip tamonomb-u-den.*
 earthquake put:SG.O-SM house turn-3SG.F-PFV
 ‘The Earthquake overturned a house.’ [Dictionary]
- (66) *Kim am komb-e yepyep yanop kel-o-den.*
 road rain put:SG.O-SM slippery there.is become-3SG.M-PFV
 ‘The rain made the road become slippery.’ [Dictionary]

- (67) *Wot adon kumun bim komb-e yob-en.*
 moon sun all earthquake put:SG.O-SM shake-3SG.M
 ‘The earthquake shakes the whole world.’ [Dictionary]

Although IA constructions introduce an actor, they are not always increasing the valency compared to V2 as a simple predicate. Only in two of the examples above is an additional argument added: In (64), the verb *ameki* ‘collapse’ is intransitive, while the IA construction as a whole is transitive. And in (66), the IA construction adds a referent in the semantic role of a causer to the event. These two cases are clearly valency increasing. In contrast, the verbs *tamonombi* ‘turn’ in (65) and *yobi* ‘shake’ in (67) are transitive verbs. The IA construction seems to merely license an inanimate referent where an animate referent would be expected as the subject.

The only corpus example of an IA construction found so far is (68). It is quite similar to the dictionary examples above, with *up* ‘wind’ as the subject and an intransitive verb *koki* ‘fall (sg.sbj.)’ as V2.

- (68) *Yu kodolok kat odo up komb-e kok-on.*
 3SG.F head skin DEM wind put:SG.O-SM fall:SG.SBJ-3SG.M
 ‘Her hat fell down because of the wind.’ [muyu011:017]

Due to insufficient data, the **periphery of IA constructions** (both compositional and structural) is almost impossible to determine. The only exception to this pertains to the subject referent. The subject referents in the examples above are all forces of nature: *up* ‘wind’ in (64) and (68), *bim* ‘earthquake’ in (65) and (67), as well as *am* ‘rain’ in (66). There is one example, however, in which the subject referent is *yonbin* ‘kick’:

- (69) *Kristian ye ambip ambonkim yonbin komb-e*
 PN 3SG.M house door kick put:SG.O-SM
ban-o-den.
 open-3SG.M-PFV
 ‘The kick opened the door of Kristian’s house.’ [Dictionary]

Similar to more typical examples, a ‘kick’ is inanimate but it is not a force of nature.²⁸

²⁸There is also the possibility that the *yonbin* ‘kick’ as the subject of an IA construction in (69) has a certain metaphorical effect, comparing a human action with a force of nature.

Finally, it should be noted that *kombi* ‘put (sg.obj.)’ as the V1 of an MVC does not automatically lead to an IA interpretation. The following example shows it as the V1 of an aspect construction:

- (70) *E, otbop aip komb-e kol-ime engg-ok balin.*
 yes, language also put:SG.O-SM stop-2PL.IMP say-SBJV NEG
 [The missionaries rejected some traditional Muyu customs but not
 the language:]
 ‘Yes, they did not tell us to abandon the language also.’
 [muyu019:033]

As we have seen in Section 11.3.1, the V2 of an aspect construction is one of three possible aspectual verbs, while V1 is open to any verb. Therefore, we sometimes find verbs that would be typical of other MVCs in positions that are open to any verb. The verb of putting in (70) is a case in point. It does not constitute an IA construction but is part of an aspect construction instead.²⁹

11.3.6 Demonstrative constructions

Another minor kind of construction is used to relate an event to a previously mentioned event or an event that is given from the context of utterance. Besides that, there are some lesser understood meanings and functions (see below). As indicated by the name, this construction makes use of demonstrative verbs, as described in Section 5.13.

The prototypical composition of a demonstrative construction is given in (71). The demonstrative verb *okuni* ‘like that’ is by far more frequent in our corpus than *ekuni* ‘like this’. The main verb is open to any verb of the lexicon.

Further research is needed.

²⁹The ambiguity of the verbal composition between an aspect construction and an IA construction in (70) raises the question of how listeners select the meaning that was actually intended by the speaker. The answer is probably that constructions represented in the linguistic knowledge of the Muyu speakers are more complex than we represent them in this study. Specifically, there should also be information about the semantic roles of the arguments and properties of the referents occupying these roles. Such an analysis of Muyu MVC constructions, although highly interesting, unfortunately goes beyond the scope of this thesis.

(71) **Demonstrative construction:**

V1 = demonstrative verb

ekuni ‘like this’*okuni* ‘like that’

V2 = [open]

Here are some examples of the demonstrative construction:

- (72) *Emba, okun-e timbel-e bal-an-ep*
 father.son like.that-SM sit-SM AUX.CONT-IRR-2SG
balin=o,
 NEG=QUOT
 [Encouraging his son to go to school in another village:]
 ‘Son, you cannot stay here like that (he said)’ [muyu041:008]
- (73) *Aih, yeka okun-e wonggo alebol-ok!*
 INTJ 3SG.M.REFL like.that-SM there stand-3SG.IMP
 [His interlocutor complained why another person won’t sit down:]
 ‘Oh, let him stand like that!’ [muyu009:090]
- (74) “*Okun-e kumungg-i balin=a*”, *engg-up.*
 like.that-SM tell-INF NEG=PTC say-1PL
 [As a response in conversation:]
 ‘ “Please do not say that”, we said.’ [muyu025:037]

The demonstrative verb in (72) refers to the overall situation. The son attended the local school in the village, but now it is time to move on. In contrast, the V1 in (73) refers to a specific circumstance in the context of speech. The primary investigator of this study was standing, while the interlocutors were sitting. Finally, the demonstrative in (74) refers to the immediately preceding discourse. In all these examples, the main event is conveyed in V2. The demonstrative constructions always serve to establish a relation between the main event and the context.

The demonstrative *ekuni* ‘like this’ is by far less frequent, but also attested in demonstrative constructions:

- (75) “*Kep=ko ekun-e onongm-e=yo*”, *engg-an.*
 1SG.M=PTC like.this-SM make-2SG.IMP=QUOT say-1SG
 [Instructing someone how to make fish traps:]

‘ “You make (them) like this”, I said.’ [muyu038:051]

The **periphery of the demonstrative construction** is not related to untypical compositions but rather to unusual functions. We were able to discover some further meanings of this construction, but they are not yet well understood. Due to the lack of generalisations, each item will be discussed in turn. Our first example is from a narrative about a music group:

- (76) *Nimbin~nimbin okun-e ban-an=go teleb-ip.*
 women~RED like.that-SM call.once-1SG gather-2/3PL
 [Trying to form a music group:]

‘I invited women to get together.’ [muyu012:054]

Unlike the examples above, the demonstrative *okune* in (76) seems not to refer to any previous event or circumstance. But what does it mean then? One of our consultants interprets its semantic effect as some kind of unspecificity. Without *okune*, the utterance in (76) would mean that he calls certain women. The demonstrative construction, in contrast, makes sure that any women who would like to join are welcome.

The second example was overheard when a guest arrived and was reluctant to approach the scene:

- (77) *Otbob nowan enggon, eyani okun-e men-e.*
 language NEG friend here like.that-SM come-2SG.IMP
 [Inviting a guest to come closer:]

‘No problem friend, please come here.’ [overheard]

The imperative *mene* ‘come!’ actually suffices in such situations and the demonstrative does not refer to any previous discourse. However, our consultant judges the demonstrative construction in (77) to be slightly more polite than the plain imperative. The demonstrative is maybe a strategy to reduce the directness of commands.

Finally, there is a more puzzling contrast including demonstrative constructions. The following instances are elicited from the same consultant who explained the two examples above:

- (78) *But kan-ime.*
 shrimp take:SG.O-2PL.IMP

‘Take a shrimp!’ [elicited]

- (79) *But okun-e kan-ime.*
 shrimp like.that-SM take-2PL.IMP
 ‘Take a shrimp already!’ [elicited]

The difference between (78) and (79) seems not to be in politeness (at least not directly), but rather in the insistence of the command. The demonstrative construction is used when the speaker recognises a certain reluctance on the part of the addressee. It is not clear yet, whether the demonstrative should reduce the directness of the command, as in (77), or rather the opposite: to increase the directness by insisting on the requested action.

The three instances of peripheral demonstrative constructions should not be taken as exhaustive. Since demonstrative verbs are quite frequent in natural discourse, we expect there to be more functions.

11.3.7 Some idiomatic MVCs

The MVCs discussed so far had two properties: (a.) the choices of verbs are not fully fixed (i.e. there is at least some paradigmatic variation for V1 or V2 or both), and (b.) the meaning of the whole construction is transparent through the meanings of its elements. We will see next that these properties are not fulfilled in all MVCs, since some of them are more idiomatic.

Idiomaticity in MVCs implies that the meaning of the construction is not fully transparent, i.e. the whole is not the sum of its parts. Consider the following example:

- (80) *Awon ambip kan-e kubun-i=mo=n.*
 pig house take:SG.O-SM descend-INF=always=COP
 [They ancestors knew how to make a living:]
 ‘They used to raise pigs.’ [muyu017:016]

The combination of a verb of taking (*kani*) and a motion verb (*kubuni*) in (80) leads to an MVC meaning ‘raise/breed (pigs)’.³⁰ This combination is lexicalised, which can be also seen by the fact that the V1 cannot be replaced

³⁰Notice the similarity and difference between the English verb *to raise* and the Muyu construction *kane kubuni*. Both contain a metaphorical motion but English applies upward motion (‘raise’), whereas Muyu has a downward motion (lit. ‘take descend’). There are probably two different metaphors at work. In English, the verb focuses on the growth of a single pig, while the Muyu expression denotes descentance of a pig lineage.

by the corresponding plural verb *bi* ‘take (pl.ob.)’. Although the clause in (80) refers to several pigs, the MVC contains a singular verb.

Idiomatic MVCs are interpreted here as isolated cases that do not form any groups. To our knowledge there is no other construction sufficiently similar to *kane kubuni* in (80) to detect a pattern.³¹ The same is true for several other MVCs in our data. Here are the instances of idiomatic MVCs found so far:

(81)	MVC	Meaning	Composed of
	<i>be kani</i>	‘to collect’	(take many + take one)
	<i>nine анги</i>	‘to embarrass s.o.’	(hold one + lie/sleep)
	<i>nine kani</i>	‘to understand, be able to’	(hold one + take one)
	<i>kulune wini</i>	‘to crawl’	(put down + go)
	<i>ombe mini</i>	‘to come running from sth.’	(split one + come)
	<i>ombe wini</i>	‘to run away from sth.’	(split one + go)
	<i>toke tebi</i>	‘to become full’	(slide down + move)
	<i>wale kani</i>	‘to make a mistake’	(pierce(?)/stop(?) ³² + take one)
	<i>wone kombi</i>	‘to create, indicate’	(cut to share + put one)
	<i>yale kombi</i>	‘to put down with force’	(put many + put one)

Additionally, there is one MVC that seems to require three verbs:

(82)	<i>alebele alebele wini</i>	‘to take a walk’	(stand + stand + go)
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There are three observations from the list in (81) that need further comment. Firstly, idiomatic SVCs do not even form a group if they share a verb in the same position. Take for example *nine анги* ‘to embarrass s.o.’ and *nine kani* ‘to understand, be able to’. They both have *nini* ‘hold (sg.obj.)’ as the V1, but that is not sufficient to group them together because they do not apply the literal meaning of this verb and their overall semantics have little in common. Similarly, *wone kombi* ‘to create, indicate’ and *yale kombi* ‘to put down with force’ do not form a group despite having both *kombi* ‘put (sg.obj.)’ as the V2.

³¹However, there is always the possibility that our data are insufficient to detect a certain group. Yet, we recognise that some verb combinations are simply idiomatic.

³²There are two homophonous verbs *wali* ‘pierce’ and *wali* ‘stop’. Since the meaning in idiomatic SVCs is not transparent, there is no possibility to determine which of these verbs occurs in *wale kani* ‘to make a mistake’.

Secondly, there is one pair of MVCs that pertains only partially to idiomatic MVCs. The two constructions *ombe mini* ‘to come running from sth.’ and *ombe wini* ‘to run away from sth.’ fulfil criterion (a.) mentioned at the beginning this section, i.e. there is a paradigmatic variation of the V2. This variation is even transparent since it concerns the direction of motion (itive *wini* vs. ventive *mini*). However, the semantic contribution of V1 (i.e. ‘split one’) is less transparent and can be considered metaphoric. These constructions are therefore at least half-idiomatic.

Thirdly, we see from some instances in (81) that verbal number is not fully productive in these constructions. In (80), the object referred to several pigs but the MVC contained a singular verb as the V1. Generally, idiomatic MVCs seem to favor singular verbs, as can be seen from the elements *nini* ‘hold (sg.obj.)’, *kani* ‘take (sg.obj.)’, *kombi* ‘put (sg.obj.)’ and *ombi* ‘split (sg.obj.)’. However, there are two interesting exceptions from the tendency towards singular verbs. The first is *be kani* ‘to collect’, which consists of two corresponding verbs of taking: one plural, the other singular. Hence, the literal meaning is ‘take many take one’. It seems that collecting several objects is conceptualised as taking many objects in such a way that they become one entity. Similarly, we find two corresponding number verbs in *yale kombi* ‘to put down with force’, which literally means ‘put many put one’. Each of these verbs denotes that the object argument is put down. In combination, they do not denote any number value but put emphasis on the force with which the event takes place.³³ In both cases, two number verbs have lexicalised to form a new idiomatic meaning.³⁴

Finally, we need to address constructions in which one of the verbs is no longer in use. Consider the following examples (the list is not exhaustive):

(83)	MVC	Meaning	Composed of
	<i>iline wini</i>	‘drift away, float away’	(? + go)
	<i>bike kani</i>	‘pull out (sg.obj.)’	(? + take one)
	<i>bike bi</i>	‘pull out (pl.obj.)’	(? + take many)
	<i>wane wini</i>	‘fly’	(? + go)

³³Our consultants comment that the event denoted by *yale kombi* ‘to put down with force’ is often interpreted as rude and deliberately aggressive.

³⁴Note that although the component verbs of these MVCs only differ in verbal number, the resulting meaning is not a new number value. Hence, this is not an instance of ‘constructed number’ (Corbett 2000:169).

The constructions in (83) include verbs as the V1 that cannot be used as independent verbs in simple predicates. Probably, **ilini* and **biki* were verbs at an earlier stage but were lost after the constructions in (83) became lexicalised.³⁵ Interestingly, the verbal number contrast between *bike kani* ‘pull out (sg.obj.)’ and *bike bi* ‘pull out (pl.obj.)’ is still productive. Nonetheless, we interpret constructions such as these as idiomatic MVCs. Since one of the verbs fell out of use, the meaning of the construction is no longer fully transparent.

11.4 Extending MVCs

The construction types described in Section 11.3 represent a good deal of MVC occurrences we find in the corpus. Nonetheless, the list is far from exhaustive, since the Muyu syntax is not restricted according to which verbs can be combined. Therefore, we need yet another type: the general multi-verb construction (§11.4.1).

The general MVC type is particularly often realised in peripheral structures that are discussed separately: the sequential structure (§11.4.2), which has explicit markers of sequentiality between the component verbs, and the conjoined structure (§11.4.3), that splits up an MVC into several intonation units. It is important to highlight that both sequential structures and conjoined structures are located at the structural periphery of general MVCs. As such, they do not differ categorially from other structures³⁶, but we decided to label and discuss them separately here.

This section ends with some remarks on clause structure and peripheral MVCs (§11.4.4).

11.4.1 General multi-verb construction

The general multi-verb construction combines two or more verbs in such a way that each verb denotes either a facet of an event or a phase of a complex event. The composition is given in (84). Since this construction is not restricted to specific verbs, we cannot speak of central or peripheral

³⁵Similar instances are found in light verb constructions (LVCs), in which certain elements must have been nouns/adjectives that got lost over time. See Chapter 10.

³⁶Remember that we distinguish the composition of an MVC, i.e. the selection of verbs included, from its structure, i.e. the overt realisation of the MVC.

composition regarding the selection of verbs. Rather, general MVCs are as a whole more peripheral than all construction types discussed in Section 11.3. However, we find a tendency for two verbs within the general MVC, so combining more than two verbs can be seen as a peripheral composition.

(84) **General multi-verb construction:**

V1 = [open]

V2 = [open]

The composition seems to be open to any verb, as long as it can occur as a single verb in a simple predicate.³⁷ It is tempting, therefore, to interpret the specific construction types discussed in Section 11.3 as special cases of the general MVC. However, in this study, we opt for the opposite view: the general MVC is an extension of the specific construction types based on analogy (for a discussion of this issue, see below).

Here are some examples:

- (85) *Nik yop ambon boma-n-u, tan-e angg-un=o,*
 PN fruit search walk-SS-3SG.F die-SM lie-3SG.F=QUOT
 ‘She looked for the Nik fruits and then she died and was lying there
 (he said) ...’ [muyu037:046]

- (86) *Ah, ane-komb-e an-em engg-ip-ten=ki!*
 INTJ, 3SG.M.O-kill-SM eat-1PL.IMP say-2/3PL-PFV=EMPH
 [Upon recognising an arriving missionary:]
 ‘Oh, they wanted to kill and eat him!’ [muyu112:069]

As we see in the examples above, the combined verbs cannot be subsumed to any of the construction types already described. Instead, they merely denote phases of complex events. The woman in (85) died (*tane*) and her body kept lying in the forest (*anggun*). Similarly, the killing (*anekombe*) in (86) precedes the eating (*anem*).

While the examples above seem to imply event phases in temporal sequentiality, the following example denotes two simultaneous actions:

³⁷As we have seen in Section 11.3, some components of idiomatic MVCs are lexicalised and no longer in use outside of the respective MVC. Such verbs cannot enter a general MVC.

- (87) *Ena=go nup taman kudumon-e ano-d-un.*
 mother=PTC 1PL younger.sister take.on.lap eat-DUR-3SG.F
 ‘Mother is having our sister on her lap while eating.’ [Dictionary]

Some MVCs of this type also denote that one event is the result of another:

- (88) *Tana kon mim bunga meja yinim bulun-e*
 child woman one vase table(BI) on hit.once-SM
tabangga-un.
 shatter-3SG.F
 ‘A young woman hit and shattered a vase on the table.’
 [Cut_and_break:039]

General MVCs also occur when one of the specific construction types is extended by a third verb. In Section 11.3, we interpreted such instances as peripheral compositions of a specific type. However, it is equally possible to subsume them under general MVCs. Consider the following example:

- (89) *tinggan=ko neka b-e wen-e an-in gole,*
 meat=PTC 1SG.REFL take:PL.O-SM go-SM eat-1SG CONJ
 [I cannot give you this piece of meat:]
 ‘Because I took it with me for myself to eat,’ [muyu004:094]

The first two verbs in (89) form a CAM construction, whereas the third verb denotes an event phase that is not part of the caused accompanied motion and also not identifiable with any other specific construction. Hence, the whole construction is a blend of CAM and general MVC.³⁸

The **structural periphery** of the general MVC type is well attested in our corpus. In fact, the majority of instances of this type deviate from non-core properties, so that we gave separate labels to the resulting structures: sequential structures and conjoined structures. Both kinds are discussed separately in the following sections. In contrast, central structures with all

³⁸Note that the term ‘blend’ is agnostic to which of these constructions is primary. Classical syntactic analyses would operate with binary branching units. For example, in (89), we could say that the CAM of V1 and V2 is embedded in a general MVC, like this: $[[b-e\ wen-e]_{CAM}\ an-in]_{general}$. However, this is not compatible with the approach of this study. Although prototypical MVCs tend to a maximum of two verbs, they do not have a binary structure. An MVC with more verbs is also a single construction, rather than multiple nested MVCs.

non-core properties as presented in the examples above are rather rare for the general MVC type.

11.4.2 Sequential structures

Our discussion of Muyu MVCs so far focused on typical instances, which have all the core and non-core properties of the category. We also briefly mentioned peripheral versions of a specific construction type (either compositionally or structurally peripheral). This section deals with a certain kind of peripheral structure that we call sequential structure. Sequential structures are peripheral structures of the general MVC type³⁹ and, interestingly, they are more frequent than central structures within the general MVC type.⁴⁰

By sequential structures we mean all MVCs that have explicit markers of sequentiality placed between the component verbs. Such markers are *=ko* ‘PTC’, *ta* ‘and’, *kedo* ‘then’ or a combination thereof (e.g. *ta kedo*), and they often coincide with prosodic breaks. These elements mainly serve to indicate temporal sequentiality, i.e. the verbs preceding the marker denote events that happen before those denoted by the verbs subsequent to the marker, as in the following example of a general MVC:

- (90) **Tangga ane-komb-e=go,** *taman Albert*
 shoot 3SG.M.O-kill-SM=PTC brother PN
ban-an=e
 call.once-1SG=DS.SEQ
 ‘After I shot and killed (the pig), I called brother Albert and then
 he ...’ [muyu004:072]

The MVC in (90) has three verbs in total. V2 is host to the clitic *=ko* and is followed by an intonational break. The translation of this example makes use of a separate dependent clause (‘After I shot and killed ...’). However, the Muyu example is monoclausal.

Sequential structures per definition violate the non-core property CON-

³⁹Keep in mind that the general MVC type has only a structural periphery. Since the composition of this type is not restricted to certain verbs, there cannot be any compositional periphery of the type itself. Rather, the whole type is at the periphery of the category MVC.

⁴⁰This distinguishes the general MVC type from all the specific types discussed in Section 11.3. The specific types always have the central structures as more frequent realisations.

TIGUOUS ELEMENTS. Additionally, they also have a tendency to lack other non-core properties: SINGLE DOMAIN OF NEGATION, SHARED OBJECT ARGUMENT and SINGLE INTONATION UNIT. It is important to notice, however, that the constructions we discuss in the remainder of this chapter have all core properties and therefore are real MVCs, albeit less typical ones.

The following examples show sequential structures in natural discourse:

- (91) **Wen-e** *ano mo yal-e=go wen-e waktop*
 go-SM arrow only put:PL.O-SM=PTC go-SM clearing
okun-e win-in.
 like.that-SM go-1SG
 ‘I went there and put (down) the arrows and then went through a clearing.’ [muyu004:028]
- (92) **B-e kan-e amon-e=go, ti-un.**
 take:PL.O-SM take:SG.O-SM put.back-SM=PTC sit-3SG.F
 [After digging a hole to bury her husband’s head:]
 ‘She collected (the soil) and put it back and then she stayed.’ [muyu031:043-44]
- (93) **Tama ban-e kedo wom won-o-den.**
 termite.hill open-SM then inside go-3SG.M-PFV
 ‘He opened the termite hill and then went inside.’ [muyu007:142]
- (94) **Wen-e owet nin-e ta ap muktom**
 go-S bamboo hold:SG.O-SM and tree branch.stub
tol-a-den=go wen-e yan-a-den.
 step.on.once-1SG-PFV=PTC go-SM climb.onto-1SG.PFV
 ‘After holding on to the Bamboo tree, I stepped on the branch stub; and (eventually) climbed it.’ [muyu004:059]

Three of the four examples given above blend specific construction types with the general MVC type. We find associated motion in (91) and (94) (both as prior motion with *wene*) and the idiomatic construction *be kane* ‘collect’ in (92). Furthermore, the examples differ in which sequential markers are used, =*ko* in (91) and (92), *kedo* in (93) and *ta* in (94). Nonetheless, the functions of these markers are quite similar, since they all indicate a temporal sequentiality of the events.

Although the markers of sequentiality are functionally similar in these

structures, they differ morphosyntactially. The particle *=ko* is an enclitic, whose host is the verb that shall be sequentially separated from the subsequent verbs. In contrast, *ta* ‘and’ is a conjunction that occurs mostly at the beginning of a syntactic unit – often at the start of a clause. In sequential structures, *ta* ‘and’ is at the beginning of the next part rather than at the end of the previous part. This is most evident when prosodic breaks like pauses occur between the elements of a sequence. Whereas *=go* is usually uttered before the pause, *ta* occurs after the pause:

- (95) ...=**go** (pause) ...
 ... (pause) **ta** ...

In contrast to *=go* ‘PTC’ and *ta* ‘and’, the third sequential marker, *kedo* ‘then’, seems to have no tendency for its position. It is not a clitic to any host and can occur at both sides of a pause.

Sequential structures differ from typical MVCs in an important way: The component verbs can be modified separately. Consider the CAM construction in (96). Although it consists of two component verbs *kane* ‘take’ and *winip* ‘they go’, these verbs form one complex predicate. An attempt to modify each verb with a temporal adjunct, as in (97), is judged unacceptable by our consultants.

- (96) *Kam kan-e nangm-i timbon win-ip.*
 shield take:SG.O-SM fight-INF place go-2/3PL
 ‘They bring the shield to the battlefield.’ [Fieldnotes]
- (97) **Kam amyali kan-e oponon nangm-i timbon win-ip.*
 shield morning take:SG.O-SM evening fight-INF place go-2/3PL
 ‘(Intended:) They take the shield in the morning and go to the battlefield in the evening.’ [elicited]

The two adjuncts *amyali* ‘morning’ and *opnon* ‘evening’ in (97) cannot both be applied to modify a single MVC. However, if we separate the component verbs by a sequentiality marker *=ko*, this modification becomes acceptable:

- (98) *Kam amyali kan-e=go oponon nangm-i timbon*
 shield morning take:SG.O-SM=PTC evening fight-INF place
win-ip.
 go-2/3PL

‘They take the shield in the morning and go to the battlefield in the evening.’ [elicited]

The compatibility with separate temporal modifiers in sequential structures could be explained semantically. The MVC is divided by a marker of sequentiality, and this results in the reading in which the event is conceptualised as a complex event with two or more temporal locations, each of which can be specified by an adjunct. However, a separate modification of this sort is not restricted to temporal adjuncts but more generally to adverbial modification as the following pair of examples shows:

- (99) ***Keyap=mo** kam kan-e **bopti=mo** nangm-i timbon
 quick=ADV shield take:SG-SM slow=ADV fight-INF place
 win-ip.
 go-2/3PL
 ‘(Intended:) They take the shield quickly and go to the battlefield slowly.’ [elicited]

- (100) **Keyap=mo** kam kan-e=go **bopti=mo** nangm-i
 quick=ADV shield take:SG.O-SM=PTC slow=ADV fight-INF
 timbon win-ip.
 place go-2/3PL
 ‘They take the shield quickly and go to the battlefield slowly.’ [elicited]

In (100), *keyap=mo* ‘quickly’ and *bopti=mo* ‘slowly’ modify the manner of the respective verbs. Thus, each part of a sequential structure can be modified separately. Nonetheless, the whole construction obligatorily shares the same subject and inflects only the last verb. They remain MVCs since they have all the core properties.

To conclude, sequential structures are peripheral MVCs that add explicit markers of temporal sequentiality to instances of the general MVC type. A similar kind of structure is discussed in the next section: the conjoined structure.

11.4.3 Conjoined structures

By conjoined structure we mean any instance of the general MVC type, in which various subparts of the construction are segmented into separate

intonation units. Similarly to sequential structures, these structures often express that the subparts denote temporally sequential events. Unlike sequential structures, conjoined structures do not have explicit lexical marking. The intonation is the only cue to the grouping of the events. Consider a first example (commas indicate prosodic breaks):

- (101) *Wio-komb-e, kan-e kambul-e,*
 3SG.F.O-kill-SM take:SG.O-SM put.in.container-SM
men-en.
 come-3SG.M
 [Hunting a crowned pidgeon:]
 ‘He killed it, put it in a bag and then he came (back home).’
 [muyu054:009]

The clause in (101) contains an MVC of the general type and the complex event that is expressed consists of three phases (or subevents): (1.) an event of killing, (2.) an event of caused motion, and (3.) a motion event. Each of these phases is expressed in a separate intonation unit. Inside the first and the third of these intonation units, we find simple verbs (*wiokombe* and *menen*). In contrast, the second intonation unit contains an MVC of the caused motion type (*kane kambule*).

Now, let us consider the intonation of (101). Its pitch contour is shown in Figure 11.2. The utterance is divided into three intonation units (IU). The first and the second IU end in a high boundary tone (H%). The steep rise in pitch contour associated with these IUs (>50 Hz each) is characteristic for conjoined structures. In contrast, the third IU ends in a low boundary tone (L%) and represents the end of the utterance. The pitch rate resets at the beginning of each IU to a medium level. Additionally, prolonged phases of silence (i.e. pauses) are found between the IUs.

Here are some further examples of conjoined structures:

- (102) *Ap wilib-e, kelak onongm-un.*
 tree pile-SM fence make-3SG.F
 ‘She piled wood and made a fence.’ [muyu031:069]
- (103) *Amkumti=bet komb-e, kawen-e apyop wa-en.*
 ladder=OBL put:SG.O-SM climb-SM fruit pick:PL.O-3SG.M
 ‘He put a ladder (at the tree) and climbed it to pick the fruits.’

[muyu011:004]

- (104) “Ah, *eyuk=a*” *engg-e, an-e wan-e, wen-e om*
 INTJ yes=LNK say-SM eat-SM finish-SM go-SM sago
kan-e wen-e, ayob-in.
 take:SG.O-SM go-SM squeeze-1SG
 [Processing sago, having a lunch break. Her husband orders to go
 back to work:]
 ‘ “Oh yes”, I said, then finished eating and I went to take the sago
 and then squeezed it.’ [muyu026:019]

The examples above display various levels of complexity. While (102) has two verbs with one object each, (104) consists of seven verbs in four intonation units. The latter is especially good to see the function of conjoined structures. The IUs clearly set boundaries between the succeeding stages of the complex event.

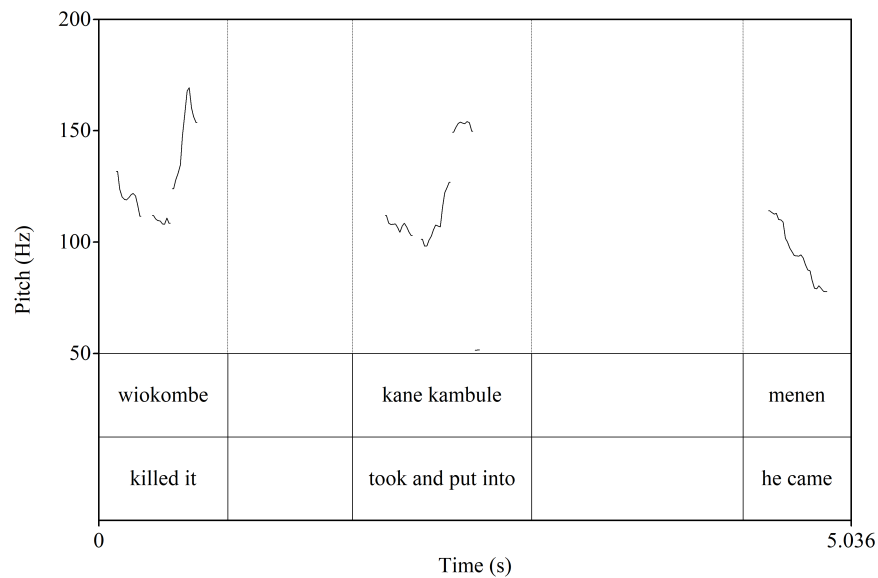


Figure 11.2: Pitch contour of the conjoined structure given in example (101).

11.4.4 Some remarks on clause structure and peripheral MVCs

In Section 11.2.2, we determined MONOCLAUSAL as one of the core properties of Muyu MVCs. Similar to other types of complex predicates (LVCs and AVCs), the verbs of an MVC all belong to one and the same clause. This ascertainment is unproblematic for prototypical MVCs, for which the non-core properties CONTIGUOUS ELEMENTS, SINGLE DOMAIN OF NEGATION, SHARED OBJECT ARGUMENT and SINGLE INTONATION UNIT are fulfilled. However, the more (structurally) peripheral a certain instance becomes, the less it resembles what is traditionally seen as a clause. In the remainder of this section, we will briefly discuss the clause status of peripheral MVCs.

Sequential structures and conjoined structures offer many debatable cases. Consider again the examples (94) and (104) from the previous sections. The former is a sequential structure with two sequential markers, and the latter is a conjoined structure with three prosodic breaks. They have in common that their English translations need several clauses to convey a similar meaning. Hence, it is worth taking a closer look at these examples.

There are two phenomena that can be seen as evidence that (94) and (104) actually contain multiple clauses. The first is related to eventhood and predication. Both instances contain very complex event sequences. In (94), the protagonist is approaching the bamboo, holding on to it, stepping on a part of it and eventually climbing it. Each of these (sub)events is denoted by a verb, so one could easily get to the equation: event = verb = predicate = clause. Similarly, the protagonist in (104) follows a complex sequence of events from uttering agreement over finishing lunch to going back to work. Here we also could equate verbs, predicates and clauses, with the possible exception of the aspect construction in the middle. This interpretation would result in complex clause chains instead of MVCs and has the side effect that clause chains would be more common than simple clauses in our Muyu corpus.

The second phenomenon that one might adduce for a clause chaining interpretation of sequential structures and conjoined structures comes from prosody. Conjoined structures such as (104) are per definition split into several intonation units. Additionally, sequential structures often have prosodic breaks in the vicinity of the markers of sequentiality. The single phases of a complex event are grouped by intonation in such cases and, therefore, one could easily get to the equation: event = intonation unit = clause. This would also suggest that the structures in questions are rather clause chains

than MVCs.

One effect of interpreting sequential structures and conjoined structures as clause chains is that the components of such clause chains are very reduced. Many clauses would consist of single verbs with a serial marker *-e/-o* only. They are hardly recognisable as clauses, which is why some researchers proposed terms to denote such elements. For example, de Vries (2020) labels similar structures in the Greater Awyu languages ‘mini clauses’, Mead & Youngman (2008) describe ‘compressed clauses’ in Tolaki, and Fedden (2011:464-465) finds ‘shortened medial clauses’ in Mian.⁴¹ While such labels can be applied to the languages they were invented for, they do not seem to make much sense for Muyu.⁴² Conceding that peripheral MVCs can be very untypical clauses, we do not adopt an analysis that results in multiple (mini/compressed/shortened) clauses. The remainder of this section summarises our view.

Individual segments of sequential/conjoined structures headed by verbs in *-e* do not display essential properties of Muyu clauses, as defined in Section 9.1. They are not separate domains of the subject, they cannot be negated separately, and they cannot be host to clause clitics⁴³. On the other hand, the verbs in sequential constructions can have separate modifying adjuncts (see Section 11.4.2), but this does not apply to the elements of conjoined structures. To sum up, grammatical tests result in a good definition for the clause but do not show evidence for clause-like units (mini clauses or compressed clauses) in sequential/conjoined structures.

As mentioned above, there are two phenomena that seem to indicate that the individual segments of sequential/conjoined MVCs are clauses or at least clause-like, i.e. eventhood and intonation. However, our definition of the clause in Muyu is purely morphosyntactic. Neither semantics nor prosody was included, since both are hardly applicable. First, it is not clear what an “event” is. Are two actions happening in fast sequence (“hit and break”) phases of one event or considered as two events? There is an inherent danger

⁴¹The Mian examples are particularly interesting, since they make use of a cognate to the Muyu sequential marker *ta*. However, Mian *=ta* is an enclitic with the verb as the host, whereas Muyu *ta* is a free word that mostly occurs at the beginning of an utterance.

⁴²In fact, also Muyu was interpreted similarly by Christensen (2013). For a discussion of this interpretation, see Section 11.5.1 below.

⁴³The marker of sequentiality *=ko* seems to contradict this statement. However, *=ko* is not a clause clitic since its host can be other syntactic units as well (e.g. NPs, postpositional phrases, etc.).

of circularity here, that events are defined as semantic units denoted by a clause, and clauses defined as units that denote events. The only solution in absence of an independent definition of an event is to exclude it altogether from the definition of a clause. Secondly, the clause is not the only unit that can be defined by means of intonation (breaks, boundary tones, pitch reset, etc.). Intonation also structures syntactic units on a subclausal level. For example, the initial subject argument of a clause is often separated from the rest of the clause by a prosodic break. Equating intonation units with clauses is therefore grossly misleading. To sum up, the application of tests outside of morphosyntax cannot give us a clear picture of what constitutes a clause. It is best to avoid them.

Finally, we need to mention that sequential structures and conjoined structures are of course quite different from prototypical MVCs. The argument in this section simply states that these differences cannot be interpreted in terms of clausehood. To all such instances the core property MONOCLAUSAL applies.

11.5 Muyu MVCs in a broader perspective

In Section 11.2, we defined a language dependent category of Muyu MVCs. Particular construction types of this category were described in the sections 11.3 and 11.4. Now, it is time to broaden the perspective and compare the language dependent category to similar phenomena in other languages.

Before considering a broader perspective of MVCs, two alternative interpretations of the Muyu data are discussed (§11.5.1). Next, MVCs will be discussed in the Ok context (§11.5.2) and then from a cross-linguistic perspective (§11.5.3).

11.5.1 Alternative interpretations of Muyu MVCs: Drabbe (1954) and Christensen (2013)

Our interpretation of MVCs as a radial category differs widely from most standard interpretations of similar phenomena offered in other languages (mostly discussed under the term serial verb construction, see Section 11.5.3). More importantly, the two available grammar sketches on three varieties of Muyu also treat these structures very differently. Therefore, we dedicate a separate section to these alternative interpretations. The remainder of this

section deals with the information about MVCs that we were able to find in Drabbe (1954) and Christensen (2013).

Drabbe (1954) describes the two dialects of Metomka and Ninati which are virtually the same regarding the topic at hand. Although both descriptions are rather sparse, his account of Ninati is more informative, hence we focus on this dialect in the following paragraphs. The most central idea of Drabbe’s analysis is that verbs on *-e* are participles, which he calls e-participles accordingly.⁴⁴ Besides that there are also *ok-*, *anok-*, *oo-*, *n-* and *naan-* participles, all of which are named after their primary suffix. An alternative designation Drabbe offers for e-participles is ‘momentary participles’⁴⁵, probably based on the fact that such participles often refer to events that happen in the same moment as other events.

E-participles are formed morphologically by omitting the stem vowel and adding the suffix *-e*. In Metomka, there are also forms that add *-o* but the resulting forms behave grammatically and semantically equal to those in *-e*.⁴⁶ The forms suffixed by *-e* (or *-o*) are regular forms. Besides them, Drabbe also mentions irregular forms: *peen* from *pee-* ‘hold many objects’, *toon* from *taa-* ‘take one out of many’, *noon* from *nii-* ‘hold on to’. Such irregular forms have not been found in the Kawiyet dialect of this study.

Semantically, Drabbe mentions that these participles are used to denote “composite events” (pg. 187) and “complex action” (pg. 191). Although he is not explicit about the nature of this complexity, the examples he gives seem to suggest that e-participles mostly denote facets of the main event (ex. from Drabbe 1954:187; glosses are our own):

- (105) *awanen-e* *win-ip*
follow.them-PART go-2/3PL
‘following them, they went’
- (106) *paamb-e* *jeetm-on*
call-PART say-3SG.M
‘calling out, he said’

Both verbs in (105) refer to one and the same motion event, and the participle

⁴⁴The Dutch original uses the term “e-participiep” (p. 186).

⁴⁵These are labeled “momentaan-deelwoord” (p. 186) in the Dutch original.

⁴⁶Compare this to our similar finding that the serial marker in Kawiyet can be *-e* or *-o* without noticeable difference.

merely adds information about the kind of event. Similarly, the participle in (106) specifies the manner of the denoted speech event. Drabbe also claims that verbs in such connections are near synonyms, although examples like (107) and (108) below refute this claim.

The syntactic description of the e-participle is virtually absent. The following information is given: (1.) verbs in this form never occur isolated but always in combination with another verb; (2.) verbal categories like person, number, tense and mood are only marked on this other verb but never on the participle; and (3.) the participle is often juxtaposed to the verb following it but can also be discontinuous, i.e. separated by an argument or adjunct. Unfortunately, the syntactic relation between these two verbs is not studied further. This is reflected in the fact that Drabbe's study has morphological chapters about participles but no chapters about the syntactic units they occur in. Since this description lacks a clear account of syntactic units such as clauses or sentences, Drabbe's view of the relationship between the participle and the main verb remains obscure. We can only guess - based on the notion 'participle' - that he conceives of them belonging to the same clause as the main verb.⁴⁷ Another drawback of Drabbe's presentation is that it is largely missing instances of full sentences.

Here are some of the few examples with full sentences (Drabbe 1954:187; glosses are our own):

- (107) *manman peen* *ambi wan-an*
 things hold.many.obj:PART house go-1SG
 'Holding the things, I go home.'

- (108) *Jesus kon* *peretik katiin-e* *wen-e*
 PN hold.on:PART cross carry.on.shoulder-PART go-PART
mon-kamb-e aj-on
 stumble-PART AUX-3SG.M
 'Carrying the cross on his shoulders, Jesus fell.'

The examples in (107) and (108) show all the features mentioned above: the non-final verbs are either ending in *-e* or irregular forms, only the final verbs

⁴⁷The choice of the notion 'participle' is generally surprising, since Drabbe does not mention any properties that are similar to forms that are usually labeled by this term (e.g. in descriptions of European languages). That is besides the fact that they are inflections of verbs.

are inflected for person and number and some of the verbs are discontinuous, with intervening location *ambi* ‘house’ in (107) and intervening object *peretik* ‘cross’ in (108). One feature visible in (108) that is not mentioned by Drabbe is the stringing together of several e-participles.

To sum up, Drabbe’s account differs from our analysis in two important ways. Firstly, instead of studying the syntactic units in which they apply, he merely deals with participles as verb forms. Syntactic information is almost entirely missing. Secondly, his claim that the participles and the main event both denote facets of the same event is not compatible with our findings. Note that the notion of “event” is controversial and notoriously difficult to define. For this reason, “eventhood” as a notion is not included within our analysis of MVCs. All in all, the information we get from Drabbe (1954) is not too profound, especially because of a lack of texts and glossed examples in full sentences.

Christensen’s (2013) analysis of the Yonggom dialect offers two categories that are of relevance for our comparison: serial verb constructions (SVCs) and clause chains. Interestingly, his examples of SVCs have no equivalents in the Kawiyet dialect and direct comparison is not possible.⁴⁸ In contrast, one kind of Christensen’s clause chains are equivalent to those structures analysed as MVCs in this study. We will discuss each category in turn.

The Yonggom dialect has instances in which two verb stems are directly juxtaposed without affix on the first verb stem (i.e. our serial marker *-e/-o*). Christensen (2013:27) offers the following examples (glosses and segmentation as in the original):

- (109) *kand-wen-e*
 get-go-IMP
 ‘Take it away!’
- (110) *wand-kon-iwen*
 cut-give-23PLpa
 ‘They cut it up and gave it out.’

⁴⁸We were able to find similar examples in data from other dialects such as Okpari and Aree but not in Kawiyet which is analysed in this thesis. However, our general impression is that they are very rare in all these dialects. There is no quantitative data about these phenomena yet.

- (111) *ok yund-men-iin*
 water fill-come-1S
 ‘I’m getting water.’

As can be seen, the first two verb stems are connected directly and suffixes occur only on the whole form.⁴⁹ Unfortunately, the information he provides on these forms is rather scarce. It boils down to three points: (1.) they contain maximally two verb stems, (2.) V1 is restricted in the choice of verb and maybe only compatible with verbs of taking, (3.) V2 is also restricted and most commonly filled with motion verbs.

SVCs in Christensen (2013) are a very minor category with only a few instances in his data. In contrast, verbs with the suffix *-e* which he labels sentence medial enclitic and glosses ‘-SM’ are abundant.⁵⁰ In his analysis, the sentence medial enclitic is a minimal variant of the subject agreement enclitics. This is essentially what we analysed as same subject suffixes plus an allomorph of the subject suffix in this study. Compare the two different analyses for 1SG and 1PL (with forms for all other person/number combinations being analogous):

- (112) Yonggom (Christensen 2013:24):
-eni ‘SM.1S’
-enup ‘SM.1P’
-e ‘SM’ (=sentence medial)
- (113) Kawiyet (this study):
 ... *V-n-i* ‘...-SS-1SG’
 ... *V-n-up* ‘...-SS-1PL’
-e ‘SM’ (=serial marker)

Christensen (2013:24) lists full forms like *-eni* and *-enup* in (112) that indicate that the verb is medial and there is subject continuity with the following clause. The sentence medial enclitic *-e* is analysed as a minimal variant which lacks information about the subject. In contrast, our data from the Kawiyet dialect shows that this analysis is problematic. The suffix *-e* is unlikely to be

⁴⁹Christensen (2013:27) also gives an orthographic layer in his examples. It is made clear in the orthographic layer that the phoneme /d/ of the first verb stems are not pronounced in SVCs. For reasons of space, we skipped the orthographic layer in our reproduction of his examples.

⁵⁰Not to be confused with our glossing of ‘-SM’ which stands for serial marker.

a “minimal variant” since the corresponding vowel /e/ is not present in all “full forms”. In Kawiyet, the vowel in such forms depends on the conjugation class of the verb stem; it can be /a/, /e/ or /o/. Also note that we set the morpheme break between the vowel and the suffix *-n* ‘SS’ as shown in (113). Hence, the vowel is part of the verb stem, not the suffix. Furthermore, we separate the same subject marker *-n* from the subject index, which is another morpheme. All clause chaining morphology that is left in our analysis is the morpheme *-n*. If *-e* is a variant of the subject agreement morphology, as Christensen claims, then it would follow that *-e* is a variant of *-n*. We can find no justification for the latter.

Christensen’s analysis of *-e* as a minimal variant of subject agreement morphemes leads him to the idea that structures that we identified as MVCs are in fact clause chains. Consider the following example (Christensen 2013:49, ex. 131c; glosses and segmentation as in the original):

- (114) *awon kuu kan-men-e kow-ekor-e bung-oon.*
 pig TOP get-come-SM put-COMP-SM cut.up-3Mpa
 ‘He took the pig and put it (down), and then cut it up.’

According to the analysis he proposes, (114) consists of three clauses. The first two have medial verbs marked with *-e*, whereas the final verb is suffixed with a subject index. Note also that the first clause contains an SVC, since two verb stems *kan-* ‘get’ and *men-* ‘come’ are directly juxtaposed.

There are two problems we see in this analysis. Firstly, it depends on interpreting the suffix *-e* as a variant of other clause chaining morphemes; an idea that we already rejected above. Secondly, it depends on a weak definition of the clause. If final verbs, medial verbs suffixed with *-eni* or *-enup* and medial verbs suffixed with *-e* all constitute clauses, then there is hardly anything these clauses have in common. They all behave differently concerning properties such as shared arguments, scope of negation and morphological restrictions. As a consequence, very different structures are all covered by the term ‘clause’.⁵¹ In contrast, the analysis proposed in this study maintains a strong definition of the clause (see Section 9.1). Since verbs suffixed with *-e* do not constitute a separate clause, we cannot analyse (114) as a case of clause chaining. All verbs in this example are part of the same clause, albeit

⁵¹We recognise that the term ‘clause’ is controversial and notoriously difficult to define cross-linguistically. However, we do believe that it can and should be used consistently within the description of a single language.

a very complex one.

In conclusion, we find that the existing descriptions are too superficial regarding MVCs. The two analyses by Drabbe (1954) and Christensen (2013) do not only differ from our account but are also not really compatible with each other. While Christensen interprets verbs ending in *-e* as constituting their own clause, Drabbe calls them participles and probably subsumes them under the same clause as the final verb. The morphological status of the marker *-e* is interpreted entirely differently: in one case as an inflectional suffix of a participle form, in the other case as a reduced variant of the subject agreement medial verb suffixes. Moreover, both accounts lack a clear definition of the clause. Hence the need for a more syntactic account of these structures, as offered in this study.

11.5.2 Muyu in its Ok context

Multi-verb constructions are a typical feature of Ok languages (and TNG in general). The most information available is about Mountain Ok languages, of which Mian is currently described most comprehensively (Fedden 2011). Additionally, we find information in short studies on Bimin (Weber 1997), Telefol (Healey 1966) and Tifal (Boush 1975).⁵² One should be aware that the terms used to label this phenomenon vary between different authors and studies.

Mian verb serialisation has many similarities with what we find in Muyu. Fedden (2011:405-420) distinguishes two structural types of serial verb constructions (SVC): core SVCs and nuclear SVCs. This distinction was introduced by Foley & Olson (1985) and relates to different structural layers of the clause (as established in Role and reference grammar, Van Valin & Foley 1980). Verbs serialised in the nucleus of the clause are syntactically more tightly knit than verbs serialised in the core. The following properties are listed to distinguish the two categories in Mian (Fedden 2011:416):

1. Contiguity: Nuclear SVCs are strictly juxtaposed, whereas core SVCs can have intervening material.
2. Aspect: Verbs in nuclear SVCs must have the same aspect value, whereas aspect in core SVCs can vary.

⁵²The later two, Healey (1966) and Boush (1975), set their analysis in the framework of tagmemics. This makes both their data and interpretation hard to compare with the findings from Muyu in this study.

3. Number of stems: nuclear SVCs have a maximum of two verbs, whereas core SVCs are not limited.
4. Shared object: nuclear SVCs refer to a single shared object, whereas in core SVCs each verb can have a separate object.
5. Compositional semantics: nuclear SVC can be idiomatic, whereas the meaning of core SVCs is compositional and generally transparent.

A further important point is that Mian has a clear criterion for phonological wordhood, since it is a tonal language and tone assignment rules have scope over words as tonal domains. In both nuclear and core SVCs, each verb has its own tonal domain, i.e. is a separate phonological word. This is surprising for nuclear SVCs, since they cannot have intervening lexical elements but nonetheless remain phonologically separate.⁵³

The following examples represent core SVCs in Mian (glosses as in the original):

- (115) *éil=o yē ga*
 pig=SG.F there cook_in_leafoven
dowôn'-∅-ob=ta
 eat.PFV-DS.SEQ-1PL.SBJ=MED
 'we cooked the sow in a leaf oven and ate it and then someone else ...' (Fedden 2011:409)
- (116) *u-nâ' dowôn'-∅-e=a*
 3SG.F.O-kill.PFV eat.PFV-DS.SEQ-3SG.M.SBJ=MED
 'he killed and ate her up and then ...' (Fedden 2011:408)
- (117) *dabáal=e haka dam=o*
 ground=SG.N1 break.IPFV body=SG.F
om-bù-∅-e-bio=ta
 3SG.F_CL.O-bury.PFV-REAL-3SG.M.SBJ-GPST=MED
 'after he had dug up the ground and buried her body, (the Niniktol vine...)' (Fedden 2011:410)

As can be seen from (116), verb serialisation affects only suffixes. The first verb in this example has an object prefix, while subject indexes and other

⁵³Mian has another type of construction in which two verb stems share the same tonal domain. These are analysed as verb-verb compounds in Fedden (2011:416).

morphemes are only found on the last verb. In (117), each verb has its own object argument.

The following example has a nuclear SVC as the predicate (Fedden 2011:413-414; glosses as in the original):

- (118) \bar{i} *wéng=o baa*
 3PL.AN talk=N2 say.PFV
om-f^â-0-ibo=be
 2SG.F.CL.O-put.PFV-REAL-2/3PL.AN.SBJ=DECL
 ‘They have settled the argument.’

The two verbs in (118) both have *wéng* ‘talk’ as object argument. The first verb is a mere verb stem and the two verbs cannot be separated by any intervening element.

The second Mountain Ok language we consider here is Bimin. Speakers of this language serialise verbs by directly juxtaposing verb stems. Consider the following examples (Weber 1997:55-56; glosses as in the original):

- (119) *Ok sen dan unina!*
 water container fill go.IMP.F.2.PL
 ‘Go (PL) to fill the water container!’
- (120) *Beil okol-u teliw.*
 leaves cut come.2./3.PL
 ‘They/You (PL) come to cut leaves.’
- (121) *Fut mak debele unsiliw.*
 book/letter IDEF send go.2/3PL
 ‘They did send a letter away.’

The verb stem *dan* ‘fill’ in (119) precedes the inflected motion verb. The author is not explicit about the word status of two juxtaposed verb stems, but his orthography suggests that he considers them two separate words. The first verb in (120) has *-u* attached to it. This vowel is not an inflectional suffix but has phonological reasons (hence no gloss for this item). It only occurs when the verb stem ends in /l/. Weber (1997) does not include information about whether verbs in Bimin SVCs can be discontinuous, i.e. whether arguments or adjuncts can intervene between the verbs.

Similar examples are also found in Tifal (122) and Telefol (123) (glosses and segmentation as in the original).⁵⁴

- (122) *as dwula kudi tiltam tal-ab-a*
 wood cut get come.up come-2S-Imp
 ‘Cut and bring the wood on top!’ (Tifal; Boush 1975:62)

- (123) *kw-ééb nóo kúb-a’silíb*
 her-get go they-bury-her
 ‘they took her and buried her’ (Telefol; Healey 1966:7)

As can be seen, multi-verb constructions are a general feature of the Ok language family. In Mountain Ok, we find verbs of an MVC mostly in their bare stem forms, whereas in Muyu, the serial marker *-e/-o* is attached to the stem.⁵⁵ However, most descriptions are far from comprehensive, and it is not clear yet if the MVC in other Ok languages can also be analysed as a radial category. Detailed comparative research on Ok MVCs remains an interesting topic for future research.

11.5.3 The typological context: Does Muyu have serial verb constructions?

Approaching our findings in this chapter from a typological perspective, we find that Muyu MVCs mainly resemble those syntactic structures that have been discussed under the heading ‘serial verb constructions’ (SVCs) in the literature. And indeed, Mian is another Ok language for which SVCs have been described thoroughly (Fedden 2011:Ch. 11). In the remainder of this section, we will briefly discuss why we did not use the term serial verb construction in our study of Muyu syntax and instead developed a language dependent category of Muyu MVCs. Since the literature on SVCs is vast, we can only give a brief outline.

Although SVCs have attracted interest of linguists for decades now, there is still uncertainty whether or not this label designates a cross-linguistically

⁵⁴Boush (1975) labels multi-verb constructions in Tifal as ‘sequential verb phrases’. Healey (1966) uses the term ‘paratactic chain’ and proposes a very technical analysis in the framework of tagmemics.

⁵⁵In some dialects of Muyu, such as Yonggom and Aree, the direct juxtaposition of verb stems is also found. See Section 11.5.1 above.

comparable phenomenon (Haspelmath 2016, Bisang 2009:811-812, Shibatani 2009:278). Frequently recurring features in the existing definitions of the category (see *inter alia* Aikhenvald & Dixon 2006, Durie 1997, Foley & Olson 1985, Lefebvre 1991, Lord 1993, Senft 2008, Sebba 1987) are:

1. Multiple verbs
2. Monoclausality
3. No linking element between the verbs and no marking of dependence
4. Single eventhood
5. Single intonation unit
6. Shared grammatical categories (especially TAM)
7. Shared arguments (especially subject and object)

Haspelmath (2016:292) highlights that the term serial verb construction was coined for a single language and then gradually extended to many similar phenomena in other languages (for an overview with references see Lovestrands 2021). This may be the reason for the rather arbitrary collection of features in many comparative studies. As we will see presently, some of these features contradict the application of the SVC category on the Muyu data. But before turning to Muyu, we take a look at two typological studies that include representative samples, in order to see whether or not Muyu would fit in.

Unterladstetter (2019) offers an areal typology of Eastern Indonesia, *i.e.* an area that includes Western Papua where Muyu is spoken. Since he finds the term ‘serial verb construction’ too controversial, he offers a comparative concept that he calls ‘multi-verb construction’ instead.⁵⁶ The sample of his study included 32 languages (11 of them in Western Papua) from which he collected all available examples of multi-verb constructions in published grammars, sketch grammars, research articles and (to a lesser extent) available corpora. This procedure resulted in 2146 data points that were analysed for grammatical structures (argument structure and constituent structure) and semantic structures (mostly eventhood following a Davidsonian approach

⁵⁶Note that Unterladstetter’s (2019) term multi-verb construction does not coincide with what we called MVCs of Muyu in the present study.

with an event argument). What matters for the purposes of this study is Unterladstetter's working definition of the category 'multi-verb construction'.

(124) **Unterladstetter's (2019:139-140) definition of multi-verb constructions:**

- more than one verboid element predicating lexical content and selecting/assigning arguments
- no formal disambiguation wrt. constituent level differences or dependency hierarchies
- absence of linking element/connector
- coherent formation at the prosodic level
- entailing one continuous time frame without disruptions

The defining features listed in (124) are conspicuously vague. For example, he refers to "verboid elements" instead of verbs and there is also no reference to monoclausality. Such vagueness was chosen deliberately to maximise inclusiveness. However, most of the features of Unterladstetter's concept of multi-verb constructions can be related to the frequently recurring SVC features listed above. We will come back to the question of whether Muyu would meet these criteria and be a good candidate for the sample in a moment.

Another typological study has a geographically broader sample. Ross (2021) includes a worldwide sample of 325 languages. Unlike Unterladstetter who included only languages that have the phenomenon under scrutiny, Ross compiled a genealogically and geographically balanced sample, in which a broad range of phenomena were studied, SVCs being only one of them. Of the 325 languages in his sample, SVCs are attested in 125 languages (38%) with focal points in West Africa, Papua New Guinea and South East Asia. This shows that the phenomenon is actually widespread in the languages of the world. The definition of SVCs applied in this survey contained the following features:

(125) **Ross' (2021:227-228) definition of serial verb constructions:**

- Two or more juxtaposed verbs
- with no marker of dependency or linking element
- expressing a single event in a single clause
- with the same values for Tense-Aspect-Mood and negation
- and shared arguments (subject and/or object)
- encoding various semantic relationships

Although the features listed in (125) are quite commonly found in the languages of the world, Ross (2021:257-258) highlights that this definition of SVCs is an arbitrary one. In particular, the exclusion of linking elements is considered as a historical accident due to research traditions rather than justified by the phenomenon itself. In fact, he finds many functional similarities with other verb-combining structures that have been studied under various labels, namely pseudocoordination, converb constructions, switch-reference and para-hypotactical structures. This is why he offers a broader category that spans all these phenomena, calling them multi-verb predicates (MVPs). SVCs as they are defined in (125) are simply “MVPs with no overt linking element” (Ross 2021:259). Therefore, the category of MVPs abstracts from formal features such as linking elements and focusses on functions instead.⁵⁷

Turning to Muyu now, we ask whether or not the data analysed in this chapter are compatible with the definitions in (124) and (125). As a short reminder, the category of Muyu MVCs has four core properties: MULTIPLE VERBS, SERIAL MARKER *-e/-o*, SHARED SUBJECT and MONOCLAUSAL. Three of them are compatible with the comparative concepts in the typological studies (SERIAL MARKER *-e/-o* is the exception). Next, we discuss them in turn.

MULTIPLE VERBS is of course the fundamental condition for any category of this kind. It is present in all existing definitions, although (124) weakens it to “verboid elements”. This is a requirement for the sampling technique in the respective study and should not bother us here, since Muyu verbs are clearly definable in terms of morphological and syntactic features.⁵⁸ An important aspect of this feature is the number of verbs that are included. Both (124) and (125) acknowledge that some languages serialise more than two verbs, and this is also what we find in Muyu. However, there is no explicit limit to the maximum number of verbs. Although the specific construction types described in Section 11.3 typically are composed of two verbs, they can be blended or extended to sequential/conjoined structures and reach a significantly higher number of verbs.

SHARED SUBJECT is a core feature in Muyu MVCs and is unambiguously

⁵⁷This abstraction from formal features leads further to the inclusion of pseudocoordination, converb constructions, as well as switch-reference and para-hypotactical structures. All of these structures are, of course, beyond the scope of the present study.

⁵⁸However, one can imagine that the Muyu word class of directionals could be counted as “verboid element” in some dialects, see Section 4.4. In this case, the motion verb complex (described in Section 9.2.1.1) would be interpreted as a MVC as well.

present in all instances. The typological situation is a little more complex, however. In (125), we find the qualification “subject and/or object”. Obviously, this definition includes cases in which the argument functions vary between the component verbs.⁵⁹ For all other cases, the addition of the object argument is useless, since candidates in which both subject and object argument are shared (i.e. composed of two transitive verbs) would have fallen under a feature ‘shared subject’ anyway, and there are no cases to our knowledge in which the object argument is shared but each component verb has a separate subject. The definition in (124) is not explicit about which arguments are shared, but they do occur in the feature about the verboid elements which are “selecting/sharing arguments” (Unterladstetter 2019:139). The reason for not giving any details about argument sharing is that this topic is further analysed in the study, so the author is maximally inclusive in his sample. Naturally, the Muyu data also fit this definition regarding the arguments.

MONOCLAUSAL is an important hallmark in many SVC descriptions. In Muyu, this core property is based upon a very narrow definition of the clause. However, cross-linguistically, clauses are notoriously difficult to define.⁶⁰ This is the reason why (124) has no feature monoclausality. In contrast, (125) does include this feature and relates it with the expression of single events.⁶¹ To conclude, the Muyu data is compatible with both definitions in this respect.

The fourth and final core property of the Muyu MVC is SERIAL MARKER *-e/-o*. This is the only property that seems to be incompatible with both definitions. Formal marking of dependency is explicitly excluded in (124) and (125). Let us first consider what is meant with “marker of dependency”. Unterladstetter (2019:140) mentions

formatives to explicitly track constituent hierarchies and clausal

⁵⁹Such SVCs are often discussed as having ‘switch function’ and include constructions of the type: “He hits case breaks.”

⁶⁰Some researchers base their definition of the clause on the scope of negation (Bohne-meyer et al. 2007:501, Haspelmath 2016:299). However, some languages can have a narrow scope of negation, in which subclausal units are negated. Muyu is just one example of such a language. Furthermore, Reesink (2002) even claims that the scope of negation in many Papuan languages depends on pragmatic rather than grammatical principles. In such languages, negation can have scope over more than one clause. To sum up, scope of negation is not a good criterion to define clausehood cross-linguistically, since it can be both narrower and broader than a single clause.

⁶¹The topic of eventhood and what constitutes a single event is notoriously difficult and will not be considered here.

boundaries, for instance by making use of non-finite morphology or reduced verb forms (as we frequently find in clause chaining constructions with medial verbs and reference-tracking morphology in Papuan languages more to the east of EI [Eastern Indonesia, A.Z.]).

Thus, it seems clear that medial verbs in Muyu are excluded, since they clearly signal a clause boundary. But what is the status of the serial marker *-e/-o*? As outlined in Section 11.5.1 above, Christensen (2013) analyses it as a reduced form of the same subject medial verb endings, while Drabbe (1954) analyses it as an inflectional morpheme for participles. Our present study treats them as specialised markers that are only used in MVCs and AVCs. Muyu is not an outlier here, and there are at least several other languages that have what is sometimes called ‘serial linkers’.⁶² It is at least debatable whether or not such specialised morphemes should be counted as “markers of dependency”. However, cross-linguistic work on SVCs tends to be conservative in this question, and Muyu data would be excluded from both samples based on the definitions in (124) and (125).

The typological classification of Ross (2021) offers another interpretation in respect to the core property SERIAL MARKER *-e/-o*. As already mentioned above, Ross (2021) offered a broader category called multi-verb predicate (MVP). Within this category, dependent-marked MVPs are a separate subcategory on the same level with SVCs. The presence of a marker of dependence seems to be the only difference between these subcategories. Therefore, the core property SERIAL MARKER *-e/-o* makes Muyu MVCs more compatible with dependent-marked MVPs than with SVCs in the typology of Ross (2021).

Now that we have covered all the core properties of Muyu MVCs, there is still one more feature that needs consideration. Both Unterladstetter’s definition in (124) and Ross’ definition in (125) list the absence of linking elements as a property. The term ‘linking element’ is intentionally vague and

⁶²Khwe (Central-Khoisan, Namibia; Kilian-Hatz 2006) has a multi-verb construction in which only the final verb is inflected for all available TAM categories, whereas all non-final verbs end in one of two possible suffixes. These suffixes are equal to theme vowels between verb stem and TAM suffixes in fully inflected verbs. Therefore, these theme vowels are used as special markers in MVCs (similar to the Muyu serial marker *-e/-o*). Similar suffixes that are confined to mark non-final verbs in MVCs can be found for Urarina (isolate, Peru; Olawsky 2011) and Fuyug (TNG, Papua New Guinea; Bradshaw 2007) inter alia.

usually covers elements such as coordinating and subordinating conjunctions and clitics with similar functions. In Muyu, typical MVCs do not include any linking elements. However, the sequential structures discussed in Section 11.4.2 include what we called markers of sequentiality: *=ko* ‘PTC’, *ta* ‘CONJ’ and *kedo* ‘then’. These markers clearly qualify as linking elements and exclude the respective Muyu instances from both definitions. However, sequential structures are quite peripheral to Muyu MVCs. The question arises whether or not less frequent instances should be criterial in excluding a whole group of constructions. This difficulty was also noticed by Unterladstetter (2019) who found that linking elements are sometimes optional in certain constructions. He decided to include instances of such constructions in his sample when the author of the respective source indicated that “a particular kind of MVC is preferred without a linker” (Unterladstetter 2019:140). Therefore, the Muyu data would not have been excluded based on this criterion.

To sum up, we find that Muyu MVCs do not exactly fit the definitions given in (124) and (125). The excluding criterion is concerned with markers of dependency, which is violated by the core property SERIAL MARKER *-e/-o*. Moreover, some peripheral MVCs in Muyu have linking elements, which directly contradicts the definitions. However, it is important to notice that the current research discourse of these phenomena is highly controversial. There is no consensus about what comparative concepts make sense and it is unclear what generalisations will be found based on different groupings of the data. One reflection of this situation is Ross’ (2021) proposal of the broader concept multi-verb predicate. Muyu MVCs clearly fall within this category.

We can conclude that Muyu MVCs have many similarities with structures found in other languages of the world. There is good reason to refrain from using the heavily burdened term ‘serial verb construction’ in the analysis of Muyu. However, this does not mean that Muyu MVCs are totally different from what was traditionally called SVCs. Three of the four core properties are found throughout the whole literature on the topic.

11.6 Auxiliary Constructions

Auxiliary constructions (or auxiliary verb constructions, short: AVC) are complex predicates that encode certain grammatical meanings. They are

similar to MVCs in that they are composed of two verbs. Unlike MVCs, the last verb in an AVC is an auxiliary, which means that it does not occur as an independent verb in simple predicates (or at least with very restricted functions). The main features of AVCs are very similar to MVC core properties, as will be shown in Section 11.6.1.⁶³

After an initial section about features of AVCs, the following construction types will be discussed: habituals with *kemi* ‘do’ (§11.6.2), continuatives with *bili* (§11.6.3), desideratives with IRR + *kemi* ‘do’ (§11.6.4) as well as inchoatives with *wini* ‘go’ (§11.6.5).

11.6.1 Common features of Auxiliary Constructions

The common features of all auxiliary constructions are:

1. An AVC is a combination of a **main verb** and an **auxiliary verb**.
2. Only the **auxiliary verb can be inflected** freely.
3. The two verbs of an AVC are **contiguous**.
4. AVCs encode **aspectual** or **modal categories**.
5. AVCs are **monoclausal**.

The following paragraphs elaborate on each feature:

Ad 1.) An auxiliary verb construction is essentially a combination of a main verb and an auxiliary verb. The position of the main verb is open to any item of the word class, whereas Muyu has only three auxiliary verbs:

⁶³In fact, the radial category MVC can be modified to include AVCs as well. Two core properties would need to be altered: (1.) MULTIPLE VERBS would need to include auxiliaries and (2.) SERIAL MARKER *-e/-o* would need to allow other endings (like the infinitive suffix or the irrealis marker). However, besides these frictions with core properties, there are two fundamental reasons why we distinguish MVCs from AVCs categorially: Firstly, AVCs do not show graded centrality regarding their composition. Each auxiliary verb serves a specific function and there is no room for variation. For example, a construction either is a habitual construction or not, but there is no less typical habitual AVC. Secondly, AVCs are less variable according to those features that are considered non-core properties of MVCs. For example, in MVCs, there is a tendency, but no strict rule, for contiguity. In contrast, auxiliaries seem to always directly follow their main verbs (with some intervening adverbs as exceptions).

kemi ‘do’, *bili*⁶⁴ and *wini* ‘go’.⁶⁵ The basic motion verb *wini* ‘go’ does not denote movement when used as an auxiliary.

Ad 2.) The main verb of the construction is not inflected independently. Its form depends on the respective construction type. For example, in desiderative AVCs, the main verb is always in irrealis mood. In contrast, the auxiliary verb is compatible with the full verb morphology of Muyu (with one exception concerning *bili*, which cannot inflect for durative).

Ad 3.) Unlike MVCs, auxiliary constructions seem to require their component verbs to be strictly contiguous. The only exception to this is the insertion of the clitic =*mo* ‘always’ in one of the habitual constructions.

Ad 4.) Semantically, AVCs encode aspectual and modal categories: habitual, continuative, desiderative and inchoative.

Ad 5.) An AVC is always monoclausal and thus has all the features of the clause, as defined in Section 9.1. Most importantly, it is the domain of a subject, and the scope of negation is always the full construction.

Finally, we need to elaborate on the number of verbs in an AVC. Typically, they consist of a main verb and an auxiliary. This does not mean that auxiliaries are not involved in larger structures. There are many instances in the corpus in which a clause has more than two verbs, one of which is an auxiliary. However, it seems that the auxiliary in such cases only affects the directly preceding verb, i.e. its main verb. Additional verbs are best described as part of an MVC. In other words, Muyu grammar allows for the blending of MVCs and AVCs.

The following sections discuss each construction type in turn.

11.6.2 Habituals with *kemi* ‘do’

This section deals with the habitual auxiliary construction. Besides that, habituals are also expressed by habitual copula constructions and irrealis.

⁶⁴Since *bili* is not used outside AVCs, we do not provide a lexical translation for it throughout this chapter.

⁶⁵Another possible candidate for an auxiliary verb is *enggi* ‘say’. It seems that it often has an auxiliary-like function, for example, to express desires (“He wanted to eat” is often literally “I want eat, he said”). However, this verb mostly occurs in constructions that are bi-clausal and are therefore not analysed as AVCs in this study. For details, see Section 12.6.

The habitual AVC is formed with the auxiliary verb *kemi* ‘do’. There are two types, differing in the form of the main verb:

(126) **Habitual auxiliary construction, Type I:**

main verb = V-*e*
 auxiliary = *kemi* ‘do’

(127) **Habitual auxiliary construction, Type II:**

main verb = V-*i=mo* [V-INF=always]
 auxiliary = *kemi* ‘do’

In comparing the structures given above, we see that the main verb of Type I ends in the serial marker *-e*, whereas the main verb of Type II is inflected in its infinitive form (*-i*) and is host to the clitic *=mo*. The latter is a clitic form of the adverb *yamo* ‘always’ and is obligatory in this construction. We were not able to find any semantic differences between Type I and Type II. They seem to be compatible in the same contexts and are used with similar frequency.

Here are some examples for the habitual AVC, Type I:

- (128) *Om alum-e kem-ep=ko wedambel-e kem-in.*
 sago chop.sago-SM do-2SG=PTC hear-SM do-1SG
 ‘I usually hear it when you make sago.’ [muyu006:061]

- (129) *ta yop odo medep onongm-e kem-ip?*
 and seed DEM what make-SM do-2PL
 ‘and what do they usually make from the seeds?’ [muyu030:107]

- (130) *ambanga yi odo om aip an-e kem-ok balin.*
 grandparents 3PL DEM sago there.is eat-SM do-SBJV NEG
 ‘(Our) grandparents never ate sago.’ [muyu032:102]

The examples above show habituais in different contexts. In (128), each of the two consecutive clauses has a habitual AVC. The denoted events are aligned: each time the addressee chops sago, the speaker hears it. The content question in (129) asks for a habit, and the subject is expected to make the same product regularly. Finally, the negation of a habitual AVC, as in (130), denotes that the event never occurred (rather than not occurring regularly).

Here are some examples of the habitual AVC, Type II:

- (131) *Ok an-i=mo kem-en.*
 water eat-INF=always do-3SG.M
 ‘He used to drink water.’ [muyu048:034]
- (132) *tana olal-i=mo kem-ip.*
 child talk-INF=always do-2/3PL
 ‘They used to tell it to the children.’ [muyu065:002]
- (133) *Ah, eto aton tep-i=mo kum-un eyen.*
 INTJ, DEM sun rise-INF=always do-3SG.F this.is
 [Pointing towards east:]
 ‘Oh, this is (the direction) where the sun usually rises.’
 [muyu066:098]

The examples (131)-(133) are very similar to those of Type I above. Although habituals mostly depend on human agents, we can see in (133) that also inanimate entities can be the subject of a regularly occurring event.

The structure of Type II is peculiar in two ways. Firstly, it requires the enclitic *=mo*, which is a clitic form of the adverb *yamo* ‘always’. This clitic is obligatory in Type II only; compare (131) to its unacceptable variant (134). It also occurs in the habitual copula construction, and it is conceivable to interpret the sequence *-i=mo* as a single grammaticalised habitual marker *-imo* ‘HAB’. However, since our consultants have no problems analysing the form, we opted for a segmentation into *-i=mo* in this study as well.

- (134) **Ok an-i kem-en.*
 water eat-INF do-3SG.M
 ‘(Intended:) He used to drink water.’ [elicited]

The second peculiarity of Type II habitual constructions has to do with the inflection of the verb. It is the only auxiliary construction in which the main verb is in its infinitive form.⁶⁶ Since most AVCs and all MVCs make use of the serial marker *-e* instead, this form calls for an explanation.

Habitual AVCs of Type II can be interpreted as a syntactic blend. We find elements from two other habitual constructions: (1.) the auxiliary verb *kemi* ‘do’ is used in Type I habitual AVCs, as in the examples (128)-(130) above, and (2.) the sequence *-i=mo* [-INF=always] is found in the habitual

⁶⁶Note that multi-verb constructions also do not make use of infinitives.

copula construction. An example of this construction is the following:

- (135) *Okem-i=mo=on*
do.that-INF=always=COP
‘(We) usually do that.’ [muyu038:166]

Habitual copula constructions as in (135) are non-verbal predications of a different origin than the Type I habitual AVCs discussed in this section. However, they both fulfil similar semantic functions (i.e. they denote regularly recurring events in the present or past). This similarity probably gave rise to the syntactic blend we are witnessing in TFtype II. In such blends, morphosyntactic elements from both constructions are present.

11.6.3 Continuatives with *bili*

The continuative AVC is formed with the auxiliary *bili* ‘AUX.CONT’.⁶⁷ The main verb ends in the serial marker *-e*:

- (136) **Continuative auxiliary construction:**
main verb = V-*e*
auxiliary = *bili*

When the auxiliary is inflected, its middle vowel assimilates to the vowel of the nearest suffix: *bol-on*, *bel-ep*, *bal-an-ep*, etc.

The continuative AVC denotes that an event keeps going on for a certain period of time. It is often applied to future events, but can also be used for past events. The meaning is somewhat similar to the durative aspect which is marked morphologically with the suffix *-d*. For a discussion of the differences between continuative AVCs and durative aspect, see below.

Here are some examples of the continuative AVC:

- (137) *Baat* *bekm-e bal-an-up*
brother-in-law wait-SM AUX.CONT-IRR-1PL
[Discussing whether they should start eating:]
‘We can keep on waiting for (my) brother-in-law (but I hope we won’t)’ [muyu007:055]

⁶⁷Since the auxiliary *bili* does not occur anywhere outside continuative AVCs, we do not provide a lexical translation here. In other dialects of Muyu, however, we found this form as an independent verb with the meaning ‘stay’.

- (138) *Nup odo kulu yip balin jadi, kep=ko nup*
 1PL DEM teacher there.is NEG so(BI) 2SG.M=PTC 1PL
tana~tana ege ketmengg-e bal-an-ep nea?
 child~RED DEM.here teach-SM AUX.CONT-IRR-2SG Q
 [After the regular teachers left the village:]
 ‘We do not have teachers (anymore), so can can you continue to
 teach our children?’ [muyu030:007]
- (139) “*Oni, alebel-e bel-e! Kawan-an gole*”,
 older.sister stand-SM AUX.CONT-2SG.IMP climb-1SG CONJ
engg-on.
 say-3SG.M
 [Before climbing a tree:]
 ‘ “Sister, you keep standing (here)! Because I climb (the tree)”, he
 said.’ [muyu007:083]

The examples above show continuative AVCs in various contexts. The auxiliary verb is often inflected for irrealis mood, as in (137) and (138). Both examples denote that an activity is potentially continued in the future. Another frequent use of the continuative AVC is with imperatives, as in (139). The addressee is ordered to continue a certain activity.

Continuative AVCs are sometimes negated, as in the following examples:

- (140) *ege okun-e=mo bal-an-on balin*
 DEM.here like.that-SM=always AUX.CONT-IRR-3SG.M NEG
 [The Muyu people have recognised that their language is disappearing:]
 ‘we cannot let it go on like this’ [muyu012:029]
- (141) *Emba, okun-e timbel-e bal-an-ep*
 father.son like.that-SM sit-SM AUX.CONT-IRR-2SG
balin=o
 NEG=QUOT
 ‘Son, you cannot stay here like this (he said).’ [muyu041:008]

Both negated constructions in (140) and (141) denote that an already ongoing event should not continue in the future. Such statements mostly express the opinion of the speaker.

Some irregular verbs have incorporated *bili* to build several of their in-

flected forms. In such cases, the phoneme sequence /bVl/ becomes a part of the verb stem and is no longer a separate auxiliary verb. Evidence for this comes from the fact that in continuative AVCs the verb *bili* is attached to the whole stem, resulting in the sequence /bVl/ occurring twice as seen in (139) and (141) above. For details about this type of irregular verb, the reader is referred to Section 7.2.2.5.

Finally, we see that different AVCs can be combined. In (142), the auxiliary verb *bili* is succeeded by *kemi* ‘do’, i.e. the continuative AVC is part of a habitual AVC:

- (142) “*Olololok*”, ***kem-e bel-e*** *kem-un edo, wot kedo*
 IDEO LV-SM AUX.CONT-SM do-3SG.F DEM moon out
min-i yeman=an.
 come-INF for=COP
 [Myth. A woman became a cricket:]
 ‘ “*Olololok*”, every time when she keeps doing this, it (means that)
 the moon is about to come out.’ [muyu007:140]

The example in (142) has a rather complex predicate structure. The first *kemi* ‘do’ is actually a light verb that forms an LVC with the ideophone *olololok*, imitating the sound of a cricket.⁶⁸ This light verb is followed by two auxiliary verbs. The first auxiliary is for the continuative and the second auxiliary is for the habitual construction.

Muyu has a morphological aspect with similar semantics: the durative. While the continuative is encoded as an auxiliary construction, the durative is a morphological inflection of the verb, i.e. via the suffix *-d* (see Section 7.4.1 for details). Semantically, they can be distinguished as follows: Durative aspect denotes (1.) that an event is going on at the time of utterance (“He is X-ing (now while we are talking)”) or (2.) that an ongoing event is the temporal background for a foregrounded event that sets in (“While he was X-ing, suddenly Y”). In both cases, the main event is related to some reference time. Therefore, the durative verb cannot be inflected for values that contradict the reference time; *-d* is incompatible with irrealis mood, perfective aspect or habitual constructions. In contrast, the continuative AVC does not relate the event to some sort of reference time. Rather,

⁶⁸This kind of light verb construction is typical when referring to animal sounds. An onomatopoeic word symbolising the sound is followed by *kemi*. For details, see Section 10.3.1.

it simply expresses that the event is going on for some time, be it in the past, present, future or even repeatedly in a habitual construction. The only category which is incompatible with continuative AVCs is durative aspect. Therefore, an event cannot be conceptualised as going on relative to some reference time and continuing to go on independent of any reference time simultaneously.

11.6.3.1 Some remarks on an alternative interpretation of continuative auxiliaries

Christensen (2013) offers a different analysis of continuative auxiliaries in which *bili* is interpreted as a suffix that is directly attached to the main verb instead of as a separate auxiliary verb. This section comments on this analysis and shows that we are probably dealing with dialectal variation that is due to different stages of grammaticalisation.

In Christensen's account of Yonggom, the allomorphs *-emb Vr* and *-imb Vr* are labeled 'durative aspect' and described as suffixes that encode "the notion of an action taking a long time" (2013:16). He gives the following forms in his examples (glosses as in the original, translations A.Z.):

(143) Yonggom durative aspect allomorphs (Christensen 2013:16):

- a. *aŋg-imbɔr-ok*
lay-DUR-IRR
'may it keep on lying down'
- b. *dεŋg-εmbir-imaib*
chop-DUR-HAB.23PL
'they usually kept chopping (trees)'
- c. *kεεno-mbɔr-oon*
look-DUR-3Mpa
'he kept looking'

Although not mentioned explicitly, the verb form in (143-c) includes a third allomorph, which is either *-mb Vr* or *-omb Vr*, depending on where the morpheme break is set. In any case, the morphological facts are different from what we found in Kawip, as will be shown next.

We start by comparing the forms of the morphemes. The Yonggom allomorphs vary between three different vowels as the initial segments /ɛ/, /i/ and /o/. In contrast, the vowel preceding *bili* in Kawip is always /e/.⁶⁹ This vowel is analysed as a serial marker in our study and therefore, separates the main verb from the auxiliary.

The vowel alternation in Yonggom can be compared to the stem vowels that we identified in Kawip (see Section 7.2.1.2). For example, the durative marker *-d* is preceded by either /e/, /o/ or /a/ depending on the conjugation class of the respective verb. In other words, the quality of the vowel before some suffixes in Kawip is lexically specified. Although Christensen (2013) does not comment on the conditions for the vowel alternation in Yonggom, similar phenomena could apply to the variation between *-ɛmbVr/-imbVr/-(o)mbVr*.⁷⁰ If this is the case, Yonggom *-ɛmbVr/-imbVr/-(o)mbVr* is similar to Kawip *-d* ‘DUR’. Both are directly attached to the verb stem. In contrast, the Kawip continuative AVC with *bili* is not preceded by a stem vowel but a serial marker. To conclude, Yonggom *-ɛmbVr/-imbVr/-(o)mbVr* is a suffix, while Kawip *bili* is a separate auxiliary verb.

The statuses of these morphemes are different in Yonggom and Kawip. But how can we explain this? Obviously, the Kawip continuative auxiliary *bili* and the Yonggom durative suffix *-ɛmbVr/-imbVr/-(o)mbVr* have the same lexical origin. They are very similar in form and function, but they differ in their integration (or lack thereof) into the main verb. The answer has to do with the progress of grammaticalisation. The Yonggom morpheme has become a verb suffix, while the Kawip morpheme remained a separate word. This integration of the morpheme into the main verb was probably motivated by a reduction of the serial marker *-e*. As was shown in Section 11.5.1, Yonggom has serial verb constructions, in which two verb roots are directly juxtaposed. Similar structures are missing in Kawip, where the first verb in a MVC must always end in *-e*. We interpret Kawip as retaining the older structure, and we interpret the loss of *-e* in Yonggom as ongoing grammati-

⁶⁹Note that Christensen represents the prenasalisation of /b/ in his orthography as <mb>, while the Kawip orthography of this study simply writes . Furthermore, Christensen’s vowel phoneme /ɛ/ corresponds to what we represent as /e/. The different symbols do not imply any phonetic difference. There is no possibility to compare the sounds phonetically, since recordings of Christensen’s (2013) data are not made available.

⁷⁰However, note that the stem vowels in Kawip are /e/, /o/ and /a/. As such, they do not explain the Yonggom allomorph *-imbVr*.

calisation that leads to more tightly conjoined verbal elements.⁷¹ In the case of *-embVr/-imbVr/-(o)mbVr*, a formerly independent verb is reinterpreted as a suffix to the preceding verb. The emergence of the vowel alternations is probably related to phonotactic conditions that rule out consonant clusters between the verb root and /mb/ of the suffix. The result is a suffix with three allomorphs, varying in the initial vowel.

There is evidence that similar processes are at work in Kawip. Firstly, consider that *bili* can occur as a full verb with the meaning ‘stay’ in some dialects. This is no longer the case in Kawip and can be seen as evidence that *bili* is gradually losing its status as an independent word. Secondly, Kawip has some irregular verbs that have incorporated the sequence /bVl/. These verbs are *alebili* ‘stand’, *timbili* ‘sit’ and *wedambili* ‘hear’, and they are discussed in Section 7.2.2.5. The sequence /bVl/ is only present in certain inflected forms, but it stems unequivocally from the auxiliary *bili*. Hence, the auxiliary seems to be slowly integrating into the main verb in both dialects. While it is restricted to some irregular verbs in Kawip, this process is far more advanced in Yoggom.

11.6.4 Desideratives with IRR + kemi ‘do’

This section deals with the desiderative auxiliary construction. Other ways to express desires, intentions and purposes are embedded quotatives (see Section 12.6) and purpose clauses (see Section 9.4.4).

The desiderative AVC is formed with the auxiliary verb *kemi* ‘do’. Unlike the habitual AVC, which also uses *kemi* ‘do’, the main verb must be inflected in irrealis mood:

- (144) **Desiderative auxiliary construction:**
 main verb = V-*an-e* [V-IRR-SM]
 auxiliary = *kemi* ‘do’

This construction is unique in Muyu grammar, since it is the only kind of complex predicate in which the non-final verb inflects for mood. In all other constructions (both AVCs and MVCs), mood can be marked on the last verb only.

⁷¹Keep in mind, that Christensen’s (2013) “serial verbs” are infrequent and restricted to a few typical combinations.

Semantically, the desiderative AVC denotes that the subject has the desire, wish or intention to perform the action that is conveyed by the main verb. In contrast, the desire for an object (e.g. “I want milk”) is not covered by this construction and in fact, cannot be expressed directly in Muyu (see below).

Here are some examples of the desiderative AVC:

- (145) *Kededan-an-e kem-an.*
ask-IRR-SM do-1SG
‘I want to ask (something).’ [overheard]
- (146) *Kayebak, nup=ko ekun-an-e kem-up.*
big.man 1PL=PTC like.this-IRR-SM do-1PL
[Telling the village leader about a language documentation project:]
‘Boss, we want to do this.’ [muyu012:070]
- (147) *wen-e ton momb-up-ten yeman tek-m-an-e kem-an*
go-SM fish shoot-1PL-PFV for tell-IRR-SM do-1SG
[Beginning of a story:]
‘I want to tell about when we went to shoot (catch) a fish.’
[muyu035:002]

The examples above are straightforward. The bulk of examples in the corpus are in first person, since people tend to express their own desires more frequently than those of someone else.⁷² In (146), we see that the main verb can be a demonstrative verb with an anaphoric reference. The desired action was already mentioned in the previous discourse.

The serial marker that is attached to the first verb is sometimes realised in its variant form *-o*. As in all AVCs and MVCs, *-o* is quite rare. Here is one example:

- (148) “*Enamba, nup=ko Kowo wan-an-o kum-up=o*”,
parents 1PL=PTC PN go-IRR-SM do-1PL=QUOT
engg-up.
say-1PL
‘ “Parents, we want to go to Kowo (river)”, we said.’

⁷²Furthermore, in narratives, the expression of desires of other persons tend to occur in quoted speech. So, for example, instead of “He wanted to eat” we often find “He said, ‘I want to eat’ ”.

[muyu038:021]

As mentioned above, the desire for an object cannot be expressed directly, since there are no verbs for ‘want’ or ‘need’ in the Muyu lexicon. Hence the lack of translational equivalents for ‘I want coffee’ or ‘They need money’. Desiderative AVCs are fully dependent on the main verb. Instead of saying ‘I want XY’, one has to express the action that s/he intends to perform on the object. Consider the following example:

- (149) *Kopi an-an-e kem-an.*
 coffee(BI) eat-IRR-SM do-1SG
 ‘I want to drink coffee.’ [elicited]

Kopi ‘coffee (BI)’ in (149) is the desired object and *ani* ‘eat, drink’ the intended action. Both are needed to obtain the meaning that was intended in this case.

11.6.5 Inchoatives with *wini* ‘go’

The inchoative AVC is formed with the auxiliary verb *wini* ‘go’. This construction is unique in that the main verb is inflected in its n-participle form, ending in *-Vn* (see Section 7.6.3):

- (150) **Inchoative auxiliary construction:**
 main verb = n-participle
 auxiliary = *wini* ‘go’

Semantically, the inchoative AVC denotes that the event conveyed by the main verb is about to start.

Here are two simple examples:

- (151) *Ambangg-an wun-un.*
 work-N go-3SG.F
 ‘She starts to work.’ [Fieldnotes]
- (152) *An-en wun-up.*
 eat-N go-1PL
 ‘We start to eat.’ [Fieldnotes]

The auxiliary *wini* is derived from the basic motion verb but does not entail

any movement or change of location. The subjects of (151) and (152) work and eat at a single location without going anywhere.

Inchoative constructions can be more complex, as in the following examples:

- (153) *ta men.kodop bamengg-en won-on=e*
 and fishing.net loosen-N go-3SG.M=DS.SEQ
 ‘and then he began to untie the fishing net and then ...’
 [muyu037:049]
- (154) *Belon onet kadap kon-on kon-on okem-en*
 small but each.other give-3SG.M give-3SG.M do.that-N
wan-an-up odo kudok=an.
 go-IRR-1PL DEM good=COP
 ‘(Although) it is small but it is nice when we start sharing with
 each other.’
 [muyu019:077]

The main verb in (153) is *bamenggi* ‘to loosen’, while the clause in (154) includes a complex reciprocal construction rather than a single verb (for details see Section 12.7). The whole sequence *konon konon okemen wananup* translated with ‘sharing’ literally means ‘he gives, he gives, we start doing that’. The inchoative has scope over the whole reciprocal construction.

Finally, the main verb can also be *wini* ‘go’ in which case this verb occurs twice in one and the same AVC:

- (155) *okun-e wen-en wun-up.*
 like.that-SM go-N go-1PL
 ‘like that, we went off.’
 [muyu039:014]

Chapter 12

Complex syntax

12.1 Introduction

This chapter deals with sentences that consist of two or more clauses. Muyu has various ways in which clauses can be combined to form complex structures:

- Clause chaining (§12.2)
- Clause coordination (§12.3)
- Subordination of adverbial clauses (§12.4)
- Subordination of relative clauses (§12.5)
- Subordination of embedded quotatives (§12.6)
- Reciprocal constructions (§12.7)
- Cleft sentences (§12.8)

Each of the structures mentioned above is described in turn. This chapter ends with a short outline of tail-head linkage (§12.9) which is a discourse linking strategy that makes use of complex syntactical structures.

12.2 Clause chaining

Muyu makes extensive use of clause chaining, i.e. a syntactic structure in which two or more clauses are chained together to form a sentence. Clauses can be distinguished by dependency, whereby the last clause of a chain is independent while all preceding clauses are dependent. This dependency is reflected in the predicate of the clause: Dependent clauses have a medial verb and independent clauses have a final verb.

Clause chaining is entangled with the switch reference (S/R) system. There are markers on the medial verb that act as discourse tracking devices. These markers indicate whether an adjacent clause has an identical subject (SS, i.e. same subject) or a different subject (DS). Muyu uses verb suffixes and clause clitics as S/R markers. Additionally, some markers encode information on temporal succession of the events described by the two adjacent clauses. Muyu only signals sequentiality of events but not simultaneity.

Clause chaining and S/R marking are well known features in many Papuan languages (Foley 1986, Longacre 1972, Roberts 1997) and particularly salient in the TNG phylum (Foley 2000). De Vries (2010) offers a grammaticalisation scenario based on coordination reduction for switch reference in some direct neighbours of Muyu, i.e. the Dumut languages to the west. However, languages to the south of Muyu, e.g. Marind (Olsson 2017) and Ngkolmpu (Carroll 2016), are lacking these structures.

This section discusses relevant topics in clause chaining and S/R marking in some detail. As for the terminology, we mainly refer to medial verbs and final verbs. A medial verb is the predicate of all but the last clause in a chain. It is morphologically restricted in that not all verbal categories are marked on it. A final verb is the predicate of the last clause in a chain. It is compatible with all verbal categories.¹ A clause chain consists of more than one clause. In order to refer to the parts of a chain, we follow Farr's (1999:177-178) terminology and distinguish the 'marked' clause from the 'reference' clause. These notions are based on the locus of S/R marking. In a chain of two clauses, the first one is marked for subject continuity/discontinuity in relation to the second clause, i.e. its reference clause. One clause is always marked with respect to the other. In longer chains, all clauses are marked clauses except for the last one.

¹There is one exception to the morphological compatibility of final verbs: S/R markers are attached only to medial verbs instead of final verbs.

Throughout this section, we follow Fedden (2011:426) in illustrating the temporal structure of events as in the model proposed by Hans Reichenbach (1947), e.g. two sequential events are represented as follows (‘e1’ and ‘e2’ are the events described in two clauses; ‘<’ means ‘prior to’):

$$(1) \quad e_1 < e_2 \quad \begin{array}{c} \text{--- I --- I ---} \\ e_1 \quad e_2 \end{array} >$$

The remainder of this section is organised as follows. We begin by discussing morphosyntactic differences between medial verbs and final verbs (§12.2.1). The following three sections explain clause chains with different S/R conditions: SS clause chains (§12.2.2), DS clause chains (§12.2.3) and mixed clause chains and complex predicates (§12.2.4). Then we briefly discuss two types of overlap between the clauses of a chain: temporal overlap (§12.2.5) and referential overlap (§12.2.6). Inconsistencies in S/R marking are explained in terms of foreground and background (§12.2.7) and in some cases medial verbs occur in final position (§12.2.8). Then we briefly comment on the operator scope within clause chains (§12.2.9) and on clause chains in imperative mood (§12.2.10). A peculiar syntactic structure related to clause chaining is the right-dislocated motion construction (§12.2.11). Finally, we add some remarks on various clitics occurring in clause chains (§12.2.12).

12.2.1 Medial versus final verbs

S/R markers from the perspective of verb morphology are discussed in Section 7.5. This section deals more generally with medial verbs, of which S/R markers are only one feature.

Medial verbs are verbs that occur in all non-final clauses of a clause chain. They are the locus of the S/R system and denote whether the subsequent clause has the same subject participant (SS) or a different subject (DS). Final verbs, in contrast, are those verbs that stand in the final clause of a clause chain. They are indistinguishable from verbs outside of clause chaining. Furthermore, it is important to notice that the distinction between medial and final applies only to the last verb of a clause. Multi-verb constructions (see Chapter 11) can have many more verbs that do not form separate clauses and therefore are not relevant here.

Medial verbs and final verbs are not only distinguishable in terms of their syntactic position, they also behave differently according to morphology.

Whereas final verbs are compatible with the full range of verb morphology (see Chapter 7), medial verbs are restricted in the following ways:

- Medial verbs are incompatible with the perfective marker *-ten*.
- Medial verbs are incompatible with imperative mood.
- Medial verbs inflected with *-gVl* ‘SS.SEQ’ are incompatible with irrealis mood and durative aspect.
- Medial verbs cannot be negated individually with *balin*.

Another restriction is a consequence of the S/R system: Medial verbs marked for SS are never host to the DS clause conjoining clitic *=e* and, conversely, DS medial verbs are never host to the SS clause conjoining clitic *=ket/=t*. Other clitics that are applied to conjoin clauses (*=ko*, *=a*, *=kot*) are not dependent on S/R marking. Accordingly, they are not analysed as genuine parts of the clause chaining system (for a discussion, see Section 12.2.12).

The Muyu S/R system is asymmetric, since only the SS condition is explicitly marked on the verb. The morphological system is shown in Table 12.1. One of two S/R markers is attached to a medial verb: *-n*² ‘SS’ or *-gVl*³ ‘SS.SEQ’. The latter is a portmanteau morpheme that also encodes temporal sequentiality in addition to the sameness of the subject. Its diachronic source is probably the verb *koli* ‘stop, end’ which is found in aspect multi-verb constructions (see Section 11.3.1).⁴ Note also that *-gVl* ‘SS.SEQ’ is incompatible with irrealis mood and durative aspect, since it denotes that an event has been completed. The other S/R suffix, *-n* ‘SS’, is neutral in respect to temporal sequence. The events in the clauses are often sequential but can also take place simultaneously.

²The Muyu suffix *-n* ‘SS’ is cognate to the Mian suffix *-n* ‘(SS.)SEQ’ (Fedden 2011:425). Both may be reflexes of a common Proto-Ok form.

³The middle segment of the morpheme *-gVl* is a vowel that assimilates to the immediately succeeding vowel.

⁴Temporal sequentiality in clause chains can also be interpreted in terms of aspect. The event of the marked clause is completed before the event of the subsequent clause sets in. In contrast to the aspect multi-verb constructions, the S/R suffix has acquired the meaning of subject continuity.

Condition	Suffix
Same subject (SS)	<i>-n</i>
Same subject (SS), temporally sequential (SEQ)	<i>-gVl</i>
Different subject (DS)	[no marking]

Table 12.1: S/R marking on the verb.

Both medial verbs and final verbs are suffixed with a subject index. The presence of a same subject suffix (*-n* or *-gVl*) triggers a phonologically reduced set of subject indexes, while both DS medial verbs and final verbs inflect with the regular set of subject indexes.

As was mentioned earlier, there are no dedicated suffixes that encode that a medial verb is DS. Hence, the absence of a SS suffix is a strong indicator for DS.⁵ Additionally, the clauses can be chained by the clause clitic =*e* ‘DS.SEQ’ to make the subject switch more explicit. This clitic operates at the clausal level and also applies to verbless clauses. All DS medial verbs require some kind of clause conjoining clitic, whereas SS medial verbs can also stand alone.

12.2.2 SS clause chains

SS clause chains have a medial verb that is inflected either with *-n* ‘SS’, as in (2), or with *-gVl*, as in (3).

- (2) *Kawut ningge-n-e kan-e men tem wom*
 directly grab:SG.O-SS-3SG.M take:SG-SM string.bag in inside
kambul-on.
 put.into-3SG.M
 [In a myth about a giant who eats women:]
 ‘He immediately grabbed her and put her into the bag.’
 [muyu067:028]
- (3) *Kido wen-e tiket mone-gol-i, kawut Jayapura*
 then go-SM ticket(BI) buy-SS.SEQ-1SG directly Jayapura
wan-a-den.
 go-1SG-PFV

⁵Another way of presenting this contrast would be to analyse a zero morpheme \emptyset ‘DS’ in the respective slot of the verb.

[After graduating from High School. Going on to study in another city:]

‘Then I bought a ticket and immediately went to Jayapura.’

[muyu041:065]

The temporal sequence of both examples can be represented as follows:

$$(4) \quad e_1 < e_2 \quad \begin{array}{c} \text{--- I --- I ---} \\ e_1 \quad e_2 \end{array} >$$

However, e_1 and e_2 are more separated in (3) than in (2), since the suffix *-gVl* ‘SS.SEQ’ forces a reading in which the event of the marked clause is completed before the event of the reference clause sets in. This is not the case with *-n* ‘SS’. The clause chain in (2) can be more readily construed as describing a continuous “flow” of events. Compare the examples above with the following clause chain of simultaneous events:

$$(5) \quad \begin{array}{l} \textit{Tio-n-ip} \quad \textit{ano-d-ip}. \\ \textit{sit-SS-2/3PL} \quad \textit{sit-DUR-2/3PL} \end{array}$$

‘They are sitting and eating.’

[muyu016:010]

The temporal structure of (5) is represented as follows (‘O’ means ‘simultaneous with’):

$$(6) \quad e_1 \text{ O } e_2 \quad \begin{array}{l} e_1 \text{ ---} > \\ e_2 \text{ ---} > \end{array}$$

Clause chains with temporal structures as in (6) always mark their medial verb with *-n* ‘SS’, never with *-gVl* ‘SS.SEQ’. For details on clause chains with temporal overlap, see Section 12.2.5.

The marked clause can be host to the clause clitic *=ket/=t*⁶ ‘and.then.SS’. This clitic explicitly states that the two events are sequential and it is compatible with both S/R suffixes *-n* and *-gVl*:

$$(7) \quad \begin{array}{l} \textit{Kan-e} \quad \textit{mene-n-u=get}, \\ \textit{take:SG.O-SM} \quad \textit{come-SS-3SG.F=and.then.SS} \end{array}$$

⁶The allomorph *=t* is probably caused by intervocalic lenition. Between vowels, *=ket* is mostly realised as [get] or even [ɣet]. Sometimes the initial consonant is dropped altogether, leading to *=t*.

kobom-an-un.
 hit.with.stick-IRR-3SG.F
 [Processing sago. Taking the midrib of a palm leaf:]
 ‘She would bring it and then hit it with a stick.’ (Habitually.)
 [muyu013:067]

- (8) *Ano-gol-up=ket* *angg-up-ten.*
 eat-SS.SEQ-1PL=and.then.SS sleep-1PL-PFV
 ‘We ate and then we slept.’ [muyu026:037]

The SS clause clitic *=ket/=t* is never obligatory.

Finally, the marked clause of a SS chain is sometimes host to the clitic *=ko*, as in (9). However, the function of *=ko* is broader and it is not a genuine part of the clause chaining system (for a discussion, see Section 12.2.12).

- (9) *Nong Tenong* *watmo-gol-up=ko,* *b-e*
 rattan kind.of.rattan pick:PL.O-SS.SEQ-1PL=PTC take:PL.O-SM
wun-up.
 go-1PL
 ‘We picked some Tenong rattan and carried them with us.’
 [muyu035:012]

12.2.3 DS clause chains

A different subject clause chain is characterised by a subject switch at the clause boundaries. The subject of the marked clause is different to the subject of the reference clause. Temporally, the clauses are mostly in sequential order (for simultaneous DS chains, see Section 12.2.5).

Contrary to SS clause chains, there is no explicit S/R suffix attached to the medial verb. This lack of morphological marking is compensated by clause clitics. Unlike SS clause chains, the marked clause in a DS chain is obligatorily marked by a clause clitic, either *=e* ‘DS.SEQ’ or *=kot* ‘and.then.DS’. Only the former is a genuine clause chaining clitic; for details on clitics in clause chaining, see Section 12.2.12.

Here are a couple of examples:

- (10) *Kaduk kawen-e* *w-∅-ip=e,* *ta-un.*
 man climb-SM 3SG.F-hit-2/3PL=DS.SEQ die-3SG.F

tion)”, I said.’ [muyu004:022]

As can be seen from the examples above, *=kot* in such clause chains is pretty much the same as *=e*. They are often interchangeable. It seems that instances with *=kot* more often convey a causal relationship between the marked clause and the reference clause. However, this may be an artefact of the clause chaining process in general and cannot be attributed to the meaning of *=kot*. In any case, clauses chained with *=e* can also denote a causal relationship, as seen in (10).

Finally, the marked clause of a DS chain is sometimes host to the clitic *=ko*, as in (15). However, the function of *=ko* is broader and it is not a genuine part of the clause chaining system (for a discussion, see Section 12.2.12).

- (15) *B-e* *kan-e* *ka-ngg-ip=**ko*** *kedo*
 take:PL.O-SM take:SG.O-SM give-2/3SG.RCV-2/3PL=PTC then
nomb-e *wun-un.*
 ride-SM go-3SG.F
 ‘They collected (the fruits) and gave them to her, then she drove
 away.’ [muyu008:020]

12.2.4 Mixed clause chains and complex predicates

This section briefly comments on clause chains with mixed S/R marking and on complex predicates in clause chains.

In the Sections 12.2.2 and 12.2.3 above, all clause chains were homogeneous in the sense that they were either SS or DS chains. However, one and the same clause chain can contain both types of switch reference:

- (16) *kedo bunggup kano-**n-i=get*** *bunggup=**ko***
 then beetle take:SG.O-1SG=and.then.SS beetle=PTC
*yob-in=**got*** *mulungga-un.*
 shake-1SG=and.then.DS make.sound-3SG.F
 ‘then I took the beetle, shook the beetle and it made (strange)
 sounds.’ [muyu034:059-60]

The chain in (16) contains three clauses. The first ends in an SS medial verb and the enclitic *=get*, while the second ends in a DS medial clause and the

enclitic =*got*. The final clause ends in a final verb and concludes the chain. In such clause chains, the middle clauses are both the marked clause and the reference clause depending on which direction we consider. S/R marking is always relative to the next clause in the chain (but see Section 12.2.7 for exceptions).

Clauses with complex predicates only treat the last verb of the predicate as the medial/final verb. All preceding verbs are in the same clause and not sensitive to S/R marking. Consider the following example:

- (17) *B-e* *kan-e* *meno-n-e*,
 take:PL.O-SM take:SG.O-SM come-SS-3SG.M
mengga-mb-en.
 cook.on.leaf.oven-PL-3SG
 [Having caught many fish that day:]
 ‘He collected, brought and cooked them.’ [muyu007:019]

The first clause in (17) contains three verbs, which together form an MVC (see Chapter 11). The first two verbs have only the serial marker *-e* attached, while the third verb contains the SS medial verb morphology. Since they all are part of the same clause, they are marked for SS only once (verbs inside MVCs obligatorily share the same subject).

Although the distinction between MVCs and clause chains is quite clear in (17), it can become more obscure in less prototypical cases. Compare (17) with (18), which has a structure that we called sequential structure in Chapter 11.

- (18) *Tangg-e* *ane-komb-e=go*, *taman* *Albert*
 shoot-SM 3SG.M.O-kill-SM=PTC brother Albert
ban-an=e, *mon-on=e* *bungga-up*.
 call.once-1SG=DS.SEQ come-3SG.M=DS.SEQ slice-1PL
 [Hunting for a pig:]
 ‘After I shot and killed it, I called brother Albert and he came then we sliced it.’ [muyu004:072]

There are two subject switches from 1SG to 3SG to 1PL, both marked with the clause clitic =*e*. (The referential overlap between 1SG+3SG = 1PL is treated as DS, see Section 12.2.6.) However, the first clause consists of a sequential structure, separating the first two verbs *tangge anekombe* ‘shoot

and kill it' with a clitic =*ko* and an intonational break from the rest of the clause. In our analysis of Muyu, we do not analyse such sequential structures as separate clauses. Rather, they are complex structures within one clause. Even though we have a clitic =*ko*, there is only one medial verb, which is *banan* 'I called'. For a more detailed discussion of sequential structures, the reader is referred to Section 11.4.2. To sum up, less prototypical kinds of MVCs can look like clause chains, but we analyse only those structures as clause chains that unambiguously include medial verbs.

12.2.5 Temporal overlap

The examples given in the Sections 12.2.2, 12.2.3 and 12.2.4 mostly display clause chains with sequential events (i.e. one event after another). However, the events described in clause chains can also overlap temporally or take place simultaneously. This section deals with the grammatical structures of such clause chains.

Temporal meaning is encoded in several morphemes related to clause chaining. Sequence of events is marked by *-gVl* 'SS.SEQ', =*ket* 'and.then.SS', (=)*kot* 'and.then.DS' and =*e* 'DS.SEQ'. The remaining morphemes (*-n* 'SS', =*ko* 'PTC', =*a* 'LNK') do not convey temporal meaning. The remainder of this section discusses which structures are used to denote overlapping events in SS clause chains and DS clause chains in turn.

Same Subject

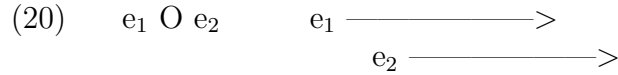
The medial verb of SS clause chains is marked by one of two S/R markers. The suffix *-gVl* 'SS.SEQ' conveys sequential meaning and denotes that the event of the marked clause is completed before the event of the reference clause sets in. In contrast, *-n* 'SS' is unspecified for temporal meaning. Medial verbs bearing *-n* 'SS' can express temporal overlap, as in the following example:

- (19) *wen-e adi=bet alo-n-ip ok, ok ani mo*
 go-SM up=OBL stand-SS-2/3PL river river down only
kelega-d-ip.
 watch-DUR-2/3PL

'They went and stood up there, just watching the river beneath.'

[muyu031:026]

The temporal structure of (19) is as follows (the horizontal shift of e_2 signals that this event sets in slightly later than e_1 because of the prior motion):



It seems that there is little room for misunderstanding in clause chains such as (19), since the context will help the addressee to determine which temporal order was intended. However, speakers can be also more explicit: the clause clitic =*ket* ‘and.then.SS’ displays sequential order, as in (21), while unambiguously simultaneous events can be signalled with the medial verb in durative mood, as in (22).

- (21) *Nekwa-n-up=ket* *kolo mun-up-ten.*
 prepare-SS-1PL=and.then.SS back come-1PL-PFV
 ‘We prepared (everything) and then came back.’ [muyu030:147]
- (22) *Tio-d-on-u=go,* *monggodem=ko ninggi katba-un.*
 sit-DUR-SS-3SG.F=PTC mouth=PTC smile smile-3SG.F
 ‘While she was sitting there, she smiled.’ [muyu054:011]

In (22), the events take place simultaneously, i.e. they are fully overlapping.

Different subject

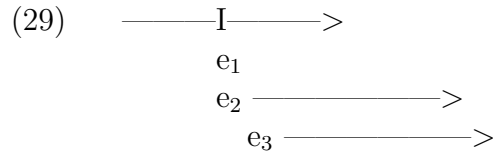
The medial verb of DS clause chains does not contain explicit S/R suffixes. Rather, the chain depends on clause clitics. The genuine DS clause clitic is =*e* and also (=)*kot* is used. Both of these clitics encode temporal sequentiality. Examples are given in Section 12.2.3 above. However, temporal overlap can be expressed by inflecting the medial verb for durative aspect, as was the case for SS medial verbs. The durative aspect of the medial verb overrules the temporal meaning of the clause clitic =*e*. However, (=)*kot* is never found in this context.

The following examples illustrate this function of the durative with slightly differing temporal configurations.

- (23) *Towong=bet* *yongga-d-en=e,* *win-in.*
 whistling=OBL call.several.times-DUR-1SG=DS.SEQ go-1SG
 [Two hunters trying to find each other in the forest:]

‘We tied it with a rope and laid it down and while it kept lying there,
we went away to look for Nik fruits.’ [muyu037:066-67]

The temporal sequence of (28) can be represented as follows (e_2 sets in after e_1 ; e_2 and e_3 run parallel):



So far, the continuative construction has been attested only in DS clause chains but not in SS clause chains.

12.2.6 Referential overlap

By referential overlap we mean that two or more linguistic expressions refer to overlapping sets of participants. For example, in the English sentence ‘The whole family was busy but the parents were frantic’ the expressions ‘the whole family’ includes ‘the parents’, whereas in ‘The whole family was busy and the neighbours were frantic’ the expression ‘the whole family’ and ‘the neighbours’ do not overlap. Pronouns are especially prone to referential overlap, since a plural pronoun can comprise the referent of a singular pronoun.⁷ For example, in ‘We came to the house and I knocked at the door’ the speaker is included in both ‘we’ and ‘I’.

The issue of referential overlap is of particular importance in languages with S/R marking. Are clause chains of the type ‘We came to the house and I knocked at the door’ marked as SS or DS? Languages differ in which marking they apply in this situation. Before describing the system in Muyu, we will give a short outline of the possible scenarios for referential overlap. At the end of this section, we will compare Muyu with the Mountain Ok language Mian.

Referential overlap in clause chains is concerned with the reference of subject arguments, since subjects (and not objects) are monitored by S/R marking. For a language with two number values (SG, PL), there are three possible situations:⁸

⁷As well as dual pronouns in languages that have them.

⁸Quite trivially, there are two further situations: (a.) a single subject referent in the

1. The set of subject referents in the marked clause includes the set of subject referents in the reference clause (i.e. PL > SG).
2. The set of subject referents in the reference clause includes the set of subject referents in the marked clause (i.e. SG > PL).
3. The set of subject referents in the marked clause intersects the set of subject referents in the reference clause, but neither is fully included in the other (i.e. PL > PL).

For Muyu, S/R marking in case of referential overlap is summarised in Table 12.2. As we see in the table, the marking differs between the types of referential overlap. Whereas PL > SG is treated as referential identity, SG > PL is marked as disjunct. The same is true for the PL > PL case, although data on this type is scarce. In the remainder of this section, we give examples for all three types.

Subject of marked clause	Subject of reference clause	S/R marking
PL	SG	SS
SG	PL	DS
PL	PL	(DS)

Table 12.2: S/R marking and referential overlap. The data for PL>PL is too little to be conclusive.

Firstly, the plural subject of the marked clause includes the singular subject of the reference clause (i.e. PL > SG). In this case, the S/R marking is SS:

- (30) *Weno-n-up wen-e ne edo tana benyop aip [...]*
 go-SS-1PL go-SM 1SG DEM.this child little there.is [...]
kadin-a-den.
 carry.on.should:SG.O-1SG.PFV
 [Walking with a friend:]

marked clause is identical with the single subject referent of the reference clause (i.e. SG > SG) and (b.) no overlap between the subject referents of the marked clause and reference clause (i.e. SG ≠ SG, PL ≠ PL). However, since these cases are genuine cases of SS (=a) and DS (=b), we do not discuss them under the heading ‘referential overlap’.

‘We went and I carried a little child on the shoulder.’

[muyu027:027]

Many examples of this type seem to have a kind of distributive meaning. All singular subjects in the subsequent clauses together exhaustively denote the plural subject of the marked clause:

- (31) *Yanggan=ko bio-n-ip.* *Anyan, yu nin-un.*
 torch=PTC take:PL.O-SS-2/3PL sister 3SG.F hold:SG-3SG.F
Kedo yu kawupki, yu taman nin-on.
 then 3SG.F brother 3SG.F younger.brother hold:SG.O-3SG.M

‘They took the torches. The sister held one and her brother, her younger brother held one.’ [muyu007:080-82]

- (32) “*Wen-e ma aip kele-n-up,* *kep=ko mim*
 go-SM other there.is become-SS-1PL 2SG.M=PTC one
kan-e wen-e, ne mim kan-e wan-a”.
 take:SG.O-SM go-2SG.IMP 1SG one take:SG.O-SM go-1SG.IMP
engge-n-i=t,
 say-SS-1SG=and.then.SS

[Two man having killed a pig:]

‘ “Let’s get one more (pig), then you take one and I take one”, I said and then ...’ [muyu004:085]

- (33) (...) *kolo-gol-up=ko,* *ye=bet*
 ... become-SS.SEQ-1PL=PTC 3SG.M=OBL
teka-on=got, *teb-a-den.*
 pull-3SG.M=and.then.DS move-1SG-PFV
 [Pulling a car out of the mud:]

‘... so we did that and then he pulled me and then I moved out (of the mud).’ [muyu036:015]

Each of the examples above has a marked clause with plural subject and two subsequent clauses with singular subjects. The patterns we see are 3PL > 3SG.M + 3SG.F in (31), 1PL > 2SG + 1SG in (32) and 1PL > 3SG.M + 1SG in (33). All these cases are treated as SS by the S/R system.

Secondly, the singular subject of the marked clause is included in the plural subject of the reference clause (i.e. SG > PL). In this case, the S/R marking is DS:

- (34) *Abraham=bet men-e ne men-on=e, ambip*
 PN=OBL come-SM 1SG come-3SG.M=DS.SEQ house
wun-up-ten.
 go-1PL-PFV
 ‘Abraham came to pick me up and we went home.’
 [muyu041:051]

The following two examples are repeated from above:

- (35) *Tangg-e ane-komb-e=go, taman Albert*
 shoot-SM 3SG.M.O-kill-SM=PTC brother Albert
ban-an=e, mon-on=e bungga-up.
 call.once-1SG=DS.SEQ come-3SG.M=DS.SEQ slice-1PL
 [Hunting for a pig:]
 ‘After I shot and killed it, I called brother Albert and he came then
 we sliced it.’ [muyu004:072]
- (36) *Kan-e kambul-an=e wun-up,*
 take:SG.O-SM put.into-1SG=DS.SEQ go-1PL
nil-an=e wun-up.
 carry.on.head:SG.O-1SG=DS.SEQ go-1PL
 ‘I put (the sago) into (the bag) and we went, I carried it on the head
 and we went (home).’ [muyu004:041]

Thirdly, the plural subject of the marked clause and the plural subject of the reference clause are overlapping (i.e. PL > PL). These cases are particularly rare in our corpus. The only example found so far has the S/R marking of DS:

- (37) *Wene, wene, wen-e ambom kudu nan-e*
 until until go-SM turtle shell take:BIG.O-SM
min-ip=kot, ambom kudu=bet wun-up-ten.
 come-2/3PL=and.then.DS turtle shell=OBL go-1PL-PFV
 ‘Until they brought a car, then we all went by car.’
 [muyu030:074]

In (37), the subject referents of the marked clause are also included in the subject of the reference clause. The two sets are overlapping but none of the subjects is a fully-included subset of the other. This example suggests

that speakers treat such cases as having different subjects. However, this conclusion rests on a single example and further data might reveal some variability.

Referential overlap is treated slightly differently in the Mountain Ok language Mian (Fedden 2011:457-461). A comparison of the systems in Muyu and Mian is given in Table 12.3. While both languages mark the PL > SG case as SS, Mian is more flexible and can mark SG > PL as either SS or DS. The third type of referential overlap cannot be compared, since the Mian corpus does not contain any instances of PL > PL overlaps.

Type of overlap	Muyu	Mian
PL > SG	SS	SS
SG > PL	DS	EITHER
PL > PL	(DS)	N/A

Table 12.3: Comparing referential overlap between Muyu and Mian.

12.2.7 Foreground and background

The Muyu S/R system sometimes shows inconsistencies, with medial verbs marking S/R conditions that are not met in the subsequent clause (e.g. a medial verb is marked SS but the next clause has a different subject). Languages with switch reference rarely employ a mechanistic system in which each and every medial verb marker is computed strictly for the next clause. Rather, we find discourse-pragmatic factors playing a role. Reesink (1983) compares a number of Papuan and American languages and finds that SS vs. DS marking is subject to a topicality hierarchy.⁹ Dooley (2010) distinguishes clauses that represent background and foreground information in discourse. S/R marking may be sensitive only to foreground information in some languages. This brief section attempts to show that S/R inconsistencies in Muyu probably can be explained in terms of a foreground/background distinction. However, we need to point out that this topic has not been studied in detail yet and needs refinement in future analyses.

Consider the following example (the inconsistent clause is in line b):

⁹Although he acknowledges that “‘topic’ is not a well-defined concept” (Reesink 1983:240).

- (38) a. (...) *Engge-gul-up*,
 ... say-SS.SEQ-1PL
- b. *Yi=go wen-e bil-ip=e*,
 3PL=PTC go-SM AUX.CONT-2/3PL=DS.SEQ
- c. *nup=ko kido yum=a, omani=ya, yemen*
 1PL=PTC down banana=LNK banana=LNK taro
yop=a, botneng=a ambongga-up.
 fruit=LNK sweet.potatoe=LNK find-1PL
 [The women (=1PL) sent their men home from the garden but
 stayed themselves:]
- ‘(a.) We said so and then (b.) (while) they were going (home),
 (c.) we found bananas, bananas, taroes, and sweet potatoes.’
 [muyu023:011-12]

As can be seen in the example above, the subjects in line a and c are identical (=the women), whereas line b has an intervening different subject (=the men). In fact, there is a subject switch between (a) and (b) but the medial verb in (a) is marked SS nonetheless. In contrast, the subject switch between (b) and (c) is correctly marked with =e ‘DS.SEQ’ on the medial verb in (b). We can explain this inconsistency of S/R marking as a consequence of foregrounding. The narrative follows the activities of the women, therefore (a) and (c) represent foregrounded information that pushes the story line forward. In contrast, the activity of the men is only background information that does not add much to the story. Therefore, the SS marker in (a) skips the clause in (b) and actually refers to (c).

Clauses with backgrounded information can be proper clauses within the clause chain, as seen in (38). However, more often they are embedded clauses of some kind. The clause chain in the following example includes two adverbial clauses that intervene between the clauses that represent the foregrounded story line (for details on adverbial clauses, see Section 12.4):

- (39) a. *Satu juta kone-gol-i=get*
 one(BI) million(BI) give-SS.SEQ-1SG=and.then.SS
- b. *ta kaduk=ma men-e nin-on kole,*
 and man=other come-SM hold:SG.O-3SG.M CONJ
- c. *odo nowan kole*
 DEM NEG CONJ

- d. *lima ratus kon-a-den.*
 five(BI) hundred(BI) give-1SG-PFV
 ‘(a.) I gave him one million (rupiah) and (b.) then because another man came to work and (c.) because I did not have (more), (d.) I gave him (only) five hundred (thousand rupiah).’
 [muyu009:056-57]

The adverbial clauses in (39) are in line b and c. Both are causal clauses that are marked with the conjunction *kole* ‘since, because, so’. As can be seen, the adverbial clauses are skipped by the S/R marker in (a) whose value is SS although the same subject only is mentioned again in (d). Obviously, the causal clauses do not represent foregrounded events of the story line but merely the background against which the protagonist’s actions are to be interpreted. She gave one million to one man and then 500,000 to another man.

Embedded structures that represent backgrounded information in relation to the S/R system can become very complex. The following example has a local adjunct that includes an embedded quotative (for details on embedded quotatives, see Section 12.6):

- (40) a. *Ta b-e beo-n-up*
 and take:PL.O-SM take:PL.O-SS-1PL
 b. *kedo, kaduk ye=bet kumungg-o-den ege*
 then man 3SG.M=OBL tell-3SG.M-PFV DEM.here
 “*b-e min-ime” engga-en wonggo=go*
 take:PL.O-SM come-2PL.IMP say-3SG.M there=PTC
 c. *b-e wun-up=ki.*
 take:PL.O-SM go-1PL=EMPH
 ‘(a.) We took (the food) and then, (c.) we brought them (b.) to the man who requested the food.’
 [muyu023:030]

The S/R marking in (40) connects (a) and (c) but skips (b). The latter contains a local adjunct with a complex sentence embedded. The ‘man who requested the food’ in the translation is literally the man ‘who said “you bring it”’. Line b includes two final verbs but they are not recognised by the S/R marker in (a). The foregrounded story line is about the actions of the protagonists and there is no change in perspective to the requesting man. Therefore, the S/R marker in (a) signals that the clause chain, despite

interruptions, eventually will come back to the subject referent of this clause.

To sum up, we saw that inconsistencies in the S/R marking of clause chains can often be explained in terms of a foreground/background distinction for the events described by the clause. If only embedded clauses were intervening, as in (39) and (40), then we could posit a syntactic rule that is sensitive to the matrix clause only. However, since non-embedded clauses as in (38) also display inconsistencies, it is likely that the foreground/background distinction operates on a discourse-pragmatic level.

12.2.8 Medial verbs in final position

Throughout this section, we saw that medial verbs belong to the marked clause of a clause chain. Syntactically, marked clauses are dependent on reference clauses headed by a final verb. However, our corpus includes cases in which medial verbs are used in final position to obtain a certain pragmatic effect.

A medial verb always signals that the line of events will be continued. If the clause chain is not continued explicitly, this continuation is conveyed implicitly. The following examples have medial verbs with the S/R marker *-gVl* ‘SS.SEQ’ attached to them:

- (41) *Kaduk=ko yu kat balin odo, “Aih, kaduk oyip*
 man=PTC 3SG.F knowledge NEG DEM INTJ man also
temo-gil-i=t”, engg-an-un.
 see-SS.SEQ-1SG=and.then.SS say-IRR-3SG.F
 [A young woman when asked to marry a certain man:]
 ‘If she does not know the man, she will say: “Oh, I’d like to see the
 man first.” (lit. I see the man also and then...)’ [muyu018:040]
- (42) *“Ah, b-e kan-e enamba*
 INTJ take:PL.O-SM take:SG.O-SM parents
weno-gul-up=a”, engg-on.
 go-SS.SEQ-1PL=LNK say-3SG.M
 [Having caught many fish, they need to get weight off their boat
 before moving on:]
 ‘ “Oh, let us take (the fish) to our parents first”, he said. (lit. go
 there first and then...)’ [muyu038:098]

Both (41) and (42) have ‘first’ in their translations. This ought to convey that the chain is not completed. In (41), the line of thought continues implicitly with “... and then I’ll decide if I can marry them him”, whereas in (42), the implicit thought is “... and then we’ll continue our trip”.

Medial verbs in final position can also be interpreted in terms of temporal anteriority. The event of the marked clause is anterior to some other event. Although less frequent, this function of medial verb markers can also occur embedded in other syntactic contexts. The following example has a DS medial verb embedded in a causal clause, denoting anteriority:

- (43) *Oya ambamkalunong a-d-ip=**kot** kole.*
 there play LV-DUR-2/3PL=and.then.DS CONJ
 [Pear story. Some kids were present when she fell with her bicycle:]
 ‘Because they were playing there before.’ [muyu011:023]

12.2.9 Operator scope in clause chains

Besides S/R marking, Muyu verbs are the locus of further grammatical categories, some of which are only found attached to final verbs (see Section 12.2.1). Irrespective of this, the question arises if a given value will have a broad or narrow scope. There are two logical possibilities: (1.) the scope of a category extends across clause boundaries and therefore is marked only once (most likely on the final verb), and (2.) the scope of a category is restricted to the clause where it is marked and has to be marked for each clause to which it applies. Unfortunately, this topic has not been studied extensively for Muyu yet. The remainder of this section will give a short outline for negation and irrealis mood. Further research is needed in this area.¹⁰

Negation

The negation particle *balin* can only follow final verbs but never medial verbs in a clause chain. This means that medial clauses cannot be negated separately. Moreover, the scope of negation does not cross clause boundaries, which means that medial clauses cannot be negated at all. In a clause chain,

¹⁰In particular, the scope of periphrastically marked categories is still obscure. This applies both to auxiliary constructions (e.g. desiderative constructions, inchoatives, habituals) and MVCs (e.g. aspect constructions).

the negation has scope over the final clause (or subparts of it¹¹).

Here are two examples:

- (44) *Komb-an-ip=e,* *angg-e kem-ok balin.*
 put:SG.O-IRR-2/3PL=DS.SEQ sleep-SM do-SBJV NEG
 [Parents go to pay the bride price:]
 ‘When they pay, they will not stay for long. (lit. ...don’t sleep)’
 [muyu018:113]
- (45) *Kampung menebo-n-up=ket,* *ombet timbang*
 village come-SS-1PL=and.then.SS OBL.DEM weigh(BI)
kol-ok balin.
 become-SBJV NEG
 [Taking some harvested peanuts to the market to sell them:]
 ‘We came to village but (we) have not taken the weight of it (=the
 peanuts).’ [muyu029:057]

The clause chain in (44) has a DS medial verb. The final verb is negated but this does not affect the medial verb. The paying takes places but the staying for long does not. Similarly, the SS medial verb in (45) is not in the scope of the negation marker of the final clause. The protagonists really came to the village, but they did not weigh the peanuts first.

The negated clause may be embedded in a matrix clause that is part of a clause chain. The scope of negation never exceeds a single clause:

- (46) *Midik-an-on=e,* *ta am aip balin odo*
 become.dark-IRR-3SG.M=DS.SEQ and rain there.is NEG DEM
kido wan-an-up.
 down go-IRR-1PL
 ‘When it gets dark and if there is no rain, we will go down there.’
 ‘(not:) *If it does not get dark and there is no rain ...’
 [muyu038:163-164]

Both getting dark and the absence of rain are seen as preconditions in (46). However, the negation only has scope over the latter, since the two conditions

¹¹In Chapter 11, we showed that negation can have narrow scope over multi-verb constructions, which means that only some of the verbs are negated while others are outside of the negation marker’s scope.

are expressed in separate clauses.

The examples given so far were confined to negation with *balin*. The negative pronoun *nowan* can also be used for certain kinds of negative constructions. This type of negation has the same scope restrictions as *balin*. Here is an example:

- (47) *Embet edo kawutmo wen-e ok Widi*
 OBL.DEM.this DEM.this directly go-SM river PN
kele-n-up, Udeben oya aip kil-i nowan.
 become-SS-1PL PN there there.is become-INF NEG
 [Reconsidering their plans on a fishing trip:]
 ‘Let’s go directly from here to Widi river, let’s not stay in Udeben.’
 [muyu038:092]

The final clause in (47) contains a negated infinitive. The negation does not extend to the first clause; therefore, the SS medial verb is positive.

To sum up, negation does not cross clause boundaries. Medial clauses of a clause chain are never negated. To compensate for this, Muyu speakers can coordinate clauses with adversative meaning (“not X but Y”) with the conjunction *onet* ‘but’ (see Section 12.3.4).

Irrealis

The scope of irrealis mood seems to differ between SS and DS clause chains. In a SS clause chain, only the final verb is marked for irrealis but it has scope over the full clause chain. In a DS clause chain, medial verb and final verb are marked separately for irrealis.

Here are some examples for irrealis mood in the SS condition:

- (48) *“Tawak eih, ambanap belajar kele-n-i wen-e ne*
 just INTJ force learn(BI) become-SS-1SG go-SM 1SG
kat kel-an-an=e”, engga-in.
 knowledge become-IRR-1SG=QUOT say-1SG
 [The speaker skipped a class in school. After being criticised that he won’t catch up with his classmates:]
 ‘ “Oh just (let me do it), I will study with force and then I will know it”, I said.’
 [muyu041:034]

- (49) “(...) *men-e ok Widi, amnom mim mo kele-gol-up*
 ... come-SM river PN night one only become-SS.SEQ-1PL
kedo ambip kampung wan-an-up=o, *engg-an=go*
 then house village go-IRR-1PL=QUOT say-1SG=PTC
 [Before going on a trip. Explaining a long travel route, finally:]
 ‘... (we) come to Widi river and spend only one night (there) and
 then we will go home to the village”, I said and ...’
 [muyu038:011-12]

The examples above both have a final verb with suffix *-an* ‘IRR’, whereas the medial verbs are not explicitly marked for irrealis. Indeed, *-gVl* ‘SS.SEQ’ as seen on the medial verb in (49) is morphologically incompatible with *-an* ‘IRR’. Nonetheless, the medial clauses in both examples take over the future reading from the final verb. In (48), the activity of studying lies as much in the future as the knowledge the speaker will gain from it. Similarly, the night at Widi river and returning home to the village are future events in (49). The scope of irrealis extends across the clause boundaries.

In contrast, medial verbs of a DS clause chain are marked for irrealis separately. Here are some examples:

- (50) *yem alin-an-ip=e om*
 quiet sit:PL.S-IRR-2/3PL=DS.SEQ sago
nunutn-an-on.
 become.stiff-IRR-3SG.M
 [During the process of making sago:]
 ‘They wait quietly for the sago to sink down (in the midrib of the
 palm leaf).’ (Habitually.) [muyu013:081]
- (51) *Ye=bet idopn-an-on=got,*
 3SG.M=OBL stimulate-IRR-3SG.M=**and.then.DS**
ambangg-an-up.
 work-IRR-1PL
 [Recognising that the language is endangered:]
 ‘It will motivate us to work (for its preservation). (lit. it will stimu-
 late and we will work)’ [muyu012:012]

The example in (50) is from a procedural text that is mostly uttered in irrealis mood (i.e. a kind of habitual reading of the irrealis). This irrealis

is not extended across the clause boundary of the chain and is marked on the medial verb separately. Similarly, the irrealis in (51) (having a future reading) is marked both on the final and the medial verb.

To sum up, the operator scope of irrealis mood varies between the different types of switch reference. SS clause chains allow for broad scope of irrealis, whereas DS clause chains do not.

12.2.10 Imperative clause chains

As was mentioned in Section 12.2.1, medial verbs are incompatible with imperative mood. However, we need to be more precise here: Medial verbs cannot take a subject suffix from the imperative mood set.¹² Nonetheless, clauses that express commands can be chained. In such cases, only the final verb is in imperative mood, but all medial verbs are interpreted as if they were in imperative too.

Here are some examples:

- (52) *kido mene-n-ip=ket nekwa-ime=yo,*
 down come-SS-2PL=and.then.SS prepare-2PL.IMP=QUOT
 ‘Come down to prepare everything (he said).’ [muyu038:120]
- (53) *Nup=ko ta ma aip ambone-n-up=a, ambip*
 1PL=PTC and other there.is search-SS-1PL=LNK house
wen-em.
 go-1PL.IMP
 ‘But as for us, let’s find some other (foods) and then go home.’
 [muyu023:010]
- (54) *Kudok=mo nekwane-n-ep=ket wen-e ambangg-e.*
 good=ADV prepare-SS-2SG=and.then.SS go-SM work-2SG.IMP
 ‘Prepare well before going to work!’ [Dictionary]

The medial verbs in the examples above agree in person and number with the final verbs but not in mood. So, *-ip* ‘2PL’ goes with *-ime* ‘2PL.IMP’ in (52), *-up* ‘1PL’ with *-em* ‘1PL.IMP’ in (53) and *-ep* ‘2SG’ with *-e* ‘2SG.IMP’ in (54). All clause chains are SS.

¹²Subject suffixes of this set are portmanteau morphemes that combine person, number and mood (see Section 7.3.1). The available items are: *-em* ‘1SG.IMP’, *-e* ‘2SG.IMP’, *-ok* ‘3SG.M.IMP’, *-uk* ‘3SG.F.IMP’, *-em* ‘1PL.IMP’, *-ime* ‘2PL.IMP’, *-imok* ‘3PL.IMP’.

So far, only SS clause chains have been attested to contain imperative mood. It is not clear yet whether this is due to a lack of data or if commands to diverging addressees cannot be chained in Muyu. The latter would be plausible since one is expected to direct commands to each addressee separately. Maybe there simply was no communicative need to grammaticalise DS clause chains in imperative mood.

12.2.11 Right-dislocated motion constructions

Muyu has a peculiar syntactic construction in which a basic motion verb (*wini* ‘go’ or *mini* ‘come’) and its locational argument are postponed after the clause they belong to:

- (55) *Kane kadino-n-e, men-e ok ani.*
 take:SG.O-SM carry:SG.O-SS-3SG.M come-SM river down
 [Having shot a cassowary:]
 ‘He carried it and then came down to the river.’ [muyu037:065]

This phenomenon is related to clause chaining, since the main verb of the clause must be a SS medial verb. However, the resulting construction is not a full clause chain because the motion verb is not a finite verb but ends in the serial marker *-e*. Note also that the constituent order in the postposed construction is reversed: Instead of LOC-V, we find V-LOC.

Here are some further examples:

- (56) *Okun-e boma-n-up men-e ok Widi dit.*
 like.that-SM walk-SS-1PL come-SM river PN mouth.of.river
 ‘We went on like that and came to the mouth of Widi river.’
 [muyu038:105]
- (57) *ta kim yanop boma-n-up men-e men-e Kimko Kaip.*
 and road there.is walk-SS-1PL come-SM come-SM PN PN
 ‘and we walked on a road and came to Kimko Kaip.’
 [muyu006:046]
- (58) *Kaweno-n-e, kaweno-n-e, kaweno-n-e, wen-e*
 climb-SS-3SG.M climb-SS-3SG.M climb-SS-3SG.M go-SM
angga.
 there.INV

‘He climbed, and climbed, and climbed, until there.’

[muyu007:84]

Unlike full clause chains, the right-dislocated motion construction has only a medial verb but no final verb. The medial verb is necessarily marked for SS switch reference since the motion verb always has the same subject referent as the preceding clause.

The right-dislocated motion construction described here is probably the motivation for the ongoing lexicalisation of *wini* ‘go’ to *wene* ‘until’.

12.2.12 Some remarks on clitics in clause chaining

Morphemes that occur as clitics in clause chains are: *=a* ‘LNK’, *=ko* ‘PTC’, *=e* ‘DS.SEQ’, *=ket* ‘and.then.SS’ and *=kot* ‘and.then.DS’. Throughout this section, we treated only *=e* ‘DS.SEQ’ and *=ket* ‘and.then.SS’ as genuine parts of the clause chaining system, whereas other clitics were merely counted as peripheral. Now it is time to elaborate on the distinction between genuine clause chaining clitics (*=e* and *=ket*) and general clause conjoining clitics (*=a*, *=ko*, *=kot*). The latter are grouped and labelled as ‘clause conjoining’ only for the sake of discussion in this section. They fulfil diverging functions in other parts of the grammar.

Table 12.4 gives an overview of all the features that separate the two groups of clitics. In the following paragraphs, each feature is discussed in turn.

	Clause chaining (= <i>ket</i> , = <i>e</i>)	Clause conjoining (= <i>a</i> , = <i>ko</i> = <i>kot</i>)
Combine with perfective <i>-ten</i>	No	Yes
Combine with negation <i>balin</i>	No	Yes
Combine with NPs	No	Yes (except = <i>kot</i>)
Have free standing forms	No	Yes (except = <i>a</i>)
Stack upon other clitics	No	Yes
Convey S/R meaning	Yes	No (except = <i>kot</i>)

Table 12.4: Features that distinguish genuine clause chaining clitics (*=ket*, *=e*) from general clause conjoining clitics (*=a*, *=ko*, *=kot*).

Firstly, the combinatorics of enclitic and medial verb separates the two groups. Clause chaining clitics are never found in combination with the

between *=ket* and *=kot*. These two forms display the /e/ vs. /o/ contrast that is well known from the demonstrative system (see Chapter 5). And indeed, *=ket* ‘and.then.SS’ vs. *=kot* ‘and.then.DS’ seem to form a contrasting pair in relation to their S/R meaning. It is highly likely that both elements have grammaticalised from proto-forms that were demonstratives. However, they have not grammaticalised to the same degree. As has been shown in this section, *=ket* is a genuine clause chaining clitic, whereas *=kot* is not. The latter has a free standing form, is distributively less restricted and can stack upon other clitics. However, *=kot* also deviates from the two other clitics it was grouped with. Unlike *=a* and *=ko*, it cannot cliticise onto NPs. We conclude that *=kot* is actually between the two groups of clitics presented in this section. It is probably grammaticalising to a genuine clause chaining clitic but is one step behind *=ket*.

12.3 Clause coordination

The main grammatical device to form complex sentences in Muyu is clause chaining as described in the previous section. However, we find some ways of combining clauses that cannot be easily subsumed under clause chaining. This section discusses them under the term clause coordination.

12.3.1 Asyndetic

The most simple way of coordination is mere juxtaposition of clauses without any overt markers of coordination. Of course, in discourse, clauses are always next to each other. So how can we decide whether two adjacent clauses are coordinated if there is no overt marker? Our main criteria is prosodic evidence.

Consider the following example (commas signal non-final intonation, i.e. rising pitch; full stops signal final intonation, i.e. falling pitch):

- (60) *Ta kido kan-e kal-an, teb-ok balin.*
 and down take:SG.O-SM throw:SG.O-1SG wake.up-SBJV NEG
Ta kido kan-e kal-an, teb-ok balin.
 and down take:SG.O-SM throw:SG.O-1SG wake.up-SBJV NEG
 [Sitting on at tree. Throwing pieces of wood on a sleeping pig beneath:]

‘I threw (it) down, but (the pig) did not wake up. I threw (it) down,
but (the pig) did not wake up.’ [muyu004:011]

There is a parallelism in (60) since one and the same sequence is uttered twice. Each of these sequences consists of two clauses: (1.) *ta kido kane kalan* and (2.) *tebok balin*. These clauses are analysed as asyndetically coordinated for two reasons. Firstly, they are related in regards to content. Together they have a concessive meaning: “Although X, not Y”. The throwing event of the first clause is supposed to wake up the pig but it didn’t, as expressed in the second clause. Secondly, the intonation contour signals that the clauses belong together. The commas between the clauses in (60) indicate non-final intonation which means that the pitch is rising. After a short pause, the intonation contour is continued in the second clause. This intonation contour is repeated when the whole sequence is repeated. However, between these parts of the sequence, there is a final intonation contour, i.e. falling pitch. We conclude that the two clauses are coordinated since the prosody groups them together. The repetition is not considered as coordinated to the first mention.¹⁵

Here are two more examples of asyndetically coordinated clauses:

(61) *E, edo an-e, edo kolongg-e.*
yes, DEM.this eat-2SG.IMP DEM.this leave-2SG.IMP
‘You may eat this (or) leave it.’ [muyu018:142]

(62) *Jadi konodom ye nonggibi odo alim kom yanop,*
so(BI) knee 3SG.M medicine DEM kind.of.tree sap there.is
tibilop kat yanop.
kind.of.tree skin there.is
[Explaining traditional medicine:]
‘As a cure for the knees, there is the sap of the Banyan tree (and)
there is the skin of the palm tree.’ [muyu045:046]

The clauses in (61) are both in imperative mood. In contrast to clause chains, they do not express successive events but are interpreted disjunctively: “either X or Y”. The clauses in (62) are verbless clauses based on the existential particle *yanop* ‘there is’. The asyndetic coordination here is

¹⁵In fact, the repetition of the sentence in (60) denotes that the protagonist repeated the action, i.e. he threw two pieces of wood on the sleeping pig.

to be interpreted as the conjunction of two existentials. In both (61) and (62), the intonation contour is such that the pitch rises at the end of the first conjunct and falls at the end of the second.

12.3.2 *ta* ‘and’

The presence of a conjunction *ta* ‘and’ per se does not say anything about the type of the clause combination. *Ta* ‘and’ is found in clause chains, clause coordination and sometimes even in simple free standing clauses (for example to signal a connection to the previous discourse). This section briefly deals with *ta* ‘and’ in clause coordination.

Generally, all those clause combinations with *ta* ‘and’ that cannot be treated as clause chaining are analysed as clause coordination. Consider the following examples:

- (63) *Kedo Malang=go wun-up-ten ta okun-e ambom*
 then PN=PTC go-1PL-PFV and like.that-SM turtle
kudu=bet wun-up-ten.
 shell=OBL go-1PL-PFV
 ‘Then we went to Malang and we went there by car.’
 [muyu030:093-094]

- (64) *Ane-ngga-up. Ta ombet kedo ti-up, wene amnom anggo*
 eat-PL-1PL and OBL.DEM then stay-1PL until night five
nak-on.
 day.break-3SG.M
 ‘We ate a lot. And then we stayed there, for five days.’
 [muyu038:038-39]

The coordinated structure in (63) is clearly not a clause chain, for two reasons: Firstly, the verb in the first clause is marked with *-ten* ‘PFV’ which is not compatible with medial verbs. Secondly, the clauses share the same subject but the first verb is not marked with an SS suffix. Since *wunupten* is not a medial verb, it can only be a final verb; hence no chaining structure. Furthermore, the two clauses do not denote a sequence of events as would be expected in clause chaining. Rather, the second clause elaborates on the event already expressed in the first clause and adds an instrument.

The coordinated structure in (64) is also not a clause chain. Similarly to

the previous example, we find two clauses with identical subjects but no S/R marking. Rather, the first clause was uttered with a final intonation contour (i.e. falling pitch). After a pause, the second clause is added as if it were an afterthought to the first one. This afterthought is added with the help of *ta* ‘and’.¹⁶

There are some less obvious cases involving *ta* ‘and’ as a coordinator. The following example contains two clauses that are either chained or coordinated:

- (65) *Tio-d-en, ta kon mim itu kopomo-n-un,*
 sit-DUR-3SG.M and woman one that(BI) squeeze.sago-SS-3SG.F
 (...)

 ...

 ‘While he was sitting, one of the women squeezed sago and then she

 ...’ [muyu067:024]

The subjects of the two clauses in (65) are diverging, so we could analyse it as a DS clause chain. As was explained in Section 12.2.3, medial verbs do not have suffixes that encode DS meaning (but only SS suffixes). To compensate for that, DS medial clauses employ additional clause clitics to explicitly mark the chaining relation (i.e. *=e* ‘DS.SEQ’ and *=kot* ‘and.then.DS’). The question arises whether *ta* ‘and’ in (65) could be also seen as an element of clause chaining. If yes, (65) would be an instance of DS clause chaining rather than clause coordination. However, in this study, we decided to opt against this analysis, for two reasons: (1.) in contrast to *=e* ‘DS.SEQ’ and *=kot* ‘and.then.DS’, *ta* ‘and’ does not encode S/R meaning and coordinates clauses independent of subject identity, (2.) in contrast to *=e* ‘DS.SEQ’ and *=kot* ‘and.then.DS’, *ta* ‘and’ does not cliticise onto the verb of the first clause but mostly begins the second clause. Hence we do not group *ta* ‘and’ with the genuine clause chaining markers.

We acknowledge that the differentiation between clause chaining and clause coordination looks somewhat artificial for cases like (65). The same is true for some cases of clause coordination with *=ko* (see Section 12.3.3 below). However, the reader should keep in mind that these are mostly terminological choices of the analyst. The speakers of the language are well

¹⁶It seems that the meaning of (64) could have been expressed with a clause chain. From the speaker’s perspective, the first clause was probably uttered before the second clause was planned. So the opportunity to utter the whole sequence as a clause chain was gone before the second clause was even considered.

aware which structures to employ for which meanings and do not bother labelling them.

Finally, clauses coordinated with *ta* ‘and’ sometimes convey a more contrastive meaning, as in the following example:

- (66) *Wedambal-an-ip ta kine.kamon-i ombet welen.*
 listen-IRR-2/3PL and answer-INF OBL.DEM difficult
 [The younger generation is forgetting their native language:]
 ‘They can understand it, but replying is difficult (for them).’
 [muyu019:004+007]

12.3.3 =ko ‘PTC’

The ubiquitous enclitic =*ko* is often cliticised to clauses. As was the case with *ta* ‘and’ above, the sheer presence of =*ko* between two clauses does not say anything about their type of combination. This enclitic is also found often in clause chaining. However, those combinations with =*ko* that cannot be subsumed under clause chaining are discussed here as clause coordination.

Here are some examples:

- (67) *Ta kampung eyom al-up=ko kodolok yanop=an.*
 and village in.here live-1PL=PTC head there.is=COP
 ‘In the village we are living in, there is a leader.’ [muyu012:068]
- (68) *Kip awon=a tana aip kel-an-ip=ko kede kin-e*
 2PL pig=LNK child there.is become-IRR-2PL=PTC how do-SM
ambangg-an-ip?
 work-IRR-2PL
 ‘When you have your family (one day), how will you be able to work?’ [muyu044:022]
- (69) *E, kolo-ngg-e=go yeka okun-e*
 yes leave-2/3SG.O-2SG.IMP=PTC 3SG.M.REFL like.that-SM
alebol-ok.
 stand-3SG.IMP
 [His interlocutor complained why another person won’t sit down:]
 ‘Yeah, you let him stand!’ [muyu009:092]

The sentences in the examples above are formed with two clauses and the

clitic *=ko*. In (67), the first clause sets the location for the second clause. It is not a clause chain, since the second clause is a verbless clause and there is no temporal relation or subject (i.e. S/R) relation between the clauses. In (68), the first clause represents a temporal specification for the second clause. Both clauses refer to the same subject. Therefore, we would expect a SS suffix on the verb. Since neither SS marking nor a specific clause chaining clitic occurs, we interpret (68) (and similar instances) as clause coordination rather than clause chaining. Finally, the sentence in (69) has two clauses both in imperative mood. As was mentioned in Section 12.2.1, medial verbs are not compatible with imperative mood.¹⁷ Hence, the verb of the first clause in (69) is a final verb. Consequently, the whole structure cannot be interpreted as a clause chain due to the lack of a medial verb.

All the sentences discussed above have features that clearly separate them from clause chains. However, there are clauses with *=ko* that are undistinguishable from clause chaining. In such cases, *=ko* can be replaced with *=e*:

- (70) *Peter=ko a-∅-un=e* *angg-en.*
 PN=PTC 3SG.M.O-hit-3SG.F=DS.SEQ lie-3SG.M
 ‘She knocked Peter down. (lit. she hit Peter and then he lied down)’
 [Fieldnotes]

- (71) *Peter=ko a-∅-un=ko* *angg-en.*
 PN=PTC 3SG.M.O-hit-3SG.F=PTC lie-3SG.M
 ‘She knocked Peter down. (lit. she hit Peter and he lied down)’
 [elicited]

Muyu does not employ DS suffixes on the medial verb, so the only difference between (70) and (71) is the clitic between the clauses. Since *=ko* is also used in clause coordination (see examples above) but *=e* is restricted to clause chaining, it is tempting to differentiate (70) and (71) as two contrasting syntactic structures, i.e. clause chaining vs. clause coordination, for which this specific case (i.e. temporal sequentiality, different subjects) results in an equivalent meaning. However, this interpretation overlooks the fact that *=ko* indeed can combine with S/R suffixes, namely in SS contexts, as seen in (9). In such cases, *=ko* is unequivocally part of a clause chain, whereas

¹⁷Imperative clause chains have only the final verb in imperative mood, as shown in Section 12.2.10.

evidence in sentences like (71) is not conclusive.

12.3.4 *onet* ‘but’

Clauses that describe contrasting situations, events or facts can be coordinated with *onet* ‘but’. In many cases, one of the conjuncts is negated.¹⁸ Contrastive coordination with more than two conjuncts is not attested in the corpus.

Here are some examples:

- (72) *Keyap eyuk engg-an-an balin, onet sekolah yeman odo*
 quick yes say-IRR-1SG NEG but school(BI) for DEM
wan-an-an.
 go-IRR-1SG
 [About having to leave the village:]
 ‘I would not agree quickly, if it wasn’t for school. (lit. I would not say yes quickly, but for school, I will go.)’ [muyu041:019-020]
- (73) *Ena Anse=go om nengga-un onet an-ok balin.*
 mother PN=PTC sago cook-3SG.F but eat-SBJV NEG
 ‘Mama Anse cooked the sago but did not eat it.’ [Fieldnotes]
- (74) *Engga-d-ip onet, ambikin embet=a kudok balin*
 say-DUR-2/3PL but soil OBL.DEM.this=LNK good NEG
kol-o-den.
 become-3SG.M-PFV
 [Officials urge them to make gardens in a certain area:]
 ‘They are saying that but this soil has become bad.’
 [muyu017:117-118]

The example in (72) shows two coordinated clauses of which the first one is negated, while in (73), the second clause is negated. The conjuncts in (74) are both positive clauses (although there is a negation marker embedded in the second clause).

Coordination with *onet* ‘but’ does not necessarily denote a strict contrast. Some cases in the corpus have a concessive meaning:

¹⁸Note that in a clause chain, medial verbs cannot be negated separately but only the final verbs. Therefore, speakers employ clause coordination with *onet* ‘but’ if the first clause in a complex sentence is negative.

- (75) *Tit yanop onet beng~beng=an.*
 product there.is **but** small~RED=COP
 [About growing plants on bad soil. Conceding the soil is not completely infertile:]
 ‘There will be some products but they are small.’ [muyu017:082]

Both clauses in (75) are verbless clauses: the first an existential clause, the second a copula clause.

12.4 Adverbial Clauses

Adverbial clauses are embedded into matrix clauses and must be distinguished from a clause in a clause chain. An adverbial clause has a final verb and is mostly skipped by S/R marking in the matrix clause (and the clauses adjacent to the matrix clause).

There are two types of adverbial clauses which are dealt with in turn in the following subsections. The first type employs conjunctions that are specialised to adverbial functions. These are *kole* ‘because, since’ for causal clauses (§12.4.1) and *kanet* ‘if’ and *kaden* ‘suppose that’ for conditional clauses (§12.4.2). The second type makes use of demonstratives which are not specifically reserved for clausal conjunction but have a more general function to denote adjuncts (§12.4.3).

12.4.1 Causal clauses with *kole* ‘because, since’

Clauses denoting causes and reasons are marked with the conjunction *kole* ‘because, since’. The conjunction usually stands directly juxtaposed to the final verb of the causal clause.¹⁹ The causal clause can precede or follow the clause for which it describes the reason.

- (76) [*Kudok=mo yul-o-den gole*], *adon tolongga-d-up.*
 good=ADV shine-3SG.M-PFV CONJ sun warm.up-DUR-1PL
 [After diving in the cold river for fish:]

¹⁹However, *kole* can also stand at the beginning of a clause, indicating that the preceding discourse is continued. In this case, it is more like Engl. ‘so’. Finally, it is also found as a filler word.

‘Since the sun shone well, we were warming up in the sun.’

[muyu035:035]

- (77) *Ambangg-em=o, kip=ko, ta [edo tokot-tokot*
 work-1PL.IMP=QUOT 2PL=PTC and DEM.this empty-empty
*ye anbangg-i balin **gole**].*
 3SG.M work-INF NEG CONJ

[Trying to motivate the others to work:]

‘Let’s work, you all, because this is not a futile work.’

[muyu029:013]

- (78) [*Kedo-n-u adut wa-un **gole** om=to*
 turn.to-SS-3SG.F prohibition LV-3SG.F CONJ sago=PTC
yal-e kol-on.
 lay.down:PL.O-SM leave-3SG.M

‘Since she turned to him and she forbade (him to eat it), he left the sago.’

[muyu007:39]

The examples above show causal clauses with various structures. There is a simple clause with a perfective marker in (76), example (77) contains a negated verbless clause and (78) is a clause chain with SS marking.

Adverbial clauses also occur without a matrix clause, for example as responses in a conversation:

- (79) *Yanam=an. [Kolop=ko nom balin **kole**]=a,*
 true=COP humus=PTC thick NEG CONJ=LNK
wani=go.
 down.there=PTC

[A: No plants are growing]

‘(B:) That’s true. Because the humus is not thick, down there.’

[muyu017:091]

The example in (79) has an extraclausal demonstrative *wani* ‘down there’ postposed to the adverbial clause. Besides that, it stands completely free and is not attached to any matrix clause.

As was seen above, clause chains also readily form adverbial clauses.²⁰ This does not only apply to SS clause chains but also to DS clause chains as

²⁰Hence the term adverbial ‘clause’ is somewhat misleading here. In cases of clause chains, it is not just one clause but rather a complex sentence that is embedded.

in the following example:²¹

- (80) *[Kep ot kan-a-den=kot*
 2SG money take:SG.O-1SG-PFV=and.then.DS
welen-o-den kole] Benkimin nengg-e.
 become.sick-3SG.M-PFV CONJ Benkimin burn-2SG.IMP
 ‘Since I got sick after I took your money, you must burn the “Benkimin”.’²²
 [Dictionary]

An alternative analysis of (80) would be that only *welenoden* is forming the causal clause. However, the whole sequence before *kole* is temporally related and it seems plausible that it is wholly construed as a reason.

12.4.2 Conditional clauses with *kanet* ‘if’ and *kaden* ‘suppose that’

There are two types of conditional clauses. Type I uses the conjunction *kanet* ‘if’ attached to the protasis. This structure is used for conditions that can occur realistically. The protasis precedes the apodosis in all instances found so far. In the following examples, the conditional clauses are marked with square brackets.

- (81) *Yal-a=go [ningg-on kanet], okun-e*
 put:PL.O-1SG.IMP=PTC hold:SG.O-3SG.M if like.that-SM
Yanu kep men-e, taman wano mon-ok.
 PN 2SG.M come-2SG.IMP younger.sibling down come-3SG.IMP

‘Let me set (the traps), then, if one of them catches (a pig), Yanu you come and the younger brother shall come down too!’

[muyu010:028]

²¹Notice that the agent of the taking event becomes the patient of the becoming-sick event. The English translation has 1SG as the subject for both but not the Muyu version. Although the verb *weleni* ‘become sick’ is intransitive, it is not marked for 1SG. A more accurate translation would be something like ‘sickness got me’.

²²‘Benkimin’ designates a ritual in which artifacts made of feathers are burnt to expel demons from a sick person’s body.

- (82) [Kul-up kanet]=ko nup tana, monop tana, amaen
 become-1PL if=PTC 1PL child grandchild child another.time
 wadi=go nin-e kombe-n-ip.
 up=PTC hold:SG.O-SM put-SS-2/3PL
 [Reflecting the possibilities of language documentation:]
 ‘If we do it, our children and grandchildren can make use of it later
 and they ...’ [muyu012:062-064]
- (83) [Kep=ko ne ambip nangg-ep kanet] ne
 2SG.M=PTC 1SG house arrive-2SG if 1SG
 ban-e.
 call.once-2SG.IMP
 ‘If you arrive at my house, call me.’ [Fieldnotes]
- Prosodically, the conjunction belongs to the protasis, i.e. if the clauses are in separate intonation units, the prosodic break is after *kanet*, as seen in (81). *Kanet* ‘if’ can occur alone or with an enclitic =*ko* ‘PTC’ as in (82).
- Type II conditionals are marked with the conjunction *kaden* ‘suppose that’ in both protasis and apodosis. This structure is used for more hypothetical conditions as in (84) and for counterfactuals as in (85) and (86). In all instances found so far, the protasis precedes the apodosis.
- (84) [Kol-ep kaden]=go ne=bet mo min-in
 refuse-2SG suppose.that=PTC 1SG=OBL only come-1SG
 kaden=go (...)
 suppose.that=PTC
 ‘If you would refuse (to join me), I would come alone and ...’
 [muyu004:087]
- (85) [Aninggo aip kaden]=go eya=go not-not aip
 name there.is suppose.that=PTC here=PTC spots there.is
 kaden=an,
 suppose.that=COP
 [Teachers in this village are not government officials:]
 ‘If we had names (i.e. official titles), there would be some badges of
 rank here (pointing at the shoulder).’ [muyu030:057]
- (86) [Yi=go mokap minok min-ip-ten kaden]
 3PL=PTC already slowly come-2/3PL-PFV suppose.that

animan=ko yitn-o-den kaden.
 food=PTC become.cold-3SG.M-PFV suppose.that
 ‘If they had come late, the food would have been cold.’

[Fieldnotes]

Similar to conditionals with *kanet* ‘if’, the conjunction *kaden* ‘suppose that’ can be accompanied by the clitic *=ko* ‘PTC’, as in (85). The same example also shows that the conditional clause is not necessarily headed by a verb but can be a verbless clause.

12.4.3 Adverbial clauses with demonstratives

In addition to the dedicated subordinators described in the previous sections, Muyu syntax also employs demonstratives to mark adverbial clauses in a matrix clause. Such demonstratives always occur after the final verb of an adverbial clause. For further information, see Chapter 5 where demonstratives are discussed thoroughly. The two types of clauses mostly denoted with such structures are locative clauses and temporal clauses.

Locative clauses

Locative clauses are marked with demonstratives that convey locative meaning. Not all such demonstratives are attested in our corpus, but this has probably to do with overall frequencies and some demonstratives are quite rare. Moreover, the distinction between demonstratives based on /e/ and those on /o/ does not seem to have a semantic influence when they function as clause markers.

Here are some examples:

- (87) *Mok ta [tana Yakob=bet kumungg-o-den eyano]*
 INTJ and child PN=OBL tell-3SG.M-PFV down.there
wan-an-an nea ke?
 go-IRR-1SG or PTC
 ‘Oh, shall I go down to where Jakob has told me?’ [muyu023:040]
- (88) *Kido Widanggun kidit yanop timingga-n-e [wen-e]*
 down kind.of.tree long there.is carry:PL.O-SS-3SG.M go-SM

taman *Albert al-en* **wonggo]** *wen-en*.
 younger.sibling PN stand-3SG.M there go-3SG.M

‘(The pig) carried the long Widanggun tree with it and went forward to where brother Albert was standing.’ [muyu004:036]

- (89) *Wen-e wen-e, [ena tinggan benem ningg-e*
 go-SM go-SM mother mouse kind.of.mouse hold:SG.O-SM
a-∅-a *engg-e kemo-d-un oya]=go wen-e*
 3SG.M.O-hit-1SG.IMP say-SM do-DUR-3SG.F there=PTC go-SM
bulu-ngg-up-ten.
 meet-2/3SG.O-1PL-PFV

‘We went to the (place) where mother was trying to hold and kill the rat and we met her (there).’ [muyu039:021]

The meaning of the locative clause is specified by the choice of demonstrative. For example, *eyano* ‘down.there’ in (89) describes that the place ‘where Jakob has told’ her to go is below the deictic center.

Temporal clauses

Temporal clauses are mostly marked with the oblique demonstrative *ombet/embet*. Here are some examples:

- (90) [*Kadin-e kubun-e tuyang=bet kedo kono ya*
 get.off-SM descend-SM paddle=OBL then boat at
bulun-a-den ombet], ta ambip wadi odo weda-ip,
 hit.once-1SG-PFV OBL.DEM and house up DEM hear-2/3PL
enamba odo.
 parents DEM

[Coming home from a fishing trip by boat:]

‘When I went off and hit the canoe with a paddle, they heard it up there at the house, the parents.’ [muyu038:111]

- (91) [*Kayebak ambangga-up embet]* *nup yondem eya*
 adult work-1PL OBL.DEM.this 1PL back here
tole-n-ip ambangg-ime, yongbon ambon=ko.
 step.once-SS-2PL work-2PL.IMP garden garden=PTC
 [Young people are supposed to learn from imitation:]

‘When we adults work, you must stay right behind us and work, in the gardens.’ [muyu044:021]

- (92) [*Amunggun ti-un ombet*]=*a* *kaduk kawen-e*
 afternoon sit-3SG.F OBL.DEM=LNK man climb-SM
w-∅-ip.
 3SG.F.O-kill-2/3PL

‘When she sat there in the afternoon, people went up (to the house) and killed her.’ [muyu054:022]

As can be seen from the examples above, both *ombet* and *embet* are used to mark an adverbial clause. Although *ombet* is more frequent, there seems to be no semantic difference between the two forms.

Besides the oblique demonstratives, we sometimes find basic demonstratives in this function. However, such cases are difficult to interpret and they could also represent relative clauses. Consider the following example:

- (93) *Tana aleng kem-an-on* ***oto***, *Muk*
 child crying do-IRR-3SG.M.SG DEM milk
kon-an-un=got *an-i=mo=on.*
 give-IRR-3SG.F=and.then.DS eat-INF=always=COP

‘Whenever the baby cries, she will give breast milk (to the baby) to drink.’ *Or:*

‘To a baby who is crying she will give breast milk to drink.’ [muyu057:024-25]

The two interpretations of (93) differ mainly in the structural position of the noun *tana*. It is either part of the subordinated clause or of the matrix clause. In the former case, it can be interpreted as the head of a relative clause:

- (94) a. *Tana [aleng kem-an-on odo]* ... ‘A baby who is crying ...’
 b. [*Tana aleng kem-an-on odo*] ... ‘When the baby cries ...’

At the moment, we do not have any measure to decide whether (a) or (b) is the correct structure in (94). Maybe the difference is illusory and Muyu grammar does not differentiate between these types of embeddings.²³

²³Note that clause combinations in which the first clause is set off from the second clause with a demonstrative are well known in Papuan linguistics (see e.g. Foley 1986:201). For

12.5 Relative clauses

Muyu has three types of relative clauses. Prenominal relative clauses (§12.5.1) immediately precede the head noun they relativise on and the relative clause is part of the same noun phrase. Postnominal relative clauses (§12.5.2) succeed the head noun and are either within the same noun phrase as their head or separated from it. Finally, headless relative clauses (§12.5.3) do not have an explicit head in the matrix clause. However, a head noun is mostly retrievable from context.

All types of relative clauses have a final verb (rather than a medial verb). The position of relative clauses within noun phrases is discussed in the Sections 6.3.2 and 6.4.

12.5.1 Prenominal relative clauses

A prenominal relative clause is a clause that immediately precedes the head noun of a noun phrase. It is linked with *ye* ‘3SG.M’ or its demonstrative version *oye* ‘POSS.DEM’.

- (95) *[ok tikap wani ti-ip]_{RC} ye kaduk*
 river downstream down live-2/3PL 3SG.M person
 ‘people who are living downstream’ [muyu031:083]

In (95), the clause *ok tikap wani tiip* ‘they are living downstream’ precedes the head noun *kaduk* ‘person’. The head noun of the resulting NP is also the subject of the RC. Since noun phrases are not marked for number in Muyu, the number value is solely specified at the verb of the relative clause.

Here are some some further examples:

- (96) *Yi=go [wip ya ti-ip]_{RC} ye kaduk.*
 3PL=PTC middle at live-2/3PL 3SG.M man
 [Comparing several communities in the area:]
 ‘They are people who live in the middle.’ [muyu044:208]

the Greater Awyu language Korowai, de Vries (2006) offers examples in which the first clause is analysed as the “topic” of the second clause, i.e. instead of clause subordination, we are dealing with thematisation. The semantic relation between the clauses is then to be interpreted in context. Although very common in Papuan linguistics, we refrain from such an analysis for Muyu since we do not employ the notoriously vague notion “topic” in this study.

- (97) *[kok-o-den]_{RC} oye kaduk odo*
 fall:SG.S-3SG.M-PFV POSS.DEM person DEM
 ‘that person who had fallen down’ [muyu011:031]

The relative clauses in (96) and (97) differ only in which element occurs as a linker: *ye* or *oye*. There is no semantic difference between these two items in the context of prenominal relative clauses.

In the examples given so far, the head noun was also the subject of the relative clause. Although this is indeed the most common structure, there are instances with a diverging relative clause subject:

- (98) *[Kaduk kibik ege town-en]_{RC} oye*
 person now DEM.here pass-3SG.M POSS.DEM
waluk=an.
 magic.spell=COP
 ‘It’s the magic spell of the man who just passed.’ [muyu045:035]

The subject of the relative clause in (98) is *kaduk* ‘person’, while the head noun is *waluk* ‘magic spell’. The relation between the two is such that *kaduk* is the possessor and *waluk* the possessed. Nonetheless, from the perspective of the NP, the relative clause occurs as a prenominal relative clause just like all other instances given above.

12.5.2 Postnominal relative clauses

Postnominal relative clauses either stand in the modifier slot of the head noun phrase, as in (99), or are separated from the head noun phrase by some phrase delimiting element, as in (100). The former are discussed in the Section 6.4 in the chapter on noun phrase syntax. Regardless of their phrase structure, both types of relative clauses are marked with a demonstrative which serves as a relative marker. They also both stand after their head noun, which is why they are discussed here as ‘postnominal’ relative clauses. Additionally, Muyu has headless relative clauses (see Section 12.5.3 below).

- (99) *[Kaduk eya ti-ip odo]_{NP}*
 person here live-2/3PL DEM
 ‘the people who live here’ [elicited]

- (100) *[Kaduk=ko]_{NP} [eya ti-ip odo]_{RC}*
 person=PTC here live-2/3PL DEM
 ‘these people who live here’ [elicited]

In (100), *=ko* delimits the right edge of the noun phrase. Therefore, the subsequent relative clause is outside the NP. Compare this to (99) where the relative clause can be analysed as part of the noun phrase. Since we are not interested here in the structure of noun phrases, we only mark the relative clauses with square brackets in the remainder of this section. Head nouns are interpreted as part of the matrix clause and remain outside the brackets.

The head noun of the relative clause is analysed as part of the matrix clause.²⁴ As such, it is compatible with any syntactic function in the matrix clause. In regards to the relative clause, the head noun can be either subject or object. The following examples, have a head noun that is the subject argument of the relative clause:

- (101) *Yu kaduk [Awin ambip won-o-den odo]_{RC} mon-on.*
 3SG.F man Awin house go-3SG.M-PFV DEM come-3SG.M
 ‘Her husband who had gone to the Awin region came back.’
 [muyu007:107]
- (102) *Ogo kep, anggotmi [wangga men-en ogo]_{RC} wen-e*
 DEM 2SG friend there come-3SG.M DEM go-SM
tem-e.
 see-2SG.IMP
 [During the recording session someone is knocking on the door:]
 ‘You there, go and see the friend who is coming there!’
 [muyu031:085]

Both *yu kaduk* ‘her husband’ in (101) and *anggotmi* ‘friend’ in (102) are subject arguments of the relative clauses. However, they have different functions in their respective matrix clause. *Yu kaduk* ‘her husband’ is the subject of the matrix clause in (101), whereas *anggotmi* ‘friend’ is the object of the matrix clause in (102).

In the following examples, the head noun is the object argument of the

²⁴An alternative analysis would locate the head noun within the embedded clause. Such an analysis as ‘head internal relative clauses’ was advocated by Fedden (2011:504-507) for Mian.

relative clause:

- (103) *Kaduk=ko [Lukas=bet tem-o-den odo]_{RC}*
 man=PTC Lukas=OBL see-3SG.M-PFV DEM
angg-o-den.
 sleep-3SG.M-PFV
 ‘The man whom Lukas saw slept.’ [Fieldnotes]
- (104) “*Ambikin ege [onongm-e yal-an edo]_{RC} kip*
 land DEM.here make-SM put:PL.O-1SG DEM.this 2PL
manusia pake kil-ime”, *engga-en,*
 human(BI) use(BI) become-2SG.IMP say-3SG.M
 [God said to the people:]
 ‘ “This land that I created shall be used by you humans”, he said,’
 [muyu029:051]

The head nouns *kaduk* ‘the man’ in (103) and *ambikin ege* ‘this land’ in (104) are object arguments of the relative clauses. Once again, they differ concerning their functions in the respective matrix clause. *Kaduk* ‘the man’ is the subject of the matrix clause in (103), while *ambikin ege* ‘this land’ is the object of the matrix clause in (104).

The head noun of a relative clause refers to a participant that is part of both the relative clause and the matrix clause. Moreover, relative clauses can have arguments which are not shared with the matrix clause. Consider example (103) again. The subject of the relative clause is *Lukas* which does not play any role in the matrix clause. Syntactically, the object *kaduk* is fronted and the constituent order of the relative clause is OAV (instead of the more usual AOV). This reversal of order is obligatory here and is the reason why we analyse the head noun as part of the matrix clause.²⁵ The reversed order could lead to a confusion of the arguments in the relative clause. Therefore, the subject argument is marked =*bet* ‘OBL’.

Sometimes the relative clause is not located within its matrix clause. It can be uttered as an afterthought, as in the following example:

- (105) *Alo-d-en=go,* *wen-e Nunum kobi kawin-in,*
 stand-DUR-3SG.M=PTC go-SM kind.of.tree on climb-1SG

²⁵If the head noun was a part of the (head internal) relative clause, the word order should not play any role.

- [*kidip komb-o-den* *ege.*]_{RC}
 nose put:SG.O-3SG.M-PFV DEM.here
 [Hiding from a pig:]
 ‘While (the pig) was standing, I went to climb on a Nunum tree,
 that was located in front of (the pig).’ [muyu004:053]

The relative clause *kidip komboden ege* ‘that was located in front of’ belongs to *Numun* as a head noun. It was uttered after the final noun of the matrix clause. Such extra-clausal locations of relative clauses are quite common in Muyu.

Finally, the matrix clause can also be a verbless clause, as in the following examples:

- (106) *Ma ye* *adin* [*kido wen-en* *odo*]_{RC} *on* *jom* *oyen.*
 but 3SG.M first down go-3SG.M DEM bird kind.of.bat there.is
 [A myth. Children turned into different kinds of bats and left their
 home:]
 ‘But the first (one) who flew out first was a “Yom” bat.’
 [muyu032:092]
- (107) *Emba,* [*ambut ambikin bit* *anong wonam-en* *odo*]_{RC}
 father sky land crest scenery create-3SG.M DEM
mim=mo gole,
 one=only CONJ
 [Missionaries told the Muyu to believe in one god only:]
 ‘Because the father who created the sky, the land, the hills and the
 whole scenery is only one.’ [muyu019:027]

12.5.3 Headless relative clauses

Relative clauses sometimes do not have a head noun in the matrix clause. Similar to postnominal relative clauses, they are marked with a demonstrative after the final verb and they can fulfil various syntactic functions in the matrix clause. If a headless relative clause is a subject or object of the matrix clause, it can alternatively be interpreted as a complement clause. However, we prefer to subsume them under relative clauses here, due to their formal resemblance to postnominal relative clauses.

Here are a couple of examples:

- (108) [*Ungguluknam-en ogo*]_{RC} *winka-n-ip*,
 spill-3SG.M DEM collect-SS-2/3PL
 ‘They collected what was spilt out and they ...’ [muyu008:015]
- (109) [*Kodolok tubun-u-den odo*]_{RC} *wano=on*.
 head cover-3SG.F-PFV DEM down=COP
 ‘(The thing) that had covered her head was (falling) down (to the floor).’ [muyu008:021]

The clause *ungguluknamen ogo* ‘what was spilt out’ is the object argument of *winkanip* ‘they collected’ in (108). When this sentence was uttered, the things spilt out (fruits from a basket) had been previously mentioned in the discourse. Therefore, the head noun is left implicit here. Similarly, the relative clause *kodolok tubunuden odo* ‘that had covered her head’ in (109) refers to a hat that fell from the protagonists head. This relative clause is part of a verbless matrix clause. Notice that the noun *kodolok* ‘head’ is part of the relative clause rather than the matrix clause.

In the examples above, the head is left implicit but could be recovered by adding *ayop* ‘fruit’ in (108) or *kodolok kat* ‘hat (lit. head skin)’ in (109). These recoverable head nouns are arguments of the relative clauses they belong to. However, there are instances of headless relative clauses that differ in this respect:

- (110) [*Kodolok ayetm-un odo*]_{RC} *tem-u-den=go* (...) (...)
 head bury-3SG.F DEM see-3SG.F-PFV=PTC
 [A woman had buried the head of her dead husband:]
 ‘She looked at (the place) where she had buried the head and ...’ [muyu031:046]

The clause *kodolok ayetmun odo* ‘that she buried the head’ is the object argument of *temuden* ‘she saw’. From the context it becomes clear that the protagonist looked at the place, not the head or something else. If we recovered the head noun with *bon* ‘place’, this noun would be neither the subject nor object of the relative clause but merely a locational adjunct. However, Muyu does not mark this structure explicitly and (110) looks like any other headless relative clause.

Headless relative clauses have strong resemblances with noun phrases:

- (111) *[Kep wingga-ep edo]_{RC} kudok=an.*
 2SG.M sing-2SG DEM.this good=COP
 ‘(The song) you sing is good.’ [elicited]
- (112) *[Yu nengga-un odo]_{RC} tap=an.*
 3SG.F cook-3SG.F DEM bad=COP
 ‘(The food) she cooked tastes bad.’ [elicited]
- (113) *[Kip min-ip odo]_{RC} kudok=an.*
 2PL come-2/3PL DEM good=COP
 ‘(The fact) that you come is good.’ [elicited]

The implicit head noun that is relativised in (111) and (112) is the object of the respective relative clause. However, the relative clause in (113) is intransitive, so there is no object to relativise on. Rather, it is the relative clause as a whole that the predicate in the matrix clause refers to. (In the English translation, we offer the highly generic noun ‘the fact’.)

12.6 Embedded Quotatives

Quotatives are syntactic units that represent discourse. In other words, they can express what someone said. Formally, they are mostly embedded as complements of the verb of speech *enggi* ‘say’ in the matrix clause. The typical structure is this:

- (114) **Structure of embedded quotatives:**
 (Subject NP) [quotative]=*o enggi*

The subject NP is not obligatory and in fact, often omitted. The verb *enggi* ‘say’ is near-obligatory and omitted only exceptionally. The quotative itself is often marked with a quotative particle =*o*. If more than one clause is embedded, then each clause can have =*o* ‘QUOT’ or only the final clause that is preceding the verb of speech.

Here are a couple of examples:²⁶

- (115) “*Et=bet kubun-an-up=o*”, *enggi-ip.*
 eight=OBL descend-IRR-1PL=QUOT say-2/3PL

²⁶Embedded quotatives are highlighted with quotation marks and separated with a comma from the succeeding speech act verb.

[In a plane:]

‘ “We will land at eight”, they said.’ [muyu030:157]

- (116) “*Karet aip alume-d-ime=yo*”, *engga-en*.
 rubber(BI) there.is plant-1SG.RCV-2PL.IMP=QUOT say-3SG.M

‘ “Plant some rubber trees for me”, he said (to us).’ [muyu028:010]

- (117) *Ye=bet, “Enggon, ambo, edo enamba*
 3SG.M=OBL friend older.brother DEM.this parents
min-ip adep=o”, *engg-on*.
 come-2/3PL like=QUOT say-3SG.M
 [Landing the boat at the shore. Witnessing smoke at the house:]
 ‘He said, “Friend, brother, maybe the parents came.” ’
 [muyu038:103]

Embedded quotatives fulfil a broader range of functions than would be expected from the verb *enggi* ‘say’. This is actually a typical feature of the languages of the area and probably more widespread in Papua. De Vries (2020:125-128) discusses it under the label ‘quotative framing’ for the Greater Awyu languages, Healey (1964c) covers ‘quotative clauses’ for the Mountain Ok language Telefol and Reesink (1993) discusses ‘inner speech’ of Papuan languages (focusing on the TNG language Usan). All of them share the insight that quotatives are not only used to report direct speech but also thought, desire, intention, perception or, in other words, cognition more generally. The exact number of functions vary from author to author but seem to lie somewhere between five (Healey 1964c) and seven (Reesink 1993) on average.²⁷

In this study, we distinguish the following functions of quotatives in Muyu:

²⁷The distinction of meanings related to embedded quotatives seems to depend to a certain degree on the language of the researcher. If the embedded quotative always follows the same structure in the analysed language, the different functions become apparent only in the translations. This of course raises the question of whether the stated functions are also distinguished by the speakers themselves. In our view, over-classification, i.e. distinguishing into minuscule categories, should be avoided when formal differences are low.

1. Reported speech
2. Reported thought
3. Intentions and desires

Each of these functions will be outlined in the following subsections. But before that, we discuss the structure of embedded quotatives more thoroughly.

12.6.1 The structure of embedded quotatives

This section deals with the structure of embedded quotatives more thoroughly. We discuss each element of the scheme in (114) in turn, starting with the quotative itself. For quotatives, we will look at three different aspects: which syntactic units can occur, the status of the final verb and the shift of the deictic center.

Quotatives can be any syntactic unit from simple to complex. Simple clauses are shown in the examples (115) and (116) above. Other simple quotatives are mere noun phrases (118), verbless clauses (119) and interjections (120).

- (118) “*Tanah Merah=bet=o*”, *engg-ip*.
 Tanah Merah=OBL=QUOT say-2/3PL
 [After weighing the harvested peanuts:]
 ‘“(Let’s bring them) to Tanah Merah”, they said.’
 [muyu025:031]
- (119) “*Oto kudok balin*”, *engga-ip*.
 DEM good NEG say-2/3PL
 [People reject the idea of taking a woman from the same village as a wife:]
 ‘“That is not good”, they say.’
 [muyu056:082]
- (120) “*Ah mok ah*”, *engg-on*.
 INTJ come.on INTJ say-3SG.M
 [Uttering disbelief about a friend’s report:]
 ‘“Oh come on”, he said.’
 [muyu037:044]

More complex quotatives are coordinated clauses (121), clause chains (122) and cleft sentences (123).

- (121) “*Ap kawan-an-up=ko kolew wadi angg-i*
 tree climb-IRR-1PL=PTC MOD up sleep-INF
yeman=an=o”, *engg-an.*
 for=COP=QUOT say-1SG
 [Two hunters hiding from an aroused pig:]
 ‘ “If we climb on the tree, we will have to sleep up there”, I said.’
 [muyu004:046]
- (122) “*Ano aip a-∅-in=got,*
 arrow there.is 3SG.O-hit-1SG=and.then.DS
men-en=o”, *engg-an.*
 come-3SG.M=QUOT say-1SG
 [Reporting to the hunting companion what just happened:]
 ‘ “I shot (at the pig) with an arrow and then it came (in my direc-
 tion)”, I said.’ [muyu004:022]
- (123) “*Ege kido mun-up eyen=o*”, *engg-up=ki.*
 DEM.here down come-1PL this.is=QUOT say-1PL=EMPH
 [On a fishing trip:]
 ‘ “This is why we came down here”, we said.’ [muyu038:201]

The complex examples above show that the quotative is a sentential complement of the matrix clause and can have all the syntactic elements of a sentence, e.g. embedded relative clauses.

As was mentioned above, each clause in a complex quotative can have its own quotative marker =*o*:

- (124) “*Kep=ko ne=go ege wan-a-den*
 2SG.M=PTC 1SG=PTC DEM.here pick:SG.O-1SG-PFV
iyen=o, an-i yeman=an=o”, *engga-n-u*
 this.is=QUOT eat-INF for=COP=QUOT say-SS-3SG.F
 [Having picked a fruit from the tree:]
 ‘ “You, this is what I have picked, it is something to eat”, she said
 and then she ...’ [muyu015:011]

The last verb in a quotative is morphologically a final verb rather than a medial verb. We find the full range of verb morphology on it and S/R marking is usually absent. This is evidence that the quotative is embedded rather than in a clause chain with the subsequent verb of speech.

The most distinguished feature of embedded quotatives is that they have their own deictic center. This is mostly seen in the change of grammatical person between the quotative and the matrix clause. Here is one example:

- (125) *“Ombet tek-a”, engg-on kole.*
 OBL.DEM pull-1SG.IMP say-3SG.M CONJ
 [A car had got stuck in the mud. Someone brought a rope from
 another car:]
 ‘Because he wanted to pull (the car) with it.’ [muyu036:061]

The matrix clause in (125) is in third person, whereas the quotative is in first person. Nonetheless, both subject indexes are co-referential here, since the deictic center has shifted to the protagonist whose intentions are reported in the quotative.

The shift of the deictic center for subject indexes as well as free pronouns and locations (“I am here, he said over there”) is fairly regular in Muyu quotatives. However, the rare cases of object agreement seem to behave differently. The following example was taken from a childhood memory of the speaker. In the literal translation, the referents are indexed with subscript *j* and *k*.

- (126) *Ta kadap “kido n-∅-a”, engg-e*
 and answer down 1SG.O-hit-1SG.IMP say-SM
 kem-an-on=e
 do-IRR-3SG.M=DS.SEQ
 [Children playing in the garden:]
 ‘And he tried repeatedly to hit me back but I ... (Lit. I_j hit me_k
 back he_j said)’ [muyu040:019]

The speaker of this narrative is also the (intended) target of the hitting. The quotative expressed the intention of the speaker’s brother. Hence the matrix clause subject is third person, whereas the quotative subject index is first person singular (“I will hit, he said” = “He wanted to hit”). However, that is not the full story. There is another person value encoded in the verb of hitting, which has suppletive forms that distinguish person, gender and number of the patient. The form used in (126) is *ni* ‘hit me’, but this suppletive first person value is not co-referential with the matrix clause subject as the subject index attached to the same verb. Rather, it refers

to the speaker of the utterance who is also one of the protagonists of the story. As a result, “I hit me” here means that both 1SG values have to be distinguished. It is not clear yet, whether suppletion is generally insensitive to the deictic shift in embedded quotatives. Suppletive verb stems are irregular and quite rare in general. The example in (126) is the only case found so far, where it is used in an embedded quotative. More data is needed.

To sum up, embedded quotatives can be of any syntactic unit, their last verb is morphologically a final verb, and inside the quotatives the deictic center shifts to conform with the spatio-temporal location and person of the matrix clause subject (with the possible exception of suppletive verbs).

Moving on to the structure of the matrix clause now, we find a typical SOV structure with *enggi* ‘say’ in the final position and the quotative in the object position. However, there are some instances where the quotative comes after the verb of speech:

- (127) *Emba=bet engg-on: “Ih, onet=ko nup karet aip*
 father=OBL say-3SG.M INTJ now 1PL rubber there.is
onongm-em, lokasi ka-y-en win-ip kole.”
 make-1PL.IMP location(BI) give-PL.RCV-N go-2/3PL CONJ
 [Government officials launched a program to plant rubber:]
 ‘(My) husband said: “Oh, now, let us make our rubber, because
 they gave us a location (i.e. land).” ’ [muyu027:004-5]

The verb *enggi* ‘say’ is a multi-purpose verb of speech with relatively little semantic content. It can be complemented by other verbs in a multi-verb construction:

- (128) “*Om=ko an-an-up nea=ko?*”, *engg-e*
 sago=PTC eat-IRR-1PL Q=PTC say-SM
kededan-on=ga,
 ask.once-3SG.M=PTC
 ‘ “Will we eat the sago?”, he asked but ...’ [muyu007:055]
- (129) “*Benban-imok=o*”, *engg-e kumungg-on jadi,*
 carry:SG.O-3PL.IMP=QUOT say-SM tell-3SG.M CONJ
 [Planing a working trip to a garden for a larger group:]
 ‘ “Let them carry (their food themselves)”, he told (us) so ...’
 [muyu023:034]

The matrix clauses in (128) and (129) have complex predicates: *engge kededanon* ‘he say-ask’ and *engge kumunggon* ‘he say-tell’. In such constructions, the final verb conveys information about the kind of speech act. Some speech act verbs of Muyu are listed in (130). They all can occur as independent verbs in simple clauses. However, with embedded quotatives they usually form MVCs with a preceding *enggi*.

- (130) **Some Muyu speech act verbs:**
bambai ‘call (several times)’
kededani ‘ask (once)’
kededai ‘ask (several times)’
kumunggi ‘tell’
monkani ‘report’
olali ‘talk’
 ...

Finally, we take a look at the subject NP. Overt subjects rarely co-occur with embedded quotatives. If present, they precede the quotative (as expected from SOV constituent order). Moreover, they are virtually always marked as obliques with =*bet*. An example is given in (131). For details on oblique marking, see Section 9.3.4.

- (131) ***Ena=bet***, “*Ah, tana=go men-e komb-ip*
 mother=OBL INTJ child=PTC come-SM put:SG.O-2/3PL
oyen”, *engg-un*.
 that.is.it say-3SG.F
 [Hearing the sound of a paddle hitting at the side of a canoe:]
 ‘Mother said, “Oh, that means the children have arrived.” ’
 [muyu038:197]

The oblique marker in (131) is used to identify the speaker of the quotative. Otherwise, the mother could be mistaken for the recipient of the quoted speech.

12.6.2 Reported speech

Reported speech means that a speaker reports literally what someone said. Most examples seen in Section 12.6.1 were of this kind.

Reported speech can be of any speech act type: statements as in (131), questions as in (128) or commands as in the following example:

- (132) “*Ah, kawat talep ogo ka-d-ime=yo*”,
 INTJ spear big DEM give-1SG.RCV-2PL.IMP=QUOT
engg-an.
 say-1SG
 ‘ “Give me the big spear”, I said.’ [muyu035:043]

Most instances of embedded quotatives in the corpus are reported speech. This has probably to do with the composition of the corpus, since it mostly contains narratives.

12.6.3 Reported thought

Embedded quotatives are sometimes used to report about thoughts of somebody. These thoughts appear like direct speech but are not uttered. The verb of speech can be in a multi-verb construction with a verb of thinking, as in the following examples:

- (133) “*Eyom edo tinggan yanop=an*”, ***engg-e yem***
 in.here DEM.this mouse there.is=COP say-SM quietly
opko-gol-i,
 think-SS.SEQ-1SG
 ‘ “There must be a mouse in here”, I thought to myself and then I ...’ [muyu040:030]
- (134) ***Engg-e opkon-an:*** “*Th, am aip kole!*”
 say-SM think-1SG INTJ rain there.is CONJ
 [Asking herself if she would go outside:]
 ‘I thought: “Oh, since it is raining (I can’t go out)!” ’
 [muyu023:041]

Both examples above have the verb *okoni* ‘think’ as a final verb. Additionally, there is an adverb *yem* ‘quietly’ in (133) to highlight the fact that the protagonist did not vocalise the thought.

However, verbs of thinking are in no way obligatory for reported thought. In most circumstances, the context will decide whether an embedded quotative is to be interpreted as a spoken utterance or as unvocalised thought.

Reported thought is sometimes combined with perception:

- (135) “*Kede adep=an*”, *engg-e kelega-un=ga nowan*.
 why why=COP say-SM watch-3SG.F=PTC NEG
 ‘She looked for the reason but (there was) nothing. (lit. why is it saying she-looked)’ [muyu007:099]

The MVC in (135) combines a quotative with the verb of perception *kelegi* ‘watch’. It can be conceptualised as a thought accompanying the perception, but often it is better to translate it without the direct equivalent to a thought. In this context, we shall mention that Healey (1964c) proposes that Telefol quotatives can have a perceptive function. Accordingly, she glosses Telefol *akankalin* as polysemous with two sub-types: (I) ‘say, think’ (saying sub-type) and (II) ‘see, know, feel’ (perceptive sub-type). We do not think that such a function is needed for Muyu quotatives. All occurrences found so far can be explained with thought processes that accompany the perceptive act.

12.6.4 Intentions and desires

Embedded quotatives in Muyu can convey meanings that are circumscribed as intentions and desires. They mostly concern sentences for which the English translation includes the verb ‘want’. In Muyu, there is no specialised verb to denote the meaning ‘want’. Besides embedded quotatives, speakers can also make use of a desiderative auxiliary construction (see Section 11.6.4).

Quotatives of this type always end in *-a* ‘-1SG.IMP’. This is a subject index from the imperative paradigm (see Section 7.3.1), as if they were talking to themselves. Here are some examples:

- (136) “*wen-e kedo wan-a*”, *engga-in=go, eh kanggan-on, ah!*
 go-SM out go-1SG.IMP say-1SG=PTC INTJ fail-3SG.M INTJ

[Driving the car to a muddy part of the road:]

‘I wanted to cross but, oh! It (the car) failed! (lit. let me go and go out I said)’ [muyu036:004]

- (137) “*nin-e omb-a*” *engg-e kemo-d-in*.
 hold:SG.O-SM break:SG.O-1SG.IMP say-SM do-DUR-1SG

‘I was trying to break it. (lit. let me hold and break I said)’
[muyu039:033]

- (138) *“yado tol-a”,* *engg-un=go* *ap* *odo*
up step.once-1SG.IMP say-3SG.F=PTC tree DEM
ok-e *komb-on=go,*
be.broken-SM lay.down-3SG.M=PTC

‘She was about to step on it but the branch broke off and ... (lit. let me step up ...)’
[muyu065:065]

This function of quotatives does not formally differ too much from reported speech or reported thought, besides the restriction to the 1SG.IMP suffix for the final verb. Moreover, many instances can be interpreted as reported thought or even reported speech. However, there are some cases in which we would not normally consider the actor to produce conscious thought:

- (139) *Yado man-a* *engg-e* *kem-on=ga* *welen.*
up come-1SG.IMP say-SM do-3SG.M=PTC difficult
[A pig chasing a human. The man escaped on a tree:]

‘It wanted to come up but it couldn’t. (lit. let me come up ...)’
[muyu004:015]

- (140) *An-a* *engge-n-e=t*
eat-1SG.IMP say-SS-3SG=and.then.SS
[A newborn baby:]

‘He wants to eat and then ... (lit. let me eat)’ [muyu057:040]

The actor in (139) is a pig, while the actor in (140) is a newborn baby. Both are subjects of an embedded quotative, which must be interpreted more as an intention or a desire than a regular conscious thought.²⁸

12.6.5 Miscellaneous

The precise functions of embedded quotatives are manifold and allow for a more fine-grained classification than applied in this section. However, we

²⁸Let us be clear that we do not wish to advocate a theory of mind here. We are agnostic of whether pigs or babies have conscious thoughts. However, we think that the speakers in examples as in (139) or (140) intend to convey the intention rather than the literal thought.

think that most instances can be explained within the three categories of reported speech, reported thought and intentions/desires; we have chosen not to over-classify quotative functions. Yet, we would like to briefly address one more potential function here: naming.

In her account of Telefol quotatives, Healey (1964) recognises the function of naming entities, e.g. “He calls her Philys”, “They call me the hunter”. The Muyu corpus also contains many instances of naming something/someone, as in the following examples:

- (141) *Ogan otbop=bet “Mayang=o”, engga-ip.*
 foreign language=OBL PN=QUOT say-2/3PL
 [Naming a location:]
 ‘In the foreign language, they say “Mayang”.’ [muyu031:072]
- (142) *Kodolok kimi mim ekunedep odo, aninggo, ogan*
 head hair one like.this DEM name foreign
otbop=bet “odo Papua” engga-ip.
 language=OBL DEM PN say-2/3PL
 ‘For someone with (curly) hair like this, as a name, in the foreign language they say “It’s a Papua”.’ [muyu030:086]

Quotatives that fulfil the purpose of naming are usually restricted to simple phrases containing the name of the entity, as seen in *Mayang=o* in (141), but (142) has a short verbless clause. Note that naming is quite similar to reported speech or reported thought.²⁹ In contrast to reported speech/thought, the actor is not a specific referent but an imagined community, i.e. ‘they say’ means ‘people in general say’.

12.7 Reciprocal construction

The reciprocal construction is a complex syntactic structure that denotes that two participants act upon each other. Each of the participants is in the role

²⁹Naming an entity can be conceived of remembering that someone said a name of that entity. Of course, there is no need to assume that a naming event has always been witnessed directly. Alternatively, one could establish a function of fictive speech. So for example, if I asked someone for the name of the entity, my interlocutor would say this or that.

of actor and undergoer simultaneously. The structure of Muyu reciprocals is schematically given as follows:

- (143) **Structure of the reciprocal construction:**
 V1-subject suffix₁ V2-subject suffix₂ *kem*-subject suffix_{cum}

Here is a short example, instantiating the structure above:

- (144) *Tem-on tem-on kem-ip.*
 see-3SG.M see-3SG.M do-2/3PL
 ‘They see each other.’ [Fieldnotes]

The structure in (143) is literally “one Vs, one Vs, they do”. Reciprocal constructions always consist of three verbs. V1 and V2 are necessarily identical, while the construction ends in an auxiliary *kemi* ‘do’. Each of the verbs is inflected with a subject suffix. The subject suffixes at V1 and V2 are singular and refer to the respective actor, while the subject suffix of the auxiliary is plural and has a cumulative reference to both participants. Further note that the auxiliary can inflect freely, whereas V1 and V2 are restricted and can only have the subject suffixes.

Here are some examples from the corpus:

- (145) *Okun-e=go adimbon wip=bet bulungg-on*
 like.that-SM=PTC bridge middle=OBL meet-3SG.M
bulungg-on kem-ip.
 meet-3SG.M do-2/3PL
 [A picture story. Two goats crossing a bridge from different directions:]
 ‘They did so and they met in the middle of the bridge.’
 [muyu003:004]
- (146) *Men-e men-e kim oya=bet=a kadap*
 come-SM come-SM road there=OBL=LNK each.other
towun-un towon-on kemo-d-ip=a,
 pass-3SG.F pass-3SG.M do-DUR-2/3PL=LNK
 [Pear story. Two bicyclists approaching each other from different directions:]
 ‘When they were coming closer and passing each other, ...’
 [muyu011:016]

- (147) *Anggayom takol-on takol-on kem-an-ip.*
 PROHIB leave-3SG.M leave-3SG.M do-IRR-2PL
 [Two young men are planning a trip together. Advice from their
 parents:]
 ‘You must not separate from each other.’ [muyu038:026]

Reciprocal constructions sometimes resemble full reduplication if the participants trigger identical subject suffixes as in (145) and (147). However, in (146), we see that the verbs are independent from each other; the first inflects for a feminine subject (*-un*), whereas the second inflects for a masculine subject (*-on*). In all cases, the cumulative reference at the auxiliary triggers the suffix *-ip* ‘-2/3PL’.

Verbal features like irrealis or durative are inflected at the auxiliary only, as in (146) and (147). Nonetheless, they have scope over the full construction.

Verbs that take object indexes can also enter a reciprocal construction:

- (148) *Opko-ngg-un opko-ngg-on kembo-d-ip.*
 think-3SG.O-3SG.F think-3SG.O-3SG.M do-DUR-2/3PL
 ‘They are missing each other. (man and woman)’ [Fieldnotes]

Note that the object suffix *-ngg* does not distinguish gender, whereas the subject suffixes do.

Muyu generally follows the tendency that reciprocal meanings are expressed with repetitive structures. Besides reciprocal constructions of the schema given in (143), one also finds reciprocal verbless clauses in the corpus:

- (149) *Yu taman, ye taman.*
 3SG.F far 3SG.M far
 ‘They keep a distance from each other. (lit. she far, he far)’
 [muyu018:092]

Finally, there are some instances in which the construction outlined here seems not to express reciprocity proper. The following example rather implies some kind of distributivity:

- (150) *Wen-e ketbon oya=bet ta bida-y-un*
 go-SM sacral.place there=OBL and donate-PL.RCV-3SG.F

bidā-y-on *kum-up=a*
 donate-PL.RCV-3SG.M do-1PL=LNK

‘We go to a sacred place to make sacrifices and then ...’

[muyu019:018]

The structure in (150) is maybe an idiomatic expression for the meaning ‘to sacrifice’. Evidence comes from the subject marking since *-un* ‘-3SG.F’ at V1 and *-on* ‘-3SG.M’ at V2 do not refer to certain participants in the immediate discourse context. Nonetheless, even in the idiomatic expression the interpretation is more distributive than reciprocal, i.e. the action is distributed over several subjects and they do not act upon each other. However, distributive interpretations of the reciprocal construction are particularly rare. More data is needed before we can interpret them as a separate construction.

12.8 Cleft sentences

Muyu speakers form cleft sentences with the demonstrative copulas *eyen* ‘here is, this is’ and *oyen* ‘there is, that is’ (see Section 5.10). The demonstrative copula always succeeds the embedded clause:

- (151) *Kibik=ko kakewet kel-on eyen.*
 now=PTC young.man become-3SM this.is
 [Which one do you mean?]

‘It is (the one who) now has become a young man.’

[muyu006:006]

- (152) *Ah, kan-e men-e komb-a-den oyen.*
 INTJ take:SG.O-SM come-SM put:SG.O-1SG-PFV that.is

‘Oh, that is what I have brought and kept.’

[muyu007:049]

The embedded clause always has a final verb (rather than a medial verb).

Functionally, cleft sentences are used to draw the hearer’s attention to a certain participant. This is a very broad function and is probably further divisible. However, at the present state of research, no in-depth studies of Muyu cleft sentences have been undertaken. Future research might reveal important functional distinctions within the category of cleft sentences.

Demonstrative copulas are obligatory to form a cleft sentence. Additionally, an identificational demonstrative can stand at the beginning of the

sentence, as in the following examples:

- (153) **Odo** *b-e* *mun-up* **oyen.**
 DEM take:PL.O-SM come-1PL that.is
 [Unloading fish from a canoe:]
 ‘That’s what we have brought.’ [muyu038:146]
- (154) **Odo** *Tanah Merah ti-en* **oyen.**
 DEM PN PN live-3SG.M that.is
 ‘That is (the one) who lives in Tanah Merah.’ [muyu010:218]

In a cleft sentence, an identificational demonstrative is always co-referential with the corresponding demonstrative copula.

12.9 Tail-head linkage

Tail-head linkage (THL) is a discourse strategy whose main function is to maintain continuity between two discourse units. It is commonly found in Papuan languages (de Vries 2005) and cross-linguistically (Guérin 2019).³⁰ Muyu makes extensive use of THL. In some recordings, up to half of all utterances are involved in a linkage.

In THL, two sentences are linked by repetition. The final part of the first sentence (=tail) is repeated at the beginning of the subsequent sentence (=head). A sentence can be either a clause chain or an independent clause. The tail always contains a final verb. The scope of repetition varies between a maximum of verbatim repetition of a full clause and a minimum of only repeating the final verb. Throughout this section we highlight the tail with an underline and the head in bold face. Here is a first example:

- (155) a. *Men-e adi wangga apyop wa-d-en*
 come-SM father there.INV fruit pick:PL.O-DUR-3SG.M
odo bamba-un.
 DEM call.several.times-3SG.F
 ‘She came and repeatedly called the father who was picking

³⁰Alternative notions for THL are plenty. Since de Vries (2005), the notion ‘tail-head linkage’ prevails in Papuan linguistics. Cross-linguistically, a recent volume by Guérin (2019) labels this phenomenon as ‘recapitulative linkage’ and subsumes it under ‘bridging constructions’.

fruits.’

- b. ***Bamba-un=ga*** *wedambil-i nowan kole (...)*
 call.several.times-3SG.F=but.DS hear-INF NEG so

‘She called but (he) did not hear her, so ...’

[muyu011:009-10]

In this example, the first clause of the new clause chain in (b) repeats the final verb *bambaun* ‘she called several times’. This repetition signals thematic continuity across the two clause chains. Furthermore, THL guarantees subject continuity between clause chains (in contrast, S/R marking only operates within the boundaries of a clause chain).

A broader scope of repetition is found in the following example, just a few utterances before (155):

- (156) a. *Tana manggan odo nonggonokap belon=bet mun-un.*
 child daughter DEM bicycle small=OBL come-3SG.F

‘The daughter came on a small bicycle.’

- b. ***Nonggonokap belon=bet meno-n-u,*** *men-e adi*
 bicycle small=OBL come-SS-3SG.F come-SM father
ya, kawen-e apyop wa-d-en ogo.
 at climb-SM fruit pick:PL.O-DUR-3SG.M DEM

‘She came on a small bicycle, to the father who was picking fruits.’
 [muyu011:006-7]

Not only the final verb is repeated in (156) but also the instrument *nonggonokap belon=bet* ‘with a small bicycle’. The head in (b) requires a medial verb marked with *-n* ‘SS’. Hence the form of the repeated verb changes from *munun* to *menonu*. This clause is continued with a right-dislocated motion construction (see Section 12.2.11) and a relative clause.

Multi-verb constructions are handled with great flexibility in THL. As expected, an MVC in a tail can be fully repeated (157) or only partially (158) in the head.

- (157) a. *Kedo anon=ko b-e wun-u-den.*
 then dog=PTC take:PL.O-SM go-3SG.F-PFV
 ‘Then she brought the dogs.’
- b. ***B-e weno-n-u, (...)***
 take:PL.O-SM go-SS-3SG.F
 ‘She brought them and then she ...’ [muyu031:023-24]
- (158) a. *Apyop odo kan-e kulub-un.*
 fruit DEM take:SG.O-SM show-3SG.F
 ‘She took the fruit and showed it.’
- b. ***Kulube-n-u, (...)***
 show-SS-3SG.F
 ‘She showed it and then she ...’ [muyu015:012-13]

What is unexpected, however, is that the repeated verb can form a multi-verb construction in the head that has not been present in the tail:

- (159) a. *Kole ta ambip wun-an.*
 so again house enter-1SG
 ‘So I went back again into the house.’
- b. ***Ambip wun-e timbal-an=e, (...)***
 house enter-SM sit-1SG=DS.SEQ
 ‘I went into the house and sat, and then ...’
 [muyu023:042-43]

In this example, the words *ambip wunan* ‘I entered the house’ are repeated. However, in (b), the repeated verb is part of a multi-verb construction together with *timbalan* ‘I sat’. The form changes from *wunan* to *wune*. Hence, the simple predicate from the tail expands to an MVC in the head. A suitable term for this phenomenon is ‘head expansion’. Notice that head expansion only applies to the forming of multi-verb constructions. There are no instances in the corpus, where a non-verbal element is added to the head (e.g. an additional argument or adjunct).

The flexibility of THL and MVCs is such that partial repetition and head expansion can occur in the same linkage:

- (160) a. *Kawen-e epkat=mo b-up.*
 climb-SM cloth=only take:PL.O-1PL
 ‘We climbed up and took only the clothes.’
- b. ***Epkat=mo b-e*** *wen-e ok*
 cloth=only take:PL.O-SM go-SM water
ambengga-gul-up
 shower-SS.SEQ-1PL
 ‘We took only the clothes and went to take a shower, and then
 we ...’ [muyu025:013-14]

Only the last part of the tail in (a) is repeated, namely *epkat=mo bup* ‘we took only the clothes’, whereas *kawene* ‘climb’, which is part of the same MVC, is not repeated. The single repeated verb *bup* is expanded to become a part of a new MVC in (b). MVCs and THL combine to a very adaptive and versatile discourse linking device.

Appendix A

Phonetic Data of Vowels

In Chapter 2, we gave results from a formant analysis of Muyu vowels. Here, we show the detailed phonetic data in Table A.1 below. For convenience, we repeat the report on the provenience of this data.

The phonetic realisation of the five vowels [a, e, i, o, u] was investigated with the help of a reading task. Acoustic data were collected from 4 speakers. Each speaker was seated indoors in front of a laptop and was asked to read individual words from a power point presentation (1 word per slide). The main investigator sat beside the speaker and clicked through the presentation. The recordings were made with a head-mounted microphone and a TASCAM audio recorder. Formant analysis was carried out with PRAAT (Boersma & Weenink 2023). I selected lexical items with two open syllables (i.e. /CV.CV/) of which the first syllable was the target. For each vowel, two phonological contexts were selected (/t/ and /b/). This makes 5 vowels x 2 contexts x 4 speakers = 40 data points.

The detailed results of this procedure are listed in Table A.1. The formant data in Hz is listed in the columns 4 and 5.

Word	Speaker	Vowel	F1	F2
bamit	F	a	650,87	1092,08
	S	a	640,81	1201,23
	LA	a	644,29	1289,4
	JW	a	711,97	1272,01
tabap	F	a	695,29	1230,9
	S	a	627,81	1306,33

	LA	a	729,97	1498,92
	JW	a	740,49	1256,63
benep	F	e	443,92	1794,7
	S	e	443,53	1890,67
	LA	e	398,73	2166,09
	JW	e	466,14	1797,97
temop	F	e	462,05	1781,98
	S	e	488,81	1697,84
	LA	e	552,86	1894,07
	JW	e	476,56	1631,68
bilim	F	i	324,94	2064,4
	S	i	318,61	2141,75
	LA	i	334,65	2337,42
	JW	i	278,32	2036,08
tiyok	F	i	297,21	1974,55
	S	i	298,45	2168,13
	LA	i	321,66	2321,04
	JW	i	274,21	2197,8
bomot	F	o	472,05	824,94
	S	o	438,5	849,06
	LA	o	447,66	749,03
	JW	o	480	909,39
towong	F	o	536,22	908,75
	S	o	471,09	851,33
	LA	o	508,26	966,34
	JW	o	538,92	979,88
bunup	F	u	329,07	700,31
	S	u	386,36	843,32
	LA	u	336	682,47
	JW	u	351,66	831,28
tunuk	F	u	342,77	782,3
	S	u	365,65	788,45
	LA	u	401,01	NULL
	JW	u	333,42	1051,13

Table A.1: Formant frequencies of all five vowels from four different speakers.

Appendix B

Texts

This appendix is a collection of two fully glossed texts from the corpus. The first is a traditional narrative about the origin of the moon. The second is a personal memory from the childhood of the speaker. The utterances were split and numbered separately mostly by prosodic factors: final intonation always lead to the separation as a separate utterance, whereas non-final intonation was only separated when a long pause followed.

B.1 Myth about the moon

Author: Patrisius Enip

Recorded: July 30, 2019

The recording is archived in ELAR¹ with the ID muyu007.

- (1) *Edo otbop.*
DEM.this story
'This is a story.'
- (2) *wot, wot aip kel-u-den ye otbop*
moon moon there.is become-3SG.F-PFV 3SG.M story
'A story (about how) the moon came into being.'
- (3) *Ege olal-an-e kem-an eyen.*
DEM talk-IRR-SM do-1SG this.is

¹The archive is accessible via <https://www.elararchive.org/dk0601/>

‘This is what I want to tell.’

- (4) *Adon mim=ko, kon, yu kawupki yom, yi alop mo*
 sun one=PTC woman 3SG.F brother CONJ 3PL two only
tio-d-o-n-ip
 live-DUR-EP-SS-2/3PL

‘Once upon a time, a lady was living with her brother.’

- (5) *Wen-e om bat win-ip-ten.*
 go-SM sago hunt go-2/3PL-PFV

‘They went to find sago.’

- (6) *Om bat wen-e, tut, tut=a, om, om tut bon*
 sago hunt go-SM forest forest=LNK sago sago forest place
weno-n-ip
 go-SS-2/3PL

‘They went to find sago, they went to the sago place in the forest.’

- (7) *Weno-n-ip wen-e om ambangga-ip.*
 go-SS-2/3PL go-SM sago work-2/3PL

‘They went (there) and they made the sago.’

- (8) *Adon nak-on, adon mim kedon-ip*
 sun day.break-3SG.M sun one start.to-2/3PL

‘The next day, they got up.’

- (9) *Om wi-o komb-ip-ten.*
 sago cut.down.tree:SG.O-SM fell-2/3PL-PFV

‘They fell a sago tree.’

- (10) *Win-e komb-e, alum-ip.*
 cut.down.tree:SG.O-SM put:SG.O-SM chop.sago-2/3PL

‘They fell (the tree) and chopped (the sago).’

- (11) *Alumo-n-ip,*
 chop.sago-SS-2/3PL

‘They chopped it,’

- (12) *boma, wen-e opn-on=e*
 walk go-SM become.evening-3SG.M=DS.SEQ

‘They continued until evening,’

- (13) *b-e kan-e wen-e angg-ip-ten*
take:PL.O-SM take:SG.O-SM go-SM sleep-2/3PL-PFV
'then they collected it and went home to sleep.'
- (14) *angge-n-e, nak-on ta kedo win-ip-ten*
sleep-EP-SM day.break-3SG.M again out go-2/3PL-PFV
'(they) slept and the next day, they went again.'
- (15) *okemo-n-ip wen-e, adon alop mim, odo*
do.that-SS-2/3PL go-SM sun three DEM
'They did so until the third day.'
- (16) *Yu kawupki (o)do kedon-e engg-on, "Na, enggon!"*
3SG.F brother DEM start.to-SM say-3SG.M INTJ friend
'Her brother began to say, "Sister!" '
- (17) *"Om mo ano-d-up kole=yo"*
sago only eat-DUR-1PL CONJ=QUOT
'"Since we are eating only sago all day ..."
- (18) *"ne=go kedo, ton ton bat kedo oktikap eyanu*
1SG=PTC out fish RED hunt out downstream here
wan-an-e kem-an=o", engg-on.
go-IRR-SM do-1SG=QUOT say-3SG.M
' "I want to go downstream to find some fish", he said.'
- (19) *Engga-n-e kedo tobon tinim mo bio-n-e,*
say-SS-3SG.M then sago.leaf.stick bow only take:PL.O-SS-3SG.M

'He said so and then he took some arrows made of splintered ribs of sago leaves and a bow,'
- (20) *ano tinim*
arrow bow
'arrows and a bow'
- (21) *bio-n-e kedo ton wano way-e wen-en*
take-SS-3SG.M then fish down look.for.animal-SM go-3SG.M
'He took them and went to find some fish down there.'

- (22) *way-e* *boma-n=mo* *wen-en*
 look.for.animal-SM walk-N=ADV go-3SG.M
 ‘He was walking, looking out for fish.’
- (23) *weno-n-ip*
 go-SS-2/3PL
 ‘they (!) went and then’
- (24) *Wen-e, ton odo* *b-e* *kan-e* *men-en.*
 go-SM fish DEM take:PL.O-SM take:SG.O-SM come-3SG.M
 ‘and then he collected and brought the fish.’
- (25) *B-e* *kan-e* *meno-n-e,*
 take:PL.O-SM take:SG.O-SM come-SS-3SG.M
mengga-mb-en.
 cook.on.leaf.oven-PL-3SG
 ‘He collected, brought and cooked them.’
- (26) *mengga* *anengga-en*
 cook.on.leaf.oven eat:PL.O-3SG.M
 ‘(he) cooked and ate it.’
- (27) *mengga-n-e* *ye* *yeman odo* *an-e,*
 cook.on.leaf.oven-SS-3SG.M 3SG.M for DEM eat-SM
 ‘He cooked for himself and ate it.’
- (28) *ta kedo yu,* *ye* *kon* *yeman o(go) kedo*
 and then 3SG.F 3SG.M woman for DEM out
kombe-ngg-on
 put:SG.O-2/3SG.O-3SG.M
 ‘and then she, he kept something for his woman (i.e. sister).’
- (29) *Kombe-ngg-on,* *opn-on,* *om*
 put:SG.O-2/3SG.O-3SG.M become.evening-3SG.M sago
bon=bet *mun-un.*
 place=OBL come-3SG.F
 ‘He kept it for her, and when it became evening, she came (back) from the sago place.’
- (30) *Meno-n-u,* *meno-n-u,*
 come-SS-3SG.F come-SS-3SG.F

- ‘She came and..., she came and ...’
- (31) “*Ih*”, *tem-un=go om=ko ban-e*
 INTJ see-3SG.F=PTC sago=PTC take.a.part.of-SM
mengga-en.
 cook.on.leaf.oven-3SG
 ‘ “Oh!”, she saw that he had taken some of the sago and cooked it.’
- (32) “*Ah!*”
 INTJ
 “Oh!”
- (33) “*Kep=ko, om odo wene kede=bet (...) ben-e*
 2SG.M=PTC sago DEM where where=OBL ... take:PL.O-SM
mengga-ep=ko?”
 cook.on.leaf.oven-2SG=Q
 “From where did you take that sago and cook it?”
- (34) *Engg-un=go yu kawupki=do engg-on, “Ah!”*
 say-3SG.F=PTC 3SG.F brother=PTC say-3SG.M INTJ
 ‘She said so and her brother said, “Oh!” ’
- (35) “*Om ombet=an=o, ombet ta*”
 sago OBL.DEM=COP=QUOT OBL.DEM and
 “It is from that sago, from that and ...”
- (36) “*ton yanop mengga-in=o*”
 fish there.is cook.on.leaf.oven-1SG=QUOT
 “there is also fish that I cooked.”
- (37) “*an-i yeman=an=o*”, *engg-on.*
 eat-INF for=COP=QUOT say-3SG.M
 ‘ “It is (for us) to eat”, he said.’
- (38) “*Hmm.*”
 INTJ
 “Hmm.”
- (39) “*Om=to an-an-up balin=o*”
 sago=PTC eat-IRR-1PL NEG=QUOT
 “We cannot eat that sago!”
- (40) “*Baat kedo Awin ambip onngo won-o-den.*”
 brother.in.law out PN village there go-3SG.M-PFV

- “(Your) brother-in-law went to Awin.”
- (41) *Amot ok bon won-o-den odo. Oyip*
 market market market market go-3SG.M-PFV DEM also
mon-ok=get, om=ko an-an-up=o.”
 come-3SG.IMP=and.then.SS sago=PTC eat-IRR-1PL=QUOT
 “He went to the market, let him come as well, then we can eat the sago.”
- (42) *om=ko an-i=n=o jadi, kole*”
 sago=PTC eat-INF=COP=QUOT so(BI) CONJ
 “(we always) eat sago, so”
- (43) *Om=to an-an-up balin=o.*”
 sago=PTC eat-IRR-1PL NEG=QUOT
 “We cannot eat the sago (now).”
- (44) *Engg-un=go, yu kawupki (o)do kedo engg-on:*
 say-3SG.F=PTC 3SG.F brother DEM out say-3SG.M
 ‘She said so but her brother called out:’
- (45) *[click]*
 click
 ‘(clicking sound)’
- (46) *Moyon mok, medep=bet mengga-n-an-up balin*
 INTJ INTJ what=OBL cook.on.leaf.oven-EP-IRR-1PL NEG
koleya ambikin=ko kan-e an-i=dep balin, ah.”
 INTJ earth=PTC take:SG.O-SM eat-INF=like NEG INTJ
 “Oh dear me, what can we use to cook with the fish, we cannot eat earth (to the fish).”
- (47) *Om bat mun-up-ten odo om=bet an-i=n”, ah,*
 sago hunt come-1PL-PFV DEM sago=OBL eat-INF=COP INTJ
engg-e
 say-SM
 ‘ “Oh, we went to find sago so we (must) eat from the sago”, he said ...’
- (48) *ningtem mo, kumungg-i yip balin.*
 in.the.heart only tell-INF there.is NEG
 ‘only in his mind, (he) did not say anything.’

- (49) *Ye ningtem mo komb-o-den.*
 3SG.M in.the.heart only put:SG.O-3SG.M-PFV
 ‘He kept (his thoughts) in his mind only.’
- (50) *Kele-n-e,*
 become-SS-3SG.M
 ‘And then...’
- (51) *ta nak-on,*
 and day.break-3SG.M
 ‘on the next morning...’
- (52) *nak-on=ko,*
 day.break-3SG.M=PTC
 ‘on the next morning ...’
- (53) *wen-e om=ko alum-ip.*
 go-SM sago=PTC chop.sago-2/3PL
 ‘they went to make sago.’
- (54) *Ban-e alum-e kolo-ngg-e,*
 open-SM chop.sago-SM leave-2/3SG.O-SM
 ‘He opened (the sago bones) and chopped for her ...’
- (55) *ta kedo okun-e ton bat wen-en.*
 and then like.that-SM fish hunt go-3SG.M
 ‘and then he went to find fish like (the day before).’
- (56) *boma-n-e, eh opn-on ombet olal-e*
 walk-SS-3SG.M oh become.evening-3SG.M OBL.DEM talk-SM
komb-un.
 put:SG.O-3SG.F
 ‘he walked and ..., oh she had talked to him the evening (before).’
- (57) *Olal-e, olale-n-u engg-un=gi.*
 talk-SM talk-SS-3SG.F say-3SG.F=EMPH
 ‘Talked, she talked and said:’

- (58) *“Om=to ine (o)do, om a(i)p mengga an-an-ep*
 sago=PTC tomorrow DEM sago there.is cook eat-IRR-2SG
balin.”
 NEG
 ‘Tomorrow, you will not cook the sago to eat ...’
- (59) *“Om alep ombet.”*
 sago slime OBL.DEM
 ‘(But instead) from the sago pulp’.
- (60) *“Om alep ombet menggane-n-ep=ket*
 sago slime OBL.DEM cook.on.leaf.oven-SS-2SG=and.then.SS
ton=ko an-i=n=o”, engg-un gole
 fish=PTC eat-INF=COP=QUOT say-3SG.F CONJ
 ‘ “You cook the pulp of the sago and eat the fish”, she said, so’
- (61) *“Moyon yanam=an”, engga-n-e*
 INTJ true=COP say-SS-3SG.M
 ‘ “Oh dear me, that is true”, he said and he ...’
- (62) *Kedo-n-u adut wa-un gole, om=to*
 turn.to-SS-3SG.F prohibition LV-3SG.F CONJ sago=PTC
yal-e kol-on.
 lay.down:PL.O-SM leave-3SG.M
 ‘Since she turned to him and she forbade (him to eat it), he left the sago.’
- (63) *Ton=ko opnon=ko b-e men-en.*
 fish=PTC late.afternoon=PTC take:PL.O-SM come-3SG.M
 ‘He brought the fish in the late afternoon.’
- (64) *Kedo boma-n-e wen-e ton=ko yi-∅-o-n-e,*
 out walk-SS-3SG.M go-SM fish=PTC PL.O-hit-EP-SS-3SG.M
b-e meno-n-e,
 take:PL.O-SM come-SS-3SG.M
 ‘He went out and killed some fish and brought them and then ...’
- (65) *Om alep=bet mengga-en.*
 sago slime=OBL cook.on.leaf.oven-3SG.M
 ‘He cooked it with the pulp of sago.’

- (66) *Mengga-n-e, ye=go an-on.*
 cook.on.leaf.oven-SS-3SG.M 3SG.M=PTC eat-3SG.M
 ‘He cooked and he ate it.’
- (67) *Ye=go om alep odo b-e yal-e*
 3SG.M=PTC sago slime DEM take:PL.O-SM put:PL.O-SM
kol-e
 leave-SM
 ‘He took out the pulp of the sago and ...’
- (68) *kedo ton tit ombet mo be-n an-en.*
 then fish content OBL.DEM only take:PL.O-N eat-3SG.M
 ‘he only ate from the meat of the fish.’
- (69) *Kele-n-e ton yena (o)do, nekwa-n-e,*
 become-SS-3SG.M fish other DEM prepare-SS-3SG.M
kan-e ye kon (a)ip kombe-ngg-on.
 take:SG.O-SM 3SG.M woman there.is put-2/3SG.O-3SG.M
 ‘And then he made the other fish, he prepared it and kept it for his
 woman (i.e. sister).’
- (70) *Ye kon kombe-ngg-on=e,*
 3SG.M woman put:SG.O-2/3SG.O-3SG.M=DS.SEQ
 ‘He kept it for his sister and then ...’
- (71) *Ye kon=ko opn-on=e, om*
 3SG.M woman=PTC become.evening-3SG.M=DS.SEQ sago
ambangga wan-e, kedo ambip mun-un.
 work finish-SM out house come-3SG.F
 ‘His sister finished to make the sago in the evening and she came
 home.’
- (72) *Ambip meno-n-u,*
 house come-SS-3SG.F
 ‘She came home and ...’
- (73) *ambip men-e nangg-e komb-e*
 house come-SM arrive-SM put:SG-SM
 ‘when she arrived home ...’

- (74) *“Ma kep=ko boma-ep ode=ko?”*, *engg-un.*
 but 2SG.M=PTC walk-2SG how=Q say-3SG.F
 “How was your trip?”, she said.
- (75) *“Ah, kan-e men-e komb-a-den oyen.”*
 INTJ take:SG.O-SM come-SM put:SG.O-1SG-PFV that.is
 “Oh, there is (something) I have brought and kept (for you).”
- (76) *“Kole, om alep=bet mengga-in kole*
 CONJ sago sap=OBL cook.on.leaf.oven-1SG CONJ
oyen=o”, engg-on.
 that.is=QUOT say-3SG.M
 ‘ “Because with sap, I cooked with the sago sap, so that it is”, he said.’
- (77) *“Eih!”*
 INTJ
 “Oh!”
- (78) *Yu (o)do om alep ogo nekwa b-e*
 3SG.F DEM sago sap DEM prepare take:PL.O-SM
yam-e kan-e onngo komb-e
 throw.away-SM take:SG.O-SM there put:SG.O-SM
 ‘She prepared (the food) by taking out the sago sap, threw it away, ...’
- (79) *kedo om yanop an-un=e*
 then sago there.is eat-3SG.F=DS.SEQ
 ‘and then she ate (the fish) with sago.’
- (80) *Ma yu kawupki (o)do om alep ombet mo an-en.*
 but 3SG.F brother DEM sago pulp OBL.DEM only eat-3SG.M
 ‘But her brother ate only the mucus of the sago.’
- (81) *Ano-n-e angg-on.*
 eat-SS-3SG.M sleep-3SG.M
 ‘He ate and he slept.’
- (82) *Amkibi opkongga-mb-en:*
 night think.several.times-PL-3SG.M
 ‘He made plans in the night.’

- (83) *“Moyon mok medep kun-an-an=ga?”*
 INTJ INTJ what do-IRR-1SG=PTC
 “Oh dear me, what can I do?”
- (84) *“Mok om=ko an-i yeman ambangga-up=ko an-i*
 INTJ sago=PTC eat-INF for work-1PL=PTC eat-INF
yeman=an, ah!”, *engg-e opkongga-mb-en.*
 for=COP INTJ say-SM think-PL-3SG.M
 ‘ “We make the sago to eat, so (we must) eat the sago, oh!” , he was
 thinking like that.’
- (85) *Kedo amkali kumungg-on, “Oni!”*
 then morning tell-3SG.M older.sister
 ‘In the next morning he said, “Sister!” ’
- (86) *“Om=ko an-em=o”, engg-on.*
 sago=PTC eat-1PL.IMP=QUOT say-3SG.M
 “Let us eat the sago”, he said.
- (87) *“Baat bekm-e bal-an-up=ko bunup*
 brother.in.law wait-SM AUX.CONT-IRR-1PL=PTC long.time
kole, om=ko an-an-up nea ko”, engg-e
 CONJ sago=PTC eat-IRR-1PL Q Q say-SM
kededan-on=ga,
 ask-3SG.M=PTC
 ‘ “We can keep on waiting for (my) brother-in-law but it will be
 long, so will we eat the sago?” , he asked but ...’
- (88) *“Ne taman, om=ko an-an-up balin=o”,*
 1SG younger.brother sago=PTC eat-IRR-1PL NEG=QUOT
engg-un.
 say-3SG.F
 ‘ “My brother, we cannot eat the sago”, she said.’
- (89) *Om=ko, baat Awin ambip wen-en oyip*
 sago=PTC brother.in.law PN village go-3SG.M also
mon-ok=get.
 come-3SG.IMP=and.then.SS
 ‘The sago, let the brother-in-law (who) went to Awin region come
 back first.’

- (90) *Engg-un gole,*
say-3SG.F CONJ
'She said so.'
- (91) *Eyuk.*
yes
'Yes.'
- (92) *"Eyuk", engga-n-e,*
yes say-SS-3SG.M
' "Yes", he said and ...'
- (93) *"eyuk", engga-n-e*
yes say-SS-3SG.M
' "yes", he said and ...'
- (94) *kedo, kedo nekwa-en.*
then then prepare-3SG.M
'and then he planned (something).'
- (95) *Nekwa-n-e,*
prepare-SS-3SG.M
'He planned (something) and ...'
- (96) *wen-en odo bonyik talyik,*
go-3SG.M DEM kind.of.thorns kind.of.thorns
'He went for Bonyik Talyik thorns, ...'
- (97) *bonyik taryik,*
kind.of.thorns kind.of.thorns
'Bonyik Talyik thorns, ...'
- (98) *mong, mong kel-an-on=a, adit*
bee bee become-IRR-3SG.M=LNK sharp.object
kel-an-on=a
become-IRR-3SG.M=LNK
'and then bees, bees were also, some sharp objects,'
- (99) *kenambun kenambun kumun b-e meno-n-e.*
rough rough all take:PL.O-SM come-SS-3SG.M
'He brought all sorts of rough things and he ...'

- (100) *B-e meno-n-e, ayetm-en.*
 take:PL.O-SM come-SS-3SG.M wrap-3SG.M
 ‘He brought them and wrapped them.’
- (101) *Ayetmo-n-e talep, kenambun,*
 wrap-SS-3SG.M big rough
 ‘He wrapped a big (one), a rough (one) ...’
- (102) *kenambun ayet, ayet talep onongmo-n-e.*
 rough package package big make-SS-3SG.M
 ‘he made a huge package and ...’
- (103) *b-e kan-e ap kobi yan-o-den.*
 take:PL.O-SM take:SG.O-SM tree on climb.onto-3SG.M-PFV
 ‘he took it and climbed on a tree.’
- (104) *B-e kan-e ap kobi yane-n-e,*
 take:PL.O-SM take:SG.O-SM tree on climb.onto-SS-3SG
 ‘He took it onto a tree and ...’
- (105) *kawen-e wangga=bet nekwa-n-e,*
 climb-SM there=OBL prepare-SS-3SG.M
 ‘he climbed there and arranged (everything) on the tree and ...’
- (106) *nekwa-n-e*
 prepare-SS-3SG.M
 ‘he arranged it and ...’
- (107) *kan-e bodon-e komb-on, tip=mo*
 take:SG.O-SM tie-SM put:SG.O-3SG.M good=ADV
 ‘He hung it up there, well.’
- (108) *Odo wadi (o)do, ningtem tap (a)ip komb-on*
 DEM up DEM in.the.heart bad there.is put:SG.O-3SG.M
gole.
 CONJ
 ‘It was up there, because he planned a bad thing.’

- (109) *Ye oni (a)ip opko-ngg-ok balin, om*
 3SG.M older.sister there.is think-2/3SG.O-SBJV NEG sago
yeman ombet.
 for OBL.DEM
 ‘He did not care for his sister just because of the sago.’
- (110) *kedon-e wen-en,*
 start-SM go-3SG.M
 ‘Then he went on,’
- (111) *kawen-e nekwa-on=ga tip=mo, ap nop*
 climb-SM prepare-3SG.M=PTC good=ADV tree high
wangga=go
 there=PTC
 ‘He climbed and arranged (everything) and it was good.’
- (112) *Ap nop wangga=go.*
 tree high there=PTC
 ‘High on the tree there.’
- (113) *Nekwa-n-e,*
 prepare-SS-3SG.M
 ‘He arranged it and ...’
- (114) *Konop tubun-on, nowan.*
 eye cover-3SG.M NEG
 ‘He shut his eyes but nothing (happened).’
- (115) *Nowan, tin, taman=an.*
 NEG near far=COP
 ‘Nothing was near, it was far away.’
- (116) *Kedo ong yamit amb-on.*
 then tongue stick.out stick.out-3SG
 ‘Then he stuck out (his) tongue.’
- (117) *Ong yamit omb-on=ga,ambut=ko*
 tongue stick.out stick.out-3SG.M=PTC cloud=PTC
kan-e men-e tin kol-on.
 take:SG.O-SM come-SM near become-3SG.M

‘He stucked out (his) tongue and made the sky came closer.’

- (118) *Kot, kan-e men-e tin kol-on=go*
 and.then.DS take:SG.O-SM come-SM near become-3SG.M=PTC
oke.
 okay

‘And then he made it come closer, okay.’

- (119) *tip=mo gole*
 good=ADV CONJ
 ‘Because it was good.’

- (120) *Medep kun-an-an?*
 what do-IRR-1SG
 ‘What will I do?’

- (121) *Kedo ambip, ambip wen-en.*
 then house house go-3SG.M
 ‘Then he went home.’

- (122) *Ambip weno-n-e,*
 house go-SS-3SG.M
 ‘He went home and ...’

- (123) *anyan odo mun-un.*
 younger.sister DEM come-3SG.F
 ‘His sister came.’

- (124) *Mun-un=go, amnom, opn-on*
 come-3SG.M=PTC night become.evening-3SG.M
kumungg-on=gi.
 tell-3SG.M=EMPH

‘She came at night, in the evening he told (her):’

- (125) *“Oni=yo!”*
 older.sister=QUOT
 ‘Hey sister!’

- (126) *“Ne=go=yo”*
 1SG=PTC=QUOT
 ‘I ...’

- (127) “*eh...*, *on amun talep tem-a-den=o*”, *ongg-on*.
 HES bird nest big see-1SG-PFV=QUOT say-3SG.M
 ‘ “Uhm, I have seen a big nest of a bird”, he said.’
- (128) “*On amun kenambun kolem.*”
 bird nest strong MOD
 ‘A huge nest of a bird.’
- (129) “*Tem-a-den gole, wen-e a-∅-an-up=o.*”
 see-1SG-PFV CONJ go-SM 3SG.M.O-kill-IRR-1PL=QUOT
 “I have seen it so we will go to kill it (=the bird).”
- (130) “*Amun yanop kan-e kal-i*
 nest there.is take:SG.O-SM throw:SG.O-INF
yeman=an=o”, *engg-on=go*,
 for=COP=QUOT say-3SG.M=PTC
 ‘ “(I) will drop it with its nest”, he said, and (she said:) ...’
- (131) “*Th, ne taman, yanam=an.*”
 INTJ 1SG younger.brother true=COP
 “Oh my brother, that is true.”
- (132) “*Wan-an-up=a*”
 go-IRR-1PL=LNK
 “We will go and ...”
- (133) “*om mo ano-d-up uyen gole*”, *engga-n-u*.
 sago only eat-DUR-1PL there.is CONJ say-SS-3SG.F
 ‘ “since we are eating only sago all the time”, she said and ...’
- (134) “*Kede eyuk wan-an-up*”, *engg-un=gi*,
 then yes go-IRR-1PL say-3SG.F=EMPH
 ‘ “Yes, we will go”, she said.’
- (135) “*Wan-an-up*”, *engg-un=go*,
 go-IRR-1PL say-3SG.F=PTC
 ‘ “We will go”, she said and ...’
- (136) *Kedon-ip kedo yanggan*,
 start-2/3PL then torch
 ‘So they first (took) some torches ...’

- (137) *yanggan=ko bio-n-ip.*
 torch=PTC take:PL.O-SS-2/3PL
 ‘They took the torches and ...’
- (138) *Anyan, yu nin-un.*
 sister 3SG.F hold:SG.O-3SG.F
 ‘His sister, she held (one).’
- (139) *Kedo yu kawupki, yu taman, nin-on.*
 then 3SG.F brother 3SG.F younger.brother hold:SG.O-3SG.M
 ‘And her brother, her younger brother, he held (one).’
- (140) *Boma-n-ip wen-e, wen-e wen-e ap ap (y)a amun*
 walk-SS-2/3PL go-SM go-SM go-SM tree tree at nest
onongm-en, oya wen-e nangge-n-ip.
 make-3SG.M there go-SM arrive-SS-2/3PL
 ‘They walked, they were walking for a long time to the tree, they arrived at the tree where he had made the nest and ...’
- (141) *“Oni, alabel-e bel-e!”*
 older.sister stand-SM AUX.CONT-2SG.IMP
 ‘“Sister, you keep standing (here)!”’
- (142) *“Kawan-an gole”, engg-on.*
 climb-1SG CONJ say-3SG.M
 ‘ “Because I climb”, he said.’
- (143) *Ongga-n-e, kedo ap kawen-en.*
 say-SS-3SG.M then tree climb-3SG.M
 ‘Said it and then he climbed the tree.’
- (144) *Kaweno-n-e, kaweno-n-e, kaweno-n-e, wen-e angga.*
 climb-SS-3SG.M climb-SS-3SG.M climb-SS-3SG.M go-SM there
 ‘He climbed, and climbed, and climbed, until there.’
- (145) *Angga nangge-n-e,*
 there arrive-SS-3SG.M
 ‘He arrived there and ...’

- (146) *kedo ani kededan-on=gi:*
then down ask-3SG.M=EMPH
'then he asked down there.'
- (147) “*Oni, kup=ko wene kede al-ep?*”,
older.sister 2SG.F=PTC where where stand-2SG
“Sister, where do you stand?”
- (148) *engg-on=ga “Aeh”*
say-3SG.M=PTC INTJ
'He said it and (she answered:) “Oh!” ’
- (149) “*Ne daman eya al-in.*”
1SG younger.brother here stand-1SG
“My brother, here I stand.”
- (150) “*Aih, kan-e eya (a)dep kel-e!*”
INTJ take:SG.O-SM here like become-2SG.IMP
“Oh, you come a little bit (close) here!”
- (151) *Engg-e kolem nekwa-n-e wen-e amunon nan-e*
say-SM MOD prepare-SS-3SG.M go-SM nest take:BIG.O-SM
kal-an-on=go wudo kolem
throw:SG.O-IRR-3SG.M=PTC into MOD
w-∅-an-on yeman oya.
3SG.F.O-hit-IRR-3SG.M for there
'He said it and arranged exactly, so that when he drops the nest, it must hit her.'
- (152) *Wen-e oya=bet, “ko eya al-in iyen”, engg-un.*
go-SM there=OBL PTC here stand-1SG here.is say-3SG.F
'She went there and said, “Alright, here is where I stand.” ’
- (153) “*Eyuk, odep kole okun-e alebel-e!*”
yes CONJ CONJ like.that-SM stand-2SG.IMP
“Yes, if so please stand there!”
- (154) “*Amun=ko wan-e kal-an-e kam-an.*”
nest=PTC pick:SG.O-SM throw:SG.O-IRR-SM do-1SG
“I want to pick and drop the nest.”

- (155) *“Okun-e badop=mo alebel-e*
 like.that-SM attentive=ADV stand:SG.S-SM
bel-e”, *engg-on=go okun-e*
 AUX.CONT-2SG.IMP say-3SG.M=PTC like.that-SM
alo-d-un=go,
 stand-DUR-3SG.F=PTC
 ‘ “You keep standing there well”, he said and when she was stand-
 ing there,’
- (156) *amun kenambun ogo wan-e*
 nest strong DEM pick:SG.O-SM
kal-on=gi.
 throw:SG.O-3SG.M=EMPH
 ‘he dropped the huge package.’
- (157) *Amun wa-en oye kaduk ogo, wan-e*
 nest pick:SG.O-3SG.M DEM.POSS person DEM pick:SG.O-SM
kalo-n-e=go,
 throw:SG.O-SS-3SG.M=PTC
 ‘He dropped the nest that he made and ...’
- (158) *kido wen-en=go wen-e*,
 down go-3SG.M=PTC go-SM
 ‘and it fell down and ...’
- (159) *anyan eya kenambun.*
 younger.sister here strong
 ‘(hit his) sister hardly.’
- (160) *Anyan ye kat=bet okun-e bomo-n-e*
 younger.sister 3SG.M skin=OBL like.that-SM break.out-SS-3SG
womko taliyik=a
 kind.of.thorns kind.of.thorns=LNK
 ‘It broke at (his) sister’s body and Womko and Taliyik thorns inside
 and ...’
- (161) *medep=an, mong=a tap ogo belewa-en yeman*
 what=COP bee=LNK bad DEM make.efforts-3SG.M for
odo kumun yu ya mo.
 DEM all 3SG.F at just

‘what else?, the bees and all the bad things he loaded (fell) exactly on her.’

- (162) *Wenwai wene-komb-on.*
roughly 3SG.F.O-hit-3SG.M
‘He hit her roughly.’
- (163) *Wene-komb-on=e,*
3SG.F-hit-3SG.M=DS.SEQ
‘It hit her and then ...’
- (164) *ye=go kawut kedo ong yamit*
3SG.M=PTC directly out tongue stick.out
omb-on=gi.
stick.out-3SG.M=EMPH
‘he stucked out (his) tongue.’
- (165) *Ong yamit omb-on=go,*
tongue stick.out stick.out-3SG.M=PTC
‘He stucked out (his) tongue and ...’
- (166) *wot=ko men-e tin kul-un=go kawut*
moon=PTC come-SM near become-3SG.F=PTC directly
kedo.kok-e wot wot yan-o-den.
enter-SM moon moon climb.onto-3SG.M-PFV
‘the moon came closer so he got in to the moon.’
- (167) *Ambikin,ambutambut=ko kedon-e ogo*
land cloud cloud=PTC start-SM DEM
yan-o-den odo kedo kawut wot
climb.onto-3SG.M-PFV DEM then directly moon
kol-o-den.
become-3SG.M-PFV
‘The land, the sky, the sky, so he got onto it and he became the moon soon.’
- (168) *Wot kol-o-den=go ti-ip.*
moon become-3SG.M-PFV=PTC stay-2/3PL
‘He became the moon while they(?) stayed.’

- (169) *Ombet ta, yu (o)do amun ombet wio-komb-e*
 OBL.DEM and 3SG.F DEM nest OBL.DEM 3SG.F.O-hit-SM
wan-e ta, “kede adep=an, kede adep=an”, engg-e
 finish-SM and why why=COP why why=COP say-SM
kelega-un=ga nowan.
 look-3SG.F=PTC NEG
 ‘After that, after the nest hit her and she thouth “Why is this? Why is this?”, she looked (around) but (there was) nothing.’
- (170) *Yu taman odo kadek kadek.*
 3SG.F younger.brother DEM quiet quiet
 ‘Her brother was quiet.’
- (171) *Kadek kadek=an.*
 quiet quiet=COP
 ‘It was quiet.’
- (172) *Kido min-i nowan.*
 down come-INF NEG
 ‘(He) did not come down.’
- (173) *“Th..., odep kole ombet ta wot aip*
 INTJ CONJ CONJ OBL.DEM and moon there.is
kel-on.”
 become-3SG.M
 “Oh... if so, that’s where the moon came from.”
- (174) *“Wot kenambun kel-on=go, woh ne*
 moon strong become-3SG.M=PTC INTJ 1SG
daman=ko wot kol-on iyen adep=e”,
 younger.brother=PTC moon become-3SG.M that.is like=Q
engg-un.
 say-3SG.F
 ‘ “The moon has become strong (more bright) so, oh maybe my brother has become the moon?”, she said.’
- (175) *Engga-n-u, kedo aleng yanop, kolo ambip wun-u-den.*
 say-SS-3SG.F then crying there.is back home go-3SG.F-PFV
 ‘She said so and she went back home crying.’

- (176) *Aleng yanop kedo boma-n-u wen-e ambip adi nangg-e,*
 crying there.is out walk-SS-3SG.F go-SM house up arrive-SM
 ‘She went away crying and arrived at home and (said:)’
- (177) “*Moyon, ne daman=an*”, *engg-e olok*
 INTJ 1SG younger.brother=COP say-SM longing
wa-ngga-d-un.
 LV-2/3SG.O-DUR-3SG.F
 ‘ “Oh, it is my younger brother” she said and she was missing him.’
- (178) *Engg-e tio-d-un=got yanam.*
 say-SM stay-DUR-3SG.F and.then.DS true
 ‘She said it and stayed and then yes, true.’
- (179) *Angg-un=e nak-on ombet, yu kaduk*
 sleep-3SG.F=DS.SEQ day.break-3SG.M OBL.DEM 3SG.F man
Awin ambip won-o-den odo mon-on.
 PN village go-3SG.M-PFV DEM come-3SG.M
 ‘She slept and the next morning (next day) her husband who had
 gone to Awin region came back.’
- (180) *Mon-on=go, men-e keleg-e keleg-e tem-on.*
 come-3SG.M=PTC come-SM look-SM look-SM see-3SG.M
 ‘He came and (he) looked around.’
- (181) *Keleg-e kem-on=ga, nowan.*
 look-SM do-3SG.M=PTC NEG
 ‘He looked around but (there was) nobody.’
- (182) *Wom=to yu=bet mo=on.*
 inside=PTC 3SG.F=OBL only=COP
 ‘She was alone inside (the house).’
- (183) “*Ma baat ode?*”
 but brother.in.law where
 ‘But where is (my) brother-in-law?’
- (184) “*Ah, baat odo=yo,*”
 INTJ brother.in.law=DEM=QUOT
 ‘Oh, that brother-in-law,’

- (185) “*ekune (a)dep=an=o,*”
like.this like=COP=QUOT
“it is like this ...”
- (186) “*Eh, om=ko, baat Awin ambip,*”
HES sago=PTC brother.in.law PN village
“Uhm, the sago, brother-in-law (went to) the Awin region ...”
- (187) “*won-o-den oyip mon-ok=get=a om=ko*
go-3SG.M-PFV also come-3SG.IMP and.then.SS=LNK
an-an-up=an=o, *engga-n-u.*
sago=PTC eat-IRR-1PL=COP=QUOT say-SS-3SG.F
‘ “he went so we would led him come back first before we eat the
sago”, she said and ...’
- (188) “*Engga-in=go ton=a, o(go) b-e men-e bat*
say-1PL=PTC fish=LNK DEM take:PL.O-SM come-SM hunt
boma-n-e b-e men-e kem-en odo,”
walk-SS-3SG.M take:PL.O-SM come-SM do-3SG.M DEM
“I said like that and the fish and other things, that he usually hunt
and caught, ...”
- (189) “*wen-e om alep b-e mengga-mb-e*
go-SM sago slime take:PL.O-SM cook.on.leaf.oven-PL-SM
kemo-d-on=e,”
do-DUR-3SG.M=DS.SEQ
“he came and he was cooking it with the pulp of sago and ...”
- (190) “*wen-e ekun-i (a)dep kol-o-den=o, kole,*”
go-SM like.this-INF like become-3SG.M-PFV=QUOT CONJ
“until it became like this, so ...”
- (191) “*eh okun-o-den=o, kelo-n-e wen-e*
HES like.that-3SG.M-PFV=QUOT become-SS-3SG.M go-SM
nemengga-d-on=e, baat=a,”
deceive-1SG.EXP-3SG.M=DS.SEQ brother.in.law=LNK
“... uhm, he did like that, he did something to deceive me and the
brother-in-law ...”

- (192) *“bonyik taliyik kumun mong*
 kind.of.thorns kind.of.thorns all bee
kel-an-on=a kumun amun,”
 become-IRR-3SG.M=LNK all nest
 “all kinds of thorns, all bees and other dangerous insects (were in)
 the nest ...”
- (193) *“Tokmom on amun, tokmom tokbut tokbut kemo-n-e.”*
 fake bird nest fake lie lie LV-SS-3SG.M
 “He pretended it was a bird’s nest. He pretended and lied about it
 and ...”
- (194) *“wen-e ap, ap yinim yimingga-n-e, ap kobi*
 go-SM tree tree on hang:SG.O-SS-3SG.M tree on
yimingga-n-e,”
 hang-SS-3SG.M
 “(he) went to a tree, hung it at a tree, he hung it on a tree and ...”
- (195) *“kan-e kal-on=go wudo*
 take:SG.O-SM throw:SG.O-3SG.M=PTC into
ni-∅-en=o,”
 1SG.O-hit-3SG.M=QUOT
 ‘ “he dropped it and it fell then hit me,” (she said)’
- (196) *“kele-n-e ye odo wane kedo,”*
 become-SS-3SG.M 3SG.M DEM fly-SM out
 “he did (all that) and then he flew out, ...”
- (197) *“wot kel-o-den=o,” engg-un=gi.*
 moon become-3SG.M-PFV=QUOT say-3SG.F=EMPH
 ‘ “he has become the moon”, she said.’
- (198) *Engge-n-u, kedo yu kaduk okun-e olal-e*
 say-SS-3SG.M then 3SG.F man like.that-SM talk-SM
komb-un.
 put:SG.O-3SG.F
 ‘She said it and she talked to her husband like that.’

- (199) *Yu kaduk odo kedo aleng kembo-n-e ye*
 3SG.F man DEM then crying LV-SS-3SG.M 3SG.M
baat yeman.
 brother.in.law for
 ‘And her husband cried for his brother-in-law.’
- (200) *Ye baat yeman aleng kembo-n-e otkenep.*
 3SG.M brother.in.law for crying LV-SS-3SG.M emotion
 ‘He cried for his brother-in-law and (he was full with) emotion.’
- (201) *Tamat, tamat kan-e teb-o-den odo,*
 stone.adze stone.adze take:SG.O-SM move-3SG.M-PFV DEM
 ‘He picked up a stone adze,’
- (202) *kedo wio-komb-o-den.*
 then 3SG.F.O-kill-3SG.M-PFV
 ‘and then he killed her.’
- (203) *wio-kombe-n-e,*
 3SG.F.O-kill-SS-3SG.M
 ‘He killed her and ...’
- (204) *wio-kombe-n-e, womb-e alop,*
 3SG.F.O-kill-SS-3SG.M cut:SG.O-SM two
 ‘he killed her and cut her in two ...’
- (205) *womb-e alop kol-o-den.*
 cut:SG.O-SM two become-3SG.M-PFV
 ‘he cut her in two (halves).’
- (206) *Jadi,*
 so(BI)
 ‘So ...’
- (207) *Okun-e otbop komb-un komb-on odo:*
 like.that language put:SG.O-3SG.F put:SG.O-3SG.M DEM
 ‘The story goes on like that.’

- (208) *Biyononggo kel-e, kowong kel-e,*
 kind.of.caterpillar become-SM spider become-SM
kol-o-den.
 become-3SG.M-PFV
 ‘They became a caterpillar and a spider.’
- (209) *Kole, kowong odo, otbop, eh..., ambang-a ye otbop*
 CONJ spider DEM language HES ancestor-PL 3SG.M language
odo kowong odo uyen.
 DEM spider DEM that.is
 ‘So, the spider, in the language of ancestor, that is the spider.’
- (210) *Biyononggo (o)do wane kedo, eh..., ambikin*
 kind.of.caterpillar DEM ? then HES earth
kul-u-den.
 become-3SG.F-PFV
 ‘The caterpillar went into the soil.’²
- (211) *Kole kowong odo, kowong am ogo onongm-e kum-un odo,*
 CONJ spider DEM spider house DEM make-SM do-3SG DEM

 ‘So as for the spider, when it makes its nest ...’
- (212) *kuduyap=a, on amun, on amun kuduyap onongm-i=mo*
 shadow=LNK bird nest bird nest shadow make-INF=always
kum-un.
 do-3SG.F
 ‘(it is) an imitation, she used to make a fake bird’s nest.’
- (213) *Ma kowong odo, kowong odo wane ambikin dem*
 but spider DEM spider DEM ? earth in
kul-u-den gole,
 become-3SG.F-PFV CONJ
 ‘But the spider, since the spider went into the soil ...’³

²The idiomatic expression *wane keli* means ‘move into’. *Wane* alone is not glossed for a singular meaning here.

³The idiomatic expression *wane keli* means ‘move into’. *Wane* alone is not glossed for a singular meaning here.

- (214) *wot a(i)p kedo man-a engg-e kem-an-un odo,*
 moon there.is out come-1SG.IMP say-SM do-IRR-3SG.F DEM
 ‘when the moon wants to come out ...’
- (215) *opn-on opn-on wot a(i)p*
 become.evening-3SG.M become.evening-3SG.M moon there.is
kedo min-i yeman odo,
 out come-INF for DEM
 ‘in the evening, in the evening, when the moon is about to come
 out,’
- (216) *kedon-u “ooloolok”,*
 start.to-3SG.F [SOUND]
 ‘When she starts (with) “Oooloolok” ...’
- (217) *kem-e bel-e kem-un edo,*
 do-SM AUX.CONT-SM do-3SG.F DEM.this
 ‘when she keeps doing this,’
- (218) *wot kedo min-i yeman=an.*
 moon out come-INF for=COP
 ‘it (means that) the moon is about to come out.’
- (219) *Ma kaduk, yu kaduk odo tamat kan-e kedo,*
 but man 3SG.F man DEM stone.adze take:SG.O-SM then
 ‘But the man, her husband took a stone axe and then...’
- (220) *tama, tama ban-e kedo wom won-o-den.*
 termite.hill termite.hill open-SM then inside go-3SG.F-PFV
 ‘the termite hill, he cut the termite hill and went inside.’
- (221) *Kele-n-e,*
 become-SS-3SG.M
 ‘He became ...’
- (222) *on, on batotenek.*
 bird bird kind.of.bird
 ‘a bird, a Kookaburra bird.’
- (223) *On batotenek kol-o-den kole,*
 bird kind.of.bird become-3SG.M-PFV CONJ

‘Since he became the kookaburra bird ...’

- (224) *wot (a)ip kedo min-i yeman=ko ye baat*
 moon there.is out come-INF for=PTC 3SG.M brother.in.law
odo kedo yongg-i kem-en.
 DEM out call:PL-INF do-3SG.M

‘when the moon comes out, his brother-in-law (i.e. the bird) usually calls.’

- (225) “*Baat totenek” engg-i=mo kem-en odo,*
 brother.in.law “totenek” say-INF=always do-3SG.M DEM
baat men-en wen-en.
 brother.in.law come-3SG.M go-3SG.M

‘He always says “Baat totenek”, that brother-in-law comes and goes.’

- (226) *Engg-i=mo kem-en.*
 say-INF=always do-3SG.M

‘He always said that.’

- (227) *Odo okun-e.*
 DEM like.that-SM

‘That’s it.’

- (228) *Odo wot, wot (a)ip kel-o-den ye otbop.*
 DEM moon moon there.is become-3SG.M-PFV 3SG.M language

‘That is the story (about) how the moon came into being.’

- (229) *Kayabak modenen ye otbop=ko oyen engga-ip.*
 big.man ancestors 3SG.M language=PTC that.is say-2/3PL

‘It was a story of the ancestors, they say.’

- (230) *Okun-e adep=an.*
 like.that-SM like=COP

‘It was like that.’

- (231) *Kole ombet mo=n.*
 CONJ OBL.DEM only=COP

‘So that is it.’

B.2 Catching a rat

Author: Yakobus Wonam

Recorded: August 7, 2019

The recording is archived in ELAR⁴ with the ID muyu039.

- (1) *Edo, ne, ena, ambo Yamuk, anggotmi kumun.*
 DEM 1SG mother older.brother PN friend all
 ‘This is (about) me, mother, Yamuk and all our friends.’
- (2) *Okun-e Wolok kaba weno-n-up=a, wen-e kim*
 like.that-SM PN estuary go-SS-1PL=LNK go-SM road
oya=bet.
 there=OBL
 ‘We went to the estuary of the Wolok river and went on the road.’
- (3) *Ne ena=bet tinggan benem tem-un=go wen-e*
 1SG mother=OBL mouse kind.of.mouse see-3SG.F=PTC go-SM
ningg-e a-∅-up yeman, olal-an-e kem-an.
 grab-SM 3SG.M.O-kill-1PL for talk-IRR-SM do-1SG
 ‘I want to tell about when my mother saw a big rat then we caught and killed it.’
- (4) *Ambip kampung embet nup ambuni ban-e*
 house village(BI) OBL.DEM.this 1PL group prepare-SM
wal-up.
 prepare-1PL
 ‘We prepared our group from (our) house in the village.’⁵
- (5) *Ta ena Kenmo ye ambuni ban-e*
 and mother PN 3SG.M group prepare-SM
wal-un=e, okun-e Wolok kaba wun-up-ten.
 prepare-3SG.F=DS.SEQ like.that-SM PN estuary go-1PL-PFV

⁴The archive is accessible via <https://www.elararchive.org/dk0601/>

⁵The idiomatic expression *bane wali* means ‘to prepare so. for sth.’. Although the meaning is idiomatic for the whole construction, we gloss each lexical item as ‘prepare’ here.

‘And the children of mama Kenmo, she prepared them and we all went to Wolok river estuary.’

- (6) *Wen-e Ninikaba tol-e, wen-e okun-e boma-up=ko,*
go-SM PN step.on-SM go-SM like.that-SM walk-1PL=PTC

‘We went and passed Ninikaba and from there we walked on and ...’

- (7) *wen-e wen-e Wolok kaba nangg-i yeman oya=bet.*
go-SM go-SM PN estuary arrive-INF for there=OBL

‘went on until (we) were about to arrive at the estuary of the Wolok river.’

- (8) *Ena=bet kumungg-un, “Emba kip=ko okun-e kim*
mother=OBL tell-3SG.F father.son 2PL=PTC like.that-SM road
mo wene-n-e bil-i golo,”
only go-EP-SM AUX.CONT-INF ?

‘Mom said, “Son, you keep going along the road ...” ’

- (9) *“Ne=go wen-e tinggan benem amun wiyam bon*
1SG=PTC go-SM mouse kind.of.mouse nest usual.place place
eya (a)ip.”
here there.is

‘I go to where the Benem rat has its usual place.’

- (10) *“Tem-a=get=o”, engg-un.*
see-1SG.IMP=and.then.SS=QUOT say-3SG.F

‘ “I want to check it first”, she said.’

- (11) *Engg-un=go ne, Yamuk, ambo Yamuk,*
say-3SG.F=PTC 1SG PN older.brother PN

‘She said it and I, Yamuk, brother Yamuk ...’

- (12) *ta anggotmi Abraham, Agus, Galus,*
and friend PN PN PN

‘and (other) friends Abraham, Agus, Galus ...’

- (13) *Galus odo ye belon oya gole, okun-e wen-en*
PN DEM 3SG.M small there CONJ like.that-SM go-N
wun-up
go-1PL

‘Galus was a little boy then, so we started to walk.’

- (14) *Weno-d-up=ko yanam=an.*
 go-DUR-1PL=PTC true=COP
 ‘We were walking and it’s true.’
- (15) *Ena=bet ban-un.*
 mother=OBL call.once-3SG.F
 ‘Mother called.’
- (16) *Ne aninggo kumungge-n-u bamba-d-un=go,*
 1SG name tell-SS-3SG.F call.several.times-DUR-3SG.F=PTC
 ‘She mentioned my name and she was calling and ...’
- (17) “*Medep=an=go?*”, *engg-e kadap kine kamon-an=go,*
 what=COP=PTC say-SM answer to.answer to.answer-1SG=PTC
 “*Min-i golo=yo!*”
 come-INF back=QUOT
 ‘ “What’s the matter?”, I said to reply (her call), then she said,
 “Come back (here)!” ’⁶
- (18) “*Tinggalan benem a-∅-em=o*”, *engg-un.*
 mouse kind.of.rat 3SG.M.O-kill-1PL.IMP=QUOT say-3SG.F
 ‘ “Let us kill a benem rat”, she said.’
- (19) *Engg-un=go ne ambo Yamuk yom kaban=mo*
 say-3SG.F=PTC 1SG older.brother PN COM running=ADV
boma-n-up.
 walk-SS-1PL
 ‘She said it and then brother Yamuk and I were running (to her).’
- (20) *Wen-e wen-e, ena tinggalan benem nin-e*
 go-SM go-SM mother mouse kind.of.rat hold:SG.O-SM
a-∅-a engg-e kemo-d-un oya=go
 3SG.M.O-kill-1SG.IMP say-SM do-DUR-3SG.F there=PTC
wen-e bulu-ngg-up-ten.
 go-SM meet-2/3SG:O-1PL-PFV
 ‘(We) went to the (place) where mother was trying to hold and kill
 the rat, and we met her (there).’

⁶The idiomatic expression *kine kamoni* means ‘to answer’. Each of the elements is glossed here with the meaning of the whole. In contrast, *kadap* ‘answer’ is a noun.

- (21) *Wen-e bulu-ngg-e-n-up, tem-up=kot*
 go-SM meet-2/3SG.O-EP-SS-1PL see-1PL=and.then.DS
yanam=an.
 true=COP
 ‘We went and met her and then we saw that, Oh! it was true.’
- (22) *Tinggal benem odo ap ulukap tem=bet=a amun*
 mouse kind.of.rat DEM tree aerial.root in=OBL=LNK nest
wa-gol-e=t ti-en.
 make.nest-SS.SEQ-3SG.M=and.then.SS stay-3SG.M
 ‘The rat made a nest in a big aerial root and then stayed.’
- (23) *Okun-e ti-en=go, ena edo tinggi ap*
 like.that-SM stay-3SG.M=PTC mother DEM.this hand tree
ulukap ketma=bet yil-e mene,
 aerial.root side=OBL reach.out-SM come-SM
 ‘It stayed like that, so mother put her hand in one side of the big aerial root and ...’
- (24) *ap ulukap ketma=bet yil-e men-e.*
 tree aerial.root side=OBL reach.out-SM come-SM
 ‘then she put in her (other) hand from the (other) side of big areal root and ...’
- (25) *Okun-e ningg-e a-∅-a engg-e*
 like.that-SM grab:SG.O-SM 3SG.M.O-kill-1SG.IMP say-SM
kem-un=go welen kel-on=got, nup
 do-3SG.F=PTC difficult become-3SG.M=and.then.DS 1PL
bamba-un.
 call.several.times-3SG.F
 ‘She wanted to grab and kill it but it was hard, so she kept calling us.’
- (26) *Wen-e nangg-up=ko, ena=bet kumungg-un.*
 go-SM arrive-1PL=PTC mother=OBL tell-3SG.F
 ‘When we arrived, mother said:’

- (27) *“Emba, kep odo tinggi ketma oya, wangga=bet ap*
 father.son 2SG.M DEM hand side there there=OBL tree
ulukap ketma wangga=bet yil-e men-e,”
 aerial.root side there=OBL reach.out-SM come-2SG.IMP
 “You son, with your hand, you put in your hand from one side of
 the big areal root ...”
- (28) *ta Yamuk odo ap ulukap ketma wangga=bet yil-e*
 and PN DEM tree aerial.root side there=OBL reach.out-SM
mon-ok=o, engg-un.
 come-3SG.M.IMP=QUOT say-3SG.F
 ‘ “and Yamuk must put in his hand from the other side of the big
 areal root”, she said.’
- (29) *Engg-un=e yanam=an=a, ne (e)do ap*
 say-3SG.F=DS.SEQ true=COP=LNK 1SG DEM.this tree
ulukap ketma wangga=bet.
 aerial.root side there=OBL
 ‘She said it, and true, I (came) from the side of the big areal root.’
- (30) *Tinggi yil-e wan-an=go wen-e ena ye tinggi*
 hand reach.out-SM go-1SG=PTC go-SM mother 3SG.M hand
anggo.
 thumb
 ‘I put my hand into it and reached mother’s thumb.’
- (31) *Ena ye tinggi anggo nine-gol-i,*
 mother 3SG.M hand thumb hold:SG.O-SS.SEQ-1SG
 ‘I held mother’s thumb and then ...’
- (32) *nin-e omb-a engg-e kemo-d-in.*
 hold:SG-SM break:SG.O-1SG.IMP say-SM do-DUR-1SG
 ‘I was trying to break it.’
- (33) *Ta ena yu tinggi odo nin-e bik-e*
 and mother 3SG.F hand DEM hold:SG.O-SM pull.out-SM
kan-a=ye engg-un.
 pull.out-1SG.IMP=QUOT say-3SG.F

‘And mother wanted to pull out her hand.’⁷

- (34) *Nin-e bik-e kan-a engg-e*
 hold:SG.O-SM pull.out-SM take:SG.O-1SG.IMP say-SM
belewa-d-un,
 make.effort-DUR-3SG.F

‘Mother was trying to pull out her hand.’

- (35) *Ne=bet odo kedep=a tinggan benem mudu.kono*
 1SG=OBL DEM maybe=LNK mouse kind.of.rat snout
nin-a-den engg-e,
 hold:SG.O-1SG-PFV say-SM

‘I supposed I was holding the snout of the rat and ...’

- (36) *ena ye tinggi anggo (o)do nin-e*
 mother 3SG.M hand thumb DEM hold:SG.O-SM
omb-a engg-e kemo-d-in.
 break:SG.O-1SG.IMP say-SM do-DUR-1SG

‘I held mother’s thumb and was trying to break it.’

- (37) *Ta ena (o)do yu tinggi kan-a=ye*
 and mother DEM 3SG.F hand take:SG.O-1SG.IMP=QUOT
engg-e kemo-d-un.
 say-SM do-DUR-3SG.F

‘And mother was trying to take (i.e. pull) her hand (out).’

- (38) *Okun-a engg-e kemo-d-un=go kedep=a*
 like.that-1SG.IMP say-SM do-DUR-3SG.F=PTC maybe=LNK
tinggan benem=bet=a nukmo kemo-d-en
 mouse kind.of.rat=OBL=LNK throbbing do-DUR-3SG.M
engg-e, ena ye tinggi odo
 say-SM mother 3SG.M hand DEM

‘when she was trying to do that, I supposed the rat was moving, and mother’s finger ...’

⁷The idiomatic expression *bike kani* means ‘pull out (sg.obj.)’. Since *bike* is not used, each element is glossed with the whole meaning.

- (39) *ena ye tinggi anggo (o)do kenambun okune-n-i,*
 mother 3SG.M hand thumb DEM strong like.that-SS-1SG
nine-n-i, omb-a=ye engg-e
 hold:SG.O-SS-1SG break:SG.O-1SG.IMP=QUOT say-SM
belewa-d-in=go,
 make.effort-DUR-1SG=PTC
 ‘I held mother’s thumb strongly and tried to break it and ...’
- (40) *Ena (o)do yu tinggi bik-e kan-a engg-e*
 mother DEM 3SG.F hand pull.out-SM pull.out-1SG.IMP say-SM
belewa-un=go welen kol-un=go
 make.effort-3SG.F=PTC difficult become-3SG.F=PTC
kumungg-un:
 tell-3SG.F
 ‘Mother (still) tried to pull her hand out but it became difficult, so she said.’
- (41) *“Tana wangga, tana ne tinggi wangga kanema=bet*
 child there child 1SG hand there who=OBL
nin-e alabe-d-en=ga”, engg-un.
 hold:SG.O-SM stand-DUR-3SG.M=Q say-3SG.F
 ‘ “Children (you) there, my hand is there, who is holding on to it?”, she said.’
- (42) *Engg-un=go, ne=bet kumungg-an:*
 say-3SG.F=PTC 1SG=OBL tell-1SG
 ‘She said it and I answered.’
- (43) *“Ena, ne=bet=an=non=e”, engg-an.*
 mother 1SG=OBL=COP=MAYBE=QUOT say-1SG
 ‘“Mother, maybe it is me”, I said.’
- (44) *Engg-an=go kededan-un:*
 say-1SG=PTC ask.once-3SG.F
 ‘I said that, then she asked.’
- (45) *“Wangga okun-e ma nin-e tem-e”,*
 there like.that-SM DIR hold:SG.O-SM see-2SG.IMP
engg-un.
 say-3SG.F

‘ “You try to hold it again”, she said.’

- (46) *Nin-an, ta tinggi kedep=a tinggan mudu.kono=n*
 hold:SG.O-1SG and hand maybe=LNK mouse snout=COP
engg-e=ya nin-e omb-a engg-e
 say-SM=LNK hold:SG.O-SM break:SG.O-1SG.IMP say-SM
belewa-d-in odo.
 make.efforts-DUR-1SG DEM
 ‘I held it, I supposed the finger was the snout of the rat and I tried
 to break it.’
- (47) *“Emba, odo ne tinggi nin-e omb-a*
 father.son DEM 1SG hand hold:SG.O-SM break:SG.O-1SG.IMP
engg-e belewa-d-ep, ah”, engga-un, “Oh!”.
 say-SM make.effort-DUR-2SG INTJ say-3SG.F INTJ
 ‘ “Oh son, you are trying to break my hand”, she said, “ouch!”.’
- (48) *Okun-up-ten.*
 like.that-1PL-PFV
 ‘We did like that.’

Appendix C

Wordlist Muyu-English

A a

- a** (N) • short for “ap” (tree)
aani (V) • cut (sg obj)
aanggi (V) • cut (pl obj)
abitmi (V) • squeeze
ada (N) • party, celebration
adambon (N) • party place, pig feast
adabam (N) • clothespin wood
adaben (Adj) • just for a moment
adak-adak (N) • kind of grasshopper
adan (N) • female parent (animal), mother
adanggi (V) • lick
ade (N) • parents-in-law
adek (N) • namesake
adek-adek (Adj) • cursed
aden (N) • mosquito
adeng (N) • smoke
adep (Adj) • almost
adep (PP) • like, similar
adep (N) • suffix to make adverbs
adili (V) • cut down trees to make gardens
adilim (N) • itchy leaves
adiman (N) • owner, (someone) who is concerned
adimawang (N) • moss
adimbon (N) • footbridge, bridge
adimkop (N) • rotten wood
adin (Adj) • first, first
adini (N) • the event of a traditional marriage
adini (N) • taboo
adi (N) • dad
adit (N) • sharp object
ado (N) • frog, frog

- adon** (N) • sun
adon kop (N) • noon
adon kudu (N) • watch
adotbok (N) • stick
adotki (N) • son-in-law
adumbeng (N) • peg
adutkombi (V) • prohibit
adut (N) • prohibition
adut wai (V) • forbid
adutmanim (Adj) • wild, evil
adutbop (N) • rotten wood
aen (N) • left
ai (V) • hit someone/something (masculine), kill
aip (PTC) • there is, also
ak (N) • spleen
ak (N) • kind of bird
akai (V) • fill, pile up
akat (N) • tree bark
akebenggi (V) • make noise
aket (N) • grilled food
aket nenggi (V) • grilling food on coals
akok (N) • firewood
akonombon (N) • forest
alabi (V) • to wait, to be patient
alabeyi (V) • withhold sth. as a punishment
alak-alak (N) • edge, edge
alalok (Adj) • wide, not tight
alalugop (N) • song
alam (N) • songs sung when cooking cassowary, pork, etc
alambon (N) • laughing
alambon kemi (V) • laugh
alangbodim (N) • ravine
alebili (V) • stand, survive(!) (sg subj)
alebele-alebele wini (V) • to take a walk
alek (N) • cockatoo bird
alendili (V) • stand (pl subject)
aleng (N) • weeping
aleng gemi (V) • cry
aleng adigot (N) • wailing, weeping
alengmun (N) • crybaby
alep (N) • slime
ali kuduyap (N) • rainbow
ali tam (N) • black and white short tailed snake
alidan (N) • parents
aligi (V) • straighten
alik (N) • the name of the female cuscus that is brown
alikmi (V) • to apply sth.
alim (N) • war clothing (made of rattan)
alim (N) • Banyan tree
aliman (N) • ridge (mountain)
alini (V) • sit (pl. subj), stay (pl

- sub), live (pl sub)
alinem (V) • Let's stay!
alini kono (Adj) • of any kind, without apparent reason
alinok (V) • let be (something/plural object), leave it (something/plural object)
ali (V) • to sweep/wipe
ali (N) • dragon, anaconda
alom (N) • friend
alok (ton) (N) • kind of fish, flat and scaled
alop (Num) • number 2
alop-alop (Adj) • double
alopkono (N) • yellow
alopkono adept (Adj) • yellowish
alopmim (Num) • number 3
alopne tani (V) • to be tainted, to be broken down
alopni (V) • to turn yellow, to turn pale
aloptani (V) • turn yellow
alumen kewadep (N) • decoration, full of decoration
alumi (V) • to plant, sow many seeds (pl. obj.)
alumi (V) • chop (for sago)
alumi (V) • decorate, decorate
alun (N) • praise
alun waem (V) • Let's praise!
- alun wai** (V) • admire, praise, forgive
alung (N) • crowbar
alup (N) • vegetables
Aluptem (N) • Genemon tree
alut-alut (Adj) • itchy
am mini (V) • to rain
am yimik (N) • rainy season
amaen (Adv) • another time
amainon (Adv) • another time, next opportunity
amala (N) • ladder
amalopni (V) • become empty and infertile
amangga (N) • spirit, afterlife
amanggi (V) • make a mistake by doing X, create a problem by doing X
amang (N) • a door mounted on the floor or in the attic
amang (N) • prison
amang (N) • cage, bird cage
ambalam (N) • backyard
ambamai (V) • play
ambamkalunong ai (V) • to play
amban alop (N) • polygamy, two wives
ambanap (Adj) • a little, not so
ambanap (Adj) • forced, do something with difficulty

- ambang** (N) • grandfather
ambanga (N) • grandparents
ambanggi (N) • work
ambanggi (V) • work, do
amban (N) • wife
ambatkono (N) • breast
ambat (N) • source, centre
ambelet bai (V) • sell / sell some-thing (names, deeds, etc.) to some-one to embarrass him., show off
ambemkayok (N) • maggot, larva
ambeni (V) • swim
ambeni (V) • to have fruits
ambenggi (V) • to bear fruits
ambenmoni (V) • to curse
ambi amban (N) • houseband-wife
ambikin (N) • land, ground
ambikin kuduyap (N) • globe
ambilimni (V) • to curse
ambilimni (V) • to be silent, to be quiet
ambinggi (V) • clean up something by prying, scrape away
ambiptan (N) • housefather, the owner, landlord
ambip (N) • house
ambip wut (N) • house without oc-cupants
ambip (N) • village, area
ambiwulut (N) • branch
- ambi** (N) • husband
ambi (N) • male (animal)
ambo (N) • older brother
ambo (N) • song
ambo kayoni (V) • lift, raise
ambok (N) • base beam
ambokok (N) • bald head
ambokok ali (V) • to become bald
ambokono (N) • bud
ambokop (N) • fontanel
ambom (N) • turtle
ambombai (V) • show, to point (the direction)
ambomnak (N) • tadpole
ambon wali (V) • make a window or door in a building, perforate, hollow out
ambonggop (N) • pillow
ambongni (V) • to die (several an-imals), to die (several people) (pl. subj)
amboni (V) • search
ambonkim (N) • door, window, hole
ambonwali (V) • search, find
ambot beleni (N) • headache, dizzi-ness
ambot (N) • substance, filling, essence
ambot (N) • kind of tree whose sap is white

- ambuk** (N) • mushroom
- ambulok** (N) • rib of a palm tree (nibung)
- ambuluni** (V) • collapse, fall down
- ambuluni** (V) • wash away
- ambuni** (N) • group, troop
- ambunop** (Adj) • small, short (persons)
- ambut** (N) • cloud, space/universe, sky
- ambut ambikin** (N) • world
- amekai** (V) • installing the roof of the house/building
- ameki** (V) • collapse
- amelegan** (V) • family
- amelet** (N) • family
- amenali** (V) • knock down
- amen-amen** (Adv) • forever
- amenon** (N) • branch, crossroads
- amenon tonop** (N) • fork
- amidak** (N) • floor
- amim** (N) • owl
- amimkono** (kb) • hell, God damn!
- amin ada** (N) • celebration
- aminggi** (V) • thicken
- aminggaen aminggi kono** (Adj) • state when something liquid dried and is now solid
- aminggi** (V) • freeze (blood)
- aminggi** (V) • make, produce (pl. obj) like bags, weave (pl obj)
- amini** (V) • to weave/plait a bag or something similar (sg. o.)
- amit** (N) • day
- ami** (N) • betel nut tree
- ami** (V) • cut (pl obj)
- amjali** (N) • morning
- amkabit** (N) • east
- amkayi** (N) • dry season
- amkibi** (N) • night
- amkilip** (N) • room dividing wall in the house
- amkiwali** (N) • morning
- amko** (N) • pig's sleeping place in a cave
- amkodeb bon** (N) • hearth, oven
- amkodep** (kb) • ashes
- amkombon** (N) • hill, mountain
- amkono** (N) • adult
- amkubuk** (N) • ground
- amkuntim** (N) • ladder
- amkutmon** (N) • ashes, dust
- amnang** (N) • cobwebs which are usually attached to the corner of an old house or building.
- annom** (N) • time of day (18 PM - sunrise)
- annom ni** (V) • become night
- amonggop** (Adj) • domesticated, domesticated

- amoni** (V) • spread, scatter
amoni (V) • put back
amop (Adj) • forbidden, harmful, forbidden
amop kayuluk (Adj) • very harmful
amot okbon (N) • market
amot (N) • full of fruit, full of fruit
amot (N) • dowry, treasure, wealth
amtalang (N) • shelf
amtam (N) • supply
amtam (Adj) • dry
amtamni (V) • become dry
amtanggi (V) • be full with
amtem (N) • hole
amteng (N) • part of the roof (underneath the shingles/iron sheets)
antimak (N) • lightning, lightning
amtit (N) • room, room
amtobon (N) • hut, cottage
amtolok (N) • upper part of an area or region
amtomi (V) • ruin, break
amun (N) • Nest
amunggun (N) • time of day (12-15 PM)
amunimbon (N) • old garden
amyili (N) • dry season
amyinim (N) • sunset
amyinim kim (N) • west
amyuk (N) • lower part of an area or region (clan, village etc)
am (N) • rain
am tenggelm (N) • light rain
an (N) • accompanying word which is usually placed at the end of each question or ownership sentence.
anali (V) • cut down a tree (sg. obj.), knock down a tree (sg. obj.)
anap-anap (N) • joke, joke
anbani (V) • hit so (masculine)
anbomi (V) • drive out a person or thing (masculine), expel a person or thing (masculine)
andale kani (V) • take away one's property (masculine)
andali (V) • expel so. (masculine), refuse so. (masculine)
anekok (N) • bird of paradise
anekombi (V) • kill someone/something (masculine), fall down (masculine), hit the ground (masculine)
anenggi (V) • to eat (several times), to eat many things (i1)
anep (Adv) • a little
ane kali (V) • to spread out
ane tani (V) • to spread out
anggaknaen (Adj) • weak, weak, not strong
anggaktum (N) • kind of caterpil-

lar, very big, giant

anggam kabat (N) • backstroke swimming

anggambot (N) • plants like ropes whose skin is black and hard

anggamnang (N) • small turtle

angganggi (V) • break, pick

anggayom (N) • in vain, futile

anggayom (N) • do not, not allowed

anggembili (V) • lying down, nap

anggembolok (N?) • leave it, let it

anggembolon (N) • lazy person, lazy person

anggen (V) • there is

anggen mo (Adv) • still many, these is only

anggendolok (V) • leave it (plural obj), let it (plural obj)

anggep (N) • scrotum

angget (N) • placenta

anggingmi (V) • deny

angginot kabamot (N) • complaint

angginot wai (V) • complain

anggi (V) • sleep

anggi (V) • break (pl obj)

anggobi (V) • forgive, squeeze

anggodik (N) • molar

anggokbi (V) • bend

anggokbi kono (Adj) • bent

anggoki (V) • free from

anggokono wai (N) • to coddle

anggongtem (Adj) • greedy, egoistic

anggot (N) • gecko

anggotmi (N) • friend, friend, relative

anggotmi (V) • to be friends with, to associate with

anggoyom (N) • cheek

anggo (Num) • number 5

anggo (N) • thumb

anggudom (N) • back (body part), back (body part)

anggumotkok (Adj) • queasy

anggun anggen (Adj) • creative

aniduk (N) • waste

anidukbon (N) • garbage dump

anikat (N) • illness

anikat ni (V) • I become sick.

anikok (Adj) • the pain that you feel when eating something dry that's being swallowed with force only

animan (N) • food

anin toki (V) • landslide

aninggo (N) • name

aninggo yanop (N) • meaningful, reason

anintama (N) • termite

ani (V) • to eat, food

ani (V) • hit

- ano** (N) • arrow
ano taki (N) • arrow made from the midrib of the betelnut tree
ano kanat (N) • kind of arrow, made of bamboo
ano yop (N) • bullet
anon (N) • dog
anon awon (N) • animal
anon awon (N) • expression to berate/curse (“You pig/dog/animal!”)
anong (N) • scenery, view
anotbon (N) • bird playground on the tree
anoyon (Adj) • kind of illness
anwani (V) • damage, break down
anyan (N) • younger(?) sister
ap kawini (V) • make a speech, announce, broadcast
ap tebi (V) • evaporate
apkono (Num) • number 0
ap (N) • wood, tree
ap yop (N) • fruit
ap (Adj) • empty, out of tobacco
atma (N) • side
atmi (V) • cut (pl obj)
atom (N) • coconut
atunggum (N) • knot (tree, wood)
auk (N) • kind of banana, soft
awadi (V) • follow me (1SG obj), join me (1SG obj)
- awak** (N) • animal skin
awanetai (V) • float
awanetai (V) • turn
awanetai (V) • deceive
awang (N) • epidermis
awanggi (V) • follow someone (sg. theme)
awani (V) • marry, marry
awayi (V) • follow several persons (pl. theme)
awep (Adj) • raw, unripe
awim (N) • land, highland, upland
awimka (N) • walk on land, walk by foot
awini (V) • aim
awit (N) • roof
awit (Adj) • the state when leaves or fungi dry out
awitni (V) • become hard (for plants and fungi)
awiwai (V) • sharpen (pointy tip)
awon (N) • pig
awon ambi (N) • boar
awon kiop (N) • pig imitation
awop ket (N) • pen, pencil
awop (N) • fire
awop yubu (N) • flame
awop ket (N) • charcoal
awop kop (N) • embers
awop nembeleng (N) • spark

- awop** (N) • lamp
awung (N) • antenna
awuni (V) • bend, subdue
awuni (V) • sleep (pl Sbj)
awut (N) • sugar cane
aya (N) • exclamation to express surprise
ayaki (V) • to be happy, to be glad
ayamtun (N) • running wildly
ayapkat (Adj) • slim (person), flat (fish)
ayekon (N) • flag
ayekon (N) • leaf
ayen (N) • begging
ayen bomi (V) • beg (many times)
ayeng (N) • trees or tree branches that are broken by the wind and sometimes cover the road.
ayenggi (V) • dance
ayenggun ayenggon (N) • dance
- ayenggi ayengga** (N) • dance
ayet (N) • wrapping
ayet mim (Num) • number 10
ayetmi (V) • wrap
ayetmi (V) • bury, bury
ayinggi (V) • to peel, to peel
ayingmi (V) • make noise
ayi (N) • gecko, lizard
ayi (V) • dance
ayi (V) • beg, ask for
ayobi (V) • squeeze
ayong (N) • traps that are usually made in caves or holes in the ground to catch snakes, monitor lizards, etc.
ayonggi (V) • watch out, be careful
ayongni (V) • constrict, shrivel
ayun elet (N) • comb
ayun (N) • bamboo
ayut (N) • pus

B b

- badai** (V) • cleaning bird feathers, grass, etc. (plural), pull out, pluck (plural)
badalang (N) • fat
badambeli (V) • shoot many arrows (one after another)
badanggi (V) • shoot (arrow), aim, throw something roughly
badani (V) • pull out (sg. obj)
baditbai (V) • suffer from, take pains, make effort
badop (Adv) • a little bit, a little only
badopmo (Adv) • carefully

- bai** (V) • make (a hut)
- bai** (V) • take multiple parts of sth. (pl.obj.)
- bakai** (V) • cut (seedlings)
- baktiap** (N) • jinn
- bakudim** (N) • kind of cockroach that lives in old trees
- balak-balak** (N) • missing
- balaki** (V) • disappear
- balaki** (V) • die, pass away
- balaknai** (V) • open, unwrapped something from its package
- balamban** (Adj) • difficult, hard
- balambon** (N) • birth place, delivery room
- balanggi** (V) • open, unwrap
- balin** (PTC) • not, no
- balin** (PTC) • there is no, no
- bali** (V) • move feet left/right after sitting for too long
- bali** (V) • touch (especially a woman to flirt)
- bali balimbat** (N) • hunt
- bali bat** (N) • hunting
- balukmen** (Adj) • not strong, weak, weak
- bam** (N) • cramp, cramp
- bam** (N) • frog
- bambai** (V) • call several times
- bamenggi** (V) • to loosen sth.
- bamit** (N) • kind.of.plant
- bamtai** (V) • revolt, rebel, make efforts
- bane kombi** (V) • intimidate, bully, shout, scream
- bane menebi** (V) • to be full
- bane meneben** (Adj) • full
- banenai banewali** (V) • plan to do something together, invite to do sth., invite
- bane wali** (V) • prepare so. for sth.
- bane yali** (V) • become loose
- banggi tana** (N) • adopted child, foster child
- banggi** (V) • take care of, adopt
- banggi** (V) • split (into? pl obj), cut (into? pl obj)
- banggi** (V) • make, make (some huts, tents, etc.)
- bani** (V) • call (once), call someone (once)
- bani** (V) • open, to be open
- bani** (V) • grow (fungus)
- bani** (V) • take a part of sth. (sg.obj.)
- bankat** (N) • kind of bird
- banok-banok** (N) • kind of bird, lives on the ground
- bap-bap** (Adj) • grey
- bat bomi** (V) • go hunting (plurac-

- tional, many times)
- bat mim** (Num) • number 100
- bat wini** (V) • hunt
- bat** (N) • hunt
- batbat wani** (V) • to be fresh
- baat** (N) • brother-in-law
- bat** (N) • piece
- batkop** (N) • round piece
- batotenek** (N) • kookaburra bird (kind of bird)
- bayambon** (N) • old garden
- bayang** (INTJ) • Friend! Dude!
- bayi** (V) • take a piece of something and give it to many people
- bayi** (V) • take care of (pl. obj)
- bayiki** (V) • open, detaches
- be nami** (V) • take and throw away (pl. obj.)
- bedembelop** (N) • small and thorny fern plants that grow on the edge of a river / swamp
- beden** (N) • one type of bird of paradise
- bedenongai** (V) • oppose, be in conflict
- bedenong** (Adj) • difficult (problem/situation), hard (problem/situation)
- bedenong** (N) • conflict, dispute
- bedet** (N) • insect's fingers
- bedetkap** (N) • claw
- beit** (N) • date (time)
- bek** (N) • kind of tree, grows in old gardens
- bekmi** (V) • wait
- belawuk** (N) • squirrel
- beledak** (N) • dragonfly
- beledak kudu** (N) • helicopter
- beledanggin** (N) • swallow (bird)
- belekmi** (V) • roll up
- belekmen** (N) • roll
- belekmi** (V) • to circle
- belebset** (Adj) • torn (leaf), torn (leaf)
- belenai** (V) • load many people or objects into something
- belenanggi** (V) • wriggle, shine (sun)
- belene toli** (V) • win, get away
- belenggi** (V) • heal, treat (medicaly)
- belenggi** (V) • bark
- belenggi** (V) • buy several things (pl obj), buy several things (pl obj)
- belenggono** (N) • shoulder, shoulder
- belep** (N) • fat
- belewai** (V) • fight, make efforts, wriggle
- belewai** (V) • resist
- beli** (V) • fight, fight

- beleyi** (V) • heal them(pl. obj)
belodom (N) • bullet casings
belon (Adj) • small, slim
bembi (V) • take
bemendai (V) • search, research
bemenggi (V) • to water, water several times, wet something several times, splatter several times
bemenggi (V) • bless, baptise
benbani (V) • carry (sg.obj)
benbanggi (V) • carry (Pl obj)
bendem (N) • cave in the river where fish and shrimp live and take shelter.
bendom (N) • elbow, corner
bendom (N) • cape, foreland
benem (N) • kind of mouse with long snout
benep (N) • crocodile
beng ombi (V) • to put a tag on, to mark
benggi (V) • grind, break, grind
bengmot (N) • a pinch
bengmot wani (V) • pinch
bengtop (N) • branch
beng (N) • sign
beni (V) • open, peel
benkimin (N) • a custom of the Muyu tribe, burning feathers to expel creatures / spirits from sick people.
- benkom** (N) • dirt (on hands)
ben (N) • arm
ben (num) • number 7
benyop (Adj) • little
bet (CL) • from, by, with (INSTR)
bet (N) • proposal
betmo (PTC) • like that
bet mo kemi (V) • to urge
bi (V) • take (pl Obj)
bidai (V) • donate, give away
bidawom (N) • clumps of plants that live by the river
bidilok (N) • nail, from toes or fingers (human)
bike bi (V) • pull out (pl. obj)
bike kani (V) • pull out (sg. obj) from a place
bike wai (V) • push, in a hurry, in a hurry, accelerate
bikewani (V) • pick
bikewani (V) • immediately
bilambip (N) • village, area, region
bili (V) • PROG.FUT
bilim (N) • female capped cuscus
bilinali (V) • slip
bilinggi (V) • travel
bim (N) • earthquake
bimi (V) • tie or attach a rope
bimi (V) • grind sth, pulverize
bin (N) • white snapper (fish)

- binbulut** (N) • trace
- binggi** (V) • to pee
- bingtulun** (N) • names of plants that grow in clumps
- binkop** (N) • charcoal which is usually used to make up the dancers of the Yok dance
- bit** (N) • crest, hill
- bit** (N) • the names of plants that grow in clumps
- bitka** (N) • high road (on a crest)
- bitkuk** (N) • kind of plant
- bit ok** (N) • area
- biyononggo** (N) • ground caterpillar that sometimes likes to damage plants
- biyuk** (Adj) • empty (fruit)
- bodoni** (V) • tie at sth.
- boli** (V) • tear, rip, tearing up
- bolobi** (V) • to rock, move
- bolodok** (N) • traditional feather headdress
- bolok-bolok** (N) • noise (caused by touching an object)
- boloki** (V) • wonder, make a noise
- boloki** (V) • to be torn, to be torn
- bolom** (N) • mucus of people who have died
- bolotman** (V) • disperse
- bom** (N) • magic spell
- bome kombi** (V) • to have trouble, to appear, to arrive
- bomi** (V) • disassemble, take apart
- bomi** (V) • to ruin, to break
- bomi** (V) • go
- bomi** (N) • beard
- bomot** (N) • bad luck, harm, danger
- bon toli** (V) • to sleep, especially the birds that usually sleep in the trees.
- bonbai** (V) • digging holes to plant plants or poles.
- bongtalam** (N) • traditional music instrument made of bamboo
- bong-bong** (Adj) • small
- boni** (V) • take a piece of something to give it to someone
- bonyik** (N) • kind of thorny rope
- bonkai** (V) • pile up, collect
- bonmo** (N) • lazy person
- bonmoni** (V) • check (situation), examine (situation)
- bonmoni tanmoni** (N) • network, connection
- bon** (N) • place
- bon** (N) • pile, pile
- bonyik taliyik** (N) • thorns
- bop ani** (V) • rot (pl.obj.)
- bopni** (V) • rot, decay
- boptelebi** (V) • rot, decay (pl.sbj.)
- bopti** (Adj) • slow, slow

- boptimo** (Adv) • slowly
bop (Adj) • bad, rotten, gone bad
bop (N) • death
bop (Adj) • sick
bot madan (N) • grindstone
botbolop (Adj) • old (for objects), dirty
botneng (N) • petates
bot (N) • stone
bot tumbon (N) • sedimentary rock
bot kono (Adj) • unmotivated, lazy, not active, not talkative
bot (N) • battery
bot (N) • salt
boyo (N) • kind of tree, kind of fruit
boyop (Adj) • tiny, small (person)
budobi (V) • bear fruits, hang when stuck onto sth
buduk (N) • scales from animals like fish, reptiles, etc.
buduktai (V) • slowly, try very hard, try slowly but surely
buki (V) • to be broken, to explode
bukoden (Adj) • broken
bukni (V) • go bad, become rotten
buk (N) • grass and small trees growing in the garden.
buk (N) • sound of a falling object
buk (Adj) • soft, brittle
bulai (V) • insult
bulayi (V) • insult several people (pl. exp)
bulanggi (V) • insult someone (sg. exp.)
buladi (V) • insult me (1SG exp.)
bulalim (N) • the name of a broadleaf plant that grows on a tree
buli (Adj) • cold (food)
bulini (V) • to cool down
bulubi (V) • hit like nailing something (several times), knock
bulunggi (V) • meet someone (sg.obj.), meet
bulunggi (Adj) • silent, quiet, not crowded, no longer used
buluni (V) • hit (once)
bulut (N) • rib of a palm leaf
bulut (N) • pen, pencil
buluyi (V) • meet (pl. obj) several people
bulu (N) • wing
bumbi (V) • break(?)
bumok (N) • foam, foam
bung (N) • kind of tree
bunggi (V) • slice, cut
bunggup (N) • beetle
buni (V) • to water (plants), to wet
buni (V) • bless (someone), baptize
bunu (N) • belly (animals)
bunup (Adj) • long (temporal)

bun (Adv) • outside

bun (prep) • without, temporary

but (N) • shrimp

but ti (N) • kind of shrimp

butwap (Adj) • light place, clearing,
clean place, clearing

D d

dat (N) • green frog (kind of frog)

degop (N) • kind of bird, small and
brown

dimin (N) • kind.of.bat

dit (N) • mouth of a river

dok (N) • poisonous snake

dot (N) • kind of cuscus, brown, lives
in holes or on trees

E e

=e (PTC) • Question particle

=e (PTC) • Clause chaining particle

edawo (PTC) • and other things

edemtun wini (V) • go backwards

edo (N) • this

ege (DEM) • this

ek (N) • kind of tree (Terminalia cat-
appa)

ekemi (V) • do like this

ekuni (V) • do like this

eledap (Adj) • force, reckless

eledap ali (V) • to dare, to force
oneself to do something although
one knows it's dangerous (and is not
scared of it)

elenggum (N) • crossed wood (like
'x')

elengtun (Adv) • sideways

elep-elep kemi (V) • whine

emba (N) • father, mister, form of
adress, to male child

embet (DEM) • from here

embi (V) • be used to

embit (N) • leaf

embodem (N) • ass, rear

embon (N) • shit, feces

embon ewok (N) • diarrhea

embon kok (N) • urge to defecate

embon bon (N) • dirty place, dump

embon wenebi (V) • defecate

- embon kom** (N) • fart
emeduk (Adv) • useless, in vain, nonsense, only, mere
ena (N) • mother, mother, form of address, to female child
ena emba (N) • parents
endengmi (Adj) • strange, unusual
enengmi (V) • force, coerce, persist, require
enep-anap (Adj) • underestimate, regard as trivial
enggaip otbop (N) • gossip, issue, rumor
enggi (N) • as for
enggi (V) • say
enggon (N) • friend, female, friend, female, form of address, to female-same age
enggonbon (V) • squat
enggumu (N) • intestine, guts
enkaen (N) • rottan hook
enkogi (V) • swinging, swinging your hand to hit something
enmoni (V) • gather, get together
enong (N) • feeling, instinct
enwai (V) • collect, associate with
enwani (V) • swing, turn
epkat (N) • clothes
eptom (N) • ground grasshopper
ep (N) • puddle
et (Num) • number 8
eya (DEM) • here, hither
eyadi (DEM) • up here
eyamin (DEM) • it is enough, until here
eyani (Adv) • here
eyangga (Adv) • here (speaker not facing the entit
eye (DEM) • of this
eyen (N) • this is it
eyom (eyóm) (DEM) • in here
eyonggo (Adv) • here
eyot (PTC) • DEM.CONTR.this
eyuk (N) • yes, yeah
eyuk enggi (V) • allow, acknowl-egde, agree, accept, approve
ga (Conj) • but.DS
ga (PTC) • let's
gole (Conj) • see 'kole'

I i

- i** (N) • older brother
i ninggi (N) • brothers and sisters
idanggi (V) • straddle, defend, protect

- idani** (V) • stride
idigam kamagam (Adj) • broken
idik (N) • shards, pieces, rest
idingmi (V) • smoothen, ruin
idopnai (V) • stimulate
ikap (N) • handle
ikbot moni (V) • dip, submerge, cooking food by putting food in ashes and covering it with coals
ikbula tambula (Adj) • greedy, omnivorous (eats everything)
iki (V) • ignite, put on, to illuminate
iki bon (N) • bright place (a place lit by lights/sunlight)
ilikanggu (N) • kind of banana
iline wini (V) • drift away, float away
ilinggunggang (Adj) • noisy
ilinimbin (N) • Kuntilanak (mystic character)
iliwap (V) • envious, jealous
iliwap mun (N) • jealous, like to nag
ilot balot (N) • rumor, hearsay
im (N) • pandanus fruit
im yumu (N) • red pandanus
im bem (N) • yellow pandanus
ima (N) • thigh
inamen (N) • truth, very true
indeng andeng (N) • strange, creative
ine (Adv) • tomorrow
inggen tonggen (Adj) • expression of surprise (geez ...)
inggot (N Adj) • young (animals)
ingtomoni (V) • having asthma
inon kibinok (Adv) • every day, daily
inwali (V) • make up, decorate, wear (clothes, jewelery)
ipmoni (V) • snuffle (for dogs only)
ipmoni ipkumugi (V) • smell
iptem (N) • smell (noun)
itkang (Adj) • blade of knife/machete
itkang wai (V) • sharpen, sharpen
itkon (N) • kind of banana, hard
it (N) • theft
it bi (V) • steal (pl Obj)
it kani (V) • steal (sg. obj)
it (N) • other, foreign, unknown

K k

- ka** (Conj) • or
kaba (N) • estuary
kaba wuni (V) • catch a cold
kabadem (Adj) • forgetful
kabademni (V) • forget
kabadut (Adj) • because
kabak (N) • axe
kabakadi (V) • become angry at me (1SG.T)
kabakanggi (V) • to anger so. (sg. obj.)
kabakayi (V) • to be angry, to become angry, to anger sever people (pl obj)
kabakayi mun (N) • angry person
kabam (Adj) • wrong
kabam wini (V) • get lost, go wrong, lost
kabamon (Adj Adv) • useless, useless, meaningless, without goal
kaban wini (V) • run to
kabanggelet (N) • scream
kabanggi (V) • stare at, pay attention to
kabani (V) • run
kabanombi (V) • regret
kabat (N) • name of small lizard
kabat (N) • plate
kabat (N) • dry midrib of sago
kabayop (N) • belly
kabikon (N) • kind of banana
kabudak (N) • blue wasp that lives in the midrib of a sago tree
kabu kemi (V) • to howl (for dogs)
kabulu (N) • butterfly
kadalam (N) • head wound
kadap (Quant) • lots of
kadap (N) • answer, exchange
kadap (N) • poisonous tree
kadap (Adv) • each other
kadawai (V) • wriggle, squirm
kadek (N) • danger, dangerous
kadekmun (N) • evil person
kadek-kadek (Adj) • hard, difficult, difficult, quiet
kadekmi (V) • confuse, be confused
kaden (conj) • suppose that, in the event that
kadilibi (V) • climbing several trees or climbing something several times
kadinggimuni (Adj) • greedy
kadinggi (V) • carry (pl.obj) several times
kadini (V) • carry sth. (sg.obj.) on shoulder
kadi (Adj) • pure, native
kadi (N) • person from Papua
kadi (V) • give sth. to me
kadonggip (Adj) • awkward
kadonggipkono (Adv) • akwardly

- kadot telebi** (V) • become stiff
- kaduk** (N) • person
- kaduk** (N) • man, friend
- kaduk tana** (N) • male child
- kaduk** (N) • husband
- kai** (Adv) • very, very
- kai** (V) • put (pl obj)
- kai** (PTC) • Question Particle
- kaimo** (Adv) • very well
- kak** (N) • scorpion
- Kakaip** (N) • one of the sub clans of the Muyu people and their dialect, lies in southeast part of the Muyu area
- kakane** (N) • expression of doubt
- kakewet** (N) • young man
- kakman** (N) • polite expression for menstruation
- kakmenggi** (V) • wake someone from sleep (sg. obj.)
- kakmey** (V) • wake several people from sleep (pl. obj)
- kalakbai** (V) • to tear, to rip
- kalalang** (N) • machete
- kalali** (V) • become clear, become light (weather and sky)
- kalali kono** (Adj) • clear
- kalang** (N) • chopper
- kalanggi** (V) • sew, stitch
- kalanggi** (V) • paste, stick
- kalangni kat** (Adj) • blue, clear
- kalatyap** (N) • a scar on someone's face/head.
- kalawat** (N) • kind of banana
- kale-kale** (Adj) • confused, silent, quiet
- kalet** (N) • orphan
- kali** (V) • throw (sg obj), throw away (sg obj)
- kalik-kalik** (Adj) • restless, nervous
- kalokmoni** (V) • hit someone/an animal with force
- kalumbagop** (N) • traveling (as a leisure activity)
- kalung** (Adj) • hard, strong
- kalungni** (V) • be stubborn
- kalungni** (V) • become quiet, not moving
- kaluwot** (Adv) • only, merely
- kaluwot** (Adj) • easy, easy, easy
- kam** (N) • shield
- kamak** (N) • ginger, ginger
- kamanika** (Adj) • crazy (humorous expression)
- kambai** (V) • endanger, harm
- kambadi** (V) • endanger me (1SG obj), harm me
- kambanggi** (V) • harm (Sg. Obj), harm (Sg Obj)
- kambalam** (N) • water bug

- kambali** (Adj) • big (sg. obj.), put in (sg. obj.)
- kambali** (N) • respected person / big man **kamoni** (V) • to experience
- kambat** (N) • foreigner, foreigner **kamoni** (V) • observe, pay attention to (a situation), examine (situation)
- kamben** (N) • family, relative, close friend **kamoyi** (V) • to suspect (several people), accuse (several people)
- kambongoyop** (N) • ant nest in the trees **kamoyi** (V) • burden (Pl. Obj), trouble (Pl. Obj)
- kambop** (N) • male corpse, male corpse **kantimap** (N) • mold
- kambuli** (V) • put something in a place like a bag, pocket, etc., fill **kantimap yoni** (V) • to mold
- kambulup** (Adj) • infertile **kan** (N) • rest, waste
- kambulupka** (N) • infertile person **kane balaki** (V) • make disappear
- kambumbi** (V) • fall **kane kawini** (V) • raise
- kamena** (Adj) • strong, brave **kane kombi** (V) • make free of sth (e.g. dirt), finish
- kamini** (V) • rise, appear **kane kulubi** (V) • show, show
- kamini** (V) • go up, to head upwards **kane mini** (V) • bring (sg obj)
- kamkono** (Adj) • hard **kane tebi** (V) • move, raise
- kamodi** (V) • suspect me, suspect me, accuse me, blame me **kane yani** (V) • lift
- kamonggi** (V) • suspect so. (sg), accuse so. (sg), suspect so. (sg), blame so. (sg) **kanet** (Conj) • if, when
- kamonggi** (V) • to trouble someone, encumber someone **kanema** (N) • who
- kamonggi** (V) • find out, witnessing someone doing something secretly **kang** (Adj) • sharp.edge.of.object, blade, sharp
- kamoni** (V) • wait, observe **kanggang** (Adj) • lively, agile
- kamoni** (V) • insert (sg. obj.), fill **kanggani** (V) • to tie
- kanggang** (V) • to fail
- kanggatmoni** (V) • fight
- kanggi** (V) • give
- kanggitnombi** (V) • to hug
- kanggoman** (Adj) • real, true, in

- fact
- kanggon** (Adv) • also, either
- kanggunwanggi** (V) • hit something brutally
- kanin** (Num) • number 4
- kaningganang** (N) • thing, property
- kani** (V) • take (sg obj)
- kani** (V) • get, obtain, achieve
- kanon-kanon** (V) • donation
- kanon-kanon kemi** (V) • donate
- kaop-kaop** (V) • pretend
- kap** (N) • seed, offshoot, pet (animal)
- kapkop** (N) • amulet
- kapni** (V) • carry
- kat** (N) • skin
- kat keli** (V) • know, understand
- kat ok** (N) • a way to drink water by directly filling it into the mouth without sticking the glass to the lips / directly poured into the mouth.
- kat toli** (V) • become wild
- katkalik** (Adj) • restless
- katkayop** (Adj) • exciting, seductive, sexy
- katkili** (V) • watch out, watch out
- katma** (Adv) • for days from today, in four days
- katwai** (V) • to peel, to skin
- katwon** (N) • designation for the same race, ethnicity, nation, etc.
- kat** (N) • skin
- kawa yuli** (V) • to rub
- kawai** (V) • to rub, spread on
- kawang ali** (V) • to slap, to smack
- kawanggi** (V) • rub, smear
- kawanggi** (V) • catch shrimps and fish in a river with bare hands
- kawang** (Adj) • raw, unripe
- kawan** (N) • clay
- kawan** (N) • colour
- kawap** (N) • adult man
- kawat** (N) • the name of a tree whose wood is soft and gummy white
- kawat** (N) • trap
- kawat ok** (N) • sperm, amniotic fluid, swear expression (hell/son of a bitch)
- kawatmun** (N) • an expression for cursing (evil/rude/bastard)
- kaweng wani** (V) • become hoarse, become hoarse
- kawet** (N) • sago cooking or food with banana leaves and then put it on the coals.
- kawet moni** (V) • to cook sago or food with banana leaves and stones
- kawili** (Adj) • lazy, not capable
- kawin** (N) • red paint
- kawini** (V) • climb, ascend

- kawon kamonggi** (V) • to burden someone (sg. obj.), to trouble someone (sg. obj.)
- kawut** (Adv) • directly
- kawupki** (N) • brother
- kayabak** (N) • sir (form of address), old person
- kayam** (N) • hawk
- kayang** (N) • scream, scream, yell
- kayang ai** (V) • to scream, to yell, to screek
- kayebak** (N) • big man, honorable man, adult
- kayi** (V) • give sth. to many people
- kayikadep** (N) • goods (property), everythings
- kayimo** (Adv) • very well
- kayok** (Adj) • white
- kayon** (N) • kind of banana
- kebegi** (V) • show
- kebegi** (V) • teach
- kebeni** (V) • to dam up, block, cut off, hinder, close
- kebetma** (N) • side, next to, partly
- kebet** (N) • side, edge
- kebet** (N) • friend
- kedam** (N) • knife
- kededani** (V) • ask (sg question), ask
- kedekono** (N) • foot
- kedekuni** (V) • how is it done
- kedekyop** (N) • rice
- kedek** (N) • grass
- kedek** (N) • kind of tree
- kedelem** (N) • lichens and fronds that are still attached to the sago tree trunk
- kedep** (Adv) • maybe
- kedepkat** (N) • inner part of the sago stem
- kedet** (N) • saliva
- kedet tami** (V) • spit
- kedo** (Conj) • and then, INCHOATIVE (+main verb)
- kedo** (DIR) • out
- kedo koki** (V) • get to another place, move somewhere
- kedo wini** (V) • to cross
- kedoni** (V) • start to, move to (i.e. move living location), turn to
- kelak** (n) • small fence
- kelegi** (V) • read
- kelegi** (V) • peek
- kelegi** (V) • check
- kelegi** (V) • watch
- kelegi** (V) • watch out, see
- kelem** (Adj) • wild
- kelemni** (V) • become wild
- kelemkono** (N) • kind of small snake
- kelep kalap** (Adj) • panic, nervous,

- wrong, disorganized, kosong
- kelep kalap kemi** (V) • do wrong, to err
- keletbon** (N) • front part of the garden
- kembon** (Adj) • quiet, safe
- kemekai** (V) • take off clothes or something from the body., undress (clothes), take off (clothes)
- kemen** (N) • betelnut
- kemenali** (V) • to skin (an animal), to put off clothes
- kemenggi** (V) • put down (pl obj)
- kemi** (V) • do (once), AUX, HAB
- kembi** (V) • do (several times)
- ken** (Adj) • real, real
- kenambun** (Adj) • strong, rough
- kenambunmo** (Adv) • strongly, loudly
- kenaying** (N) • noisy, noisy
- kene anggi** (V) • be confused
- kene mini** (Adj) • deaf
- kene nanggi** (V) • understand
- kene wani** (V) • forget
- kenedi** (V) • see me (1sg obj), look at me (1sg obj), watch over me (1sg obj), watch me (1sg obj)
- kenembong** (Adj) • unclear, not clear
- kenenggen wini** (V) • chase, chase someone or something
- kenenggi** (V) • stare at (sg obj), watch (sg obj)
- kenenggi** (V) • having sex (animals)
- kenewat** (Adj) • loud, rude, strong, firm, tight
- keneyen wini** (V) • chase, chasing after many people or many objects
- keneyi** (V) • see (pl obj)
- keneyi** (V) • watch (pl obj), watch (pl obj), stare at (pl obj)
- kene** (N) • ear
- kene kak** (N) • eardrum
- kenongtem** (N) • corner
- kepka** (Adj) • yours (m), yourself
- kepkambet** (Adj) • up to you
- kep** (N) • glue
- ket** (N) • ashes
- ketbon** (N) • sacral place, holy place
- ketma** (N) • side
- ketmenggi** (V) • teach
- ketmeyi** (V) • teach several people (pl exp)
- ketmon** (N) • kind of dance
- kewet** (N) • young person
- kakewet** (N) • male child
- keli** (V) • become, auxiliary
- keli** (V) • go through
- keyap** (Adj) • fast
- keyapmo** (Adv) • quickly

- ki** (PTC) • EMPH
kibidan (N) • forehead
kibik (N) • today
kibik ekine (Adv) • right now
kibikti (Adv) • just now
kibik kabak moni (V) • to squirm
kibikap (N) • root
kibin (N) • incarnation
kibing (N) • navel
kibinggi (N) • scratch, scratch
kibini (V) • to plant
kibit (Adj) • shy, ashamed
kibiyon (Adv) • yesterday
kibiyon tanipya (Adv) • day before yesterday
kibiyum (N) • dream
kibiyum wai (V) • to dream
kidili (V) • come down, fell (a tree)
kidim (N) • kind of bird: crowned pigeon
kidin (Adv) • in the past, long
kidinok (N) • sweat
kidinok wai (V) • to sweat
kidip (N) • nose
kidip (Adv) • in front of (eyes)
kidit (Adj) • long
kiditni (V) • become long, become long
kidomini (V) • go down from a high position
kido (DIR) • down
kiduluk (Adj) • first, origin
kikmonggi (V) • to scare so.
kikmoni (V) • deceive
kikmoni (V) • to scare (???)
kikmoyi (V) • to scare so. (several people)
kili (Adj) • new
kilibi (V) • put several objects or things (pl. obj), put several things (pl. obj), keep several objects (pl. obj)
kilibili (N) • in front of
kilidi (V) • confuse me with someone (1SG sbj)
kiliken (Adv) • does not matter/care, not paying attention
kiliknai (V) • pour water into a container
kilili (Adj) • free
kilin (Adj) • wrong, pitiful
kilin wini (V) • get lost (lose one's way), wrong way
kiling (N) • meat
kiling ambokono (N) • face, in front of (persons)
kiling tuluni (V) • to face something
kiling tuluni (V) • kiss
kilinggiling (N) • shaking, shivering

- kilinggi** (V) • puncture, piercing something through a small hole like a pipe
- kilinggi** (V) • confuse someone with someone, confound
- kilinggono** (N) • face, face
- kilinggono** (N) • before
- kilingmi** (V) • tremble, shiver
- kiliyi** (V) • confuse (pl. exp)
- kim** (N) • road
- kimka** (N) • straight road
- kim konop** (V) • await
- kima** (det) • other
- kimadik bon** (N) • meeting place/point
- kimbai** (V) • clear a way, open
- kimbot** (N) • forbidden sign
- kimi** (N) • hair, feather, fur
- kimiding** (N) • small mosquito
- kiminggi** (V) • to count
- kimit** (N) • nibund tree
- kimkinok** (N) • dangerous sign (bad omen?)
- kin** (N) • grave, grave
- kindum** (N) • sound when something falls or collapses
- kine kamoni** (V) • answer, answer (spoken language), reply, reply (spoken language), response, responding (spoken language)
- kine oni** (V) • promise
- kine oni** (N) • promise
- kini** (V) • give a price
- kini** (V) • install (grup/handle on a tool)
- kini** (V) • shine (sun)
- kinkin wai** (V) • pray
- kinkin** (N) • soul, soul
- kinkin** (N) • angel, (holy) spirit
- kipka** (Adj) • yours (pl), yourself
- kipkambet** (Adj) • up to you
- kip** (P) • you (PL)
- kip** (Adj) • wild
- kiwani** (Adj) • hoarse (voice), hoarse (voice)
- kobi** (PP) • on (trees, etc.)
- kobi** (V) • pave some wood for bearing support, put some wood as a bridge over a brook
- kobo** (N) • waist
- kobodinong** (N) • belt
- kobodom** (N) • waist
- kobomi** (V) • knock, sound from knocking (like a bell)
- kobomi** (V) • squeeze, squeeze like squeeze sago to take the juice
- kobomtenek** (N) • resin
- kodo** (N) • a type of monitor lizard
- kododi** (V) • surround me
- kodokmi** (V) • to gang up, to crowd,

- get together and do things together or as a group
- kole** (Conj) • because, since
- kodoli** (V) • pout
- kodolok ali** (V) • to comb
- kodolok ambot** (N) • brain
- kodolok kat** (N) • hat
- kodolok** (N) • head, skull
- kodolok** (N) • leader
- kodolom** (Adj) • young
- kodom** (N) • ant
- kodom tabuk** (N) • cocoon, cocoon, cocoon
- kodomnong** (N) • kind of rope
- kodonggi** (V) • encircle someone
- kodoni** (V) • block
- kodoni** (V) • not to know, be ignorant of
- kodonidep** (N) • foreign, not known
- kodop** (Adj) • old, torn
- kodop** (N) • humus, topsoil
- kodoyi** (V) • surround several people (pl obj)
- koe** (EXCL) • That's good!
- kokap** (Adj) • blunt, not skilled
- kokbai** (V) • split, chop
- koki** (V) • fall, fall down (sg subj)
- kokmaya** (Adj) • bitter, hot (spicy)
- kok** (Adj) • dry
- kok** (Adj) • sick, painful
- kolang tani** (V) • parry, block, fend
- kolem** (Adv) • at once
- kolem** (Adv) • very
- kolem** (PTC) • MOD
- kolem** (PTC) • in a focussed way
- kole wini** (SVC) • go back
- koli** (V) • stop, end
- koli** (V) • don't like, not
- koli** (V) • refuse
- kolo** (DIR) • back
- kolo kane wini** (V) • bring back, return (goods)
- kolo wini** (V) • avoid, stay away, go back
- kolo wini, kolo mini** (V) • go/come home, go/come back
- kolobi** (V) • show
- kolodi** (V) • leave me, leave something for me
- kolomtong** (Adj) • short, mini, stump
- kolonggi** (V) • to leave so., to stop
- kolop** (N) • the name of a short rounded little toad
- koloptang** (N) • reed, bamboo
- kolop** (N) • kind of bamboo, big and red
- kolop** (N) • fruits that have fallen to the ground
- kolop** (N) • humus

- kom yoni** (V) • commit a sin, become dirty
- kombe koli** (V) • leave sth. (sg obj)
- kombe taki** (V) • press something
- kombili** (V) • fall (pl sub)
- kombi** (V) • put (sg obj), lay down (sg obj), hit
- kombi** (V) • send
- kombon** (N) • impression, appearance
- komo** (Adv) • what
- komon** (N) • something that is secret
- komonggop** (N) • niece
- komop** (N) • magic spell
- komop tai** (V) • make spells with words
- komtuk** (N) • the name of a broad leaf plant that grows in clumps
- kom** (N) • dirt on the skin, dirt that attaches to human skin.
- kom** (N) • resin, sap
- kom** (N) • sin
- kon** (N) • woman
- kon wanam** (N) • old woman, wife
- konambo** (N) • name of traditional marital rule
- konawinggi** (V) • punish someone by not giving him/her anything
- konawiyi** (V) • punish some people by not giving them anything they want.
- konbop** (N) • female corpse, female corpse
- kondudut** (N) • mating season
- konduluk** (Adj) • bad-hearted towards women, evil-minded towards women, evil hearted woman
- konet** (N) • leaf
- konggono** (N) • neck bone. (i.e. cervical spine)
- konggotmi** (V) • do something under difficult circumstances
- kongnani** (V) • kill, kill something by breaking the neck.
- kongni** (V) • grow tall and old (plant)
- koni** (V) • give something to someone
- koni** (V) • drain something like wood as a walkway / bridge in a small river, drain a stick of wood as a buffer pad.
- konkomon** (N) • kind of snake
- kono amot** (N) • toe
- kono konop** (N) • ankle, ankle
- kono kop** (N) • calf, shank
- kono met** (N) • back of the knee, hollow of the knee
- kono notbon** (N) • port, harbor
- kono tap** (N) • defect, disability

- kono** (N) • bone
konobim kok (Adj) • sleepy
konobin (N) • peep
konobin wai (V) • to blink (eyes)
konodom (N) • knee
konoduk (N) • the tip of the toe
 (the big toe)
konoduk moni (V) • to stumble
konokap (N) • bone
konom (N) • cough
konombenggi (V) • imitate
 (sound), usually the hunters imitate
 the sound of animals, like birds, deer,
 etc. to shoot them.
konombon (N) • grave, tomb
konomkit (Adj) • longing for some-
 thing (food), hungry for something
konomoni (V) • resist, fight
kononggolot (N) • trap
konop komi (V) • suffer, suffer, ex-
 perience something bad
konop neng (N) • eye irritation, eye
 disease
konop-konop (N) • spy, spy
konopni (V) • be dead, die
konop (N) • eye
konop ok (N) • tears
konop tit (N) • eyeball
konop tut (N) • blind eyes
konop (N) • button
konoptem (N) • eye
kono (N) • boat, ship
kono bang (N) • side of boat
kono (Adj) • a suffix that is usually
 used to form adverbs of manner
kono (N) • bone
kono (N) • suffix / accompanying
 words to form adverbs.
konwon (N) • husband of a male
 ego's sister (brother-in-law)
konyebak kayebak (N) • respected
 people, adult people
kop (N) • grease
kop (N) • inside part, pip (of fruit)
kop (Num) • number 9
kowayobi (V) • strangle, squeeze the
 neck of a person or animal with the
 intent to kill
kowong (N) • spider
ambi (V) • wash with, shower with
ambi (V) • dive
ambip kowong (N) • spider that
 lives inside a house
kowot (N) • wall
koyap (Adj) • a little
koyap (Adj) • committing criminal
 acts in the house
ko (N) • delimiting clitic
ko (N) • pig lice
kubun (N) • shelter, shadow, shelter

- kubuni** (V) • descend
kubup (N) • fasting
kubup koli (V) • to fast
kudok (Adj) • good, nice, beautiful, handsome, happy
kudu (N) • light
kudu (N) • lap
kududem (N) • hug
kuduk (N) • small pieces of wood, leaves, rope etc., very small
kudukmi (V) • persuade, to tame
kudukono (N) • breast
kudule bi (V) • unplug, pull out (pl. obj), clean, pull out
kudule kani (V) • pull an object from its place
kuduli (V) • to shock, to be surprise, to be surprised
kuduli (V) • charge, sue
kuduluk (N) • fish trap made of bamboo or wire.
kudum (N) • kind.of.bat
kudumbai (V) • split, split (animal), cut
kudumbon (N) • lap
kudumoni (V) • take on one's lap
kudumbop (N) • kind of bat with a tail, kind of bat with a tail
kuduni (Adj) • burnt
kudut (N) • waste, food leftover
kuduyap (N) • shadow
kuduyap (N) • artificial, false
kuduyap (N) • echo, echo
kuip (PTC) • alright!
kukni (Adj) • white
kat kukni (N) • western person (lit. skin white)
kuk (N) • prison
kuktem kamoni (V) • imprison someone (sg. obj.), lock someone up (sg. obj.)
kuktem nai (V) • imprison some people (pl. obj), lock, lock up some people (pl. obj)
kuk (N) • fence, cage
kuk wombi (V) • fence in, put a fence somewhere
kuli (N) • god, lord
kulok (N) • owl
kulu (N) • teacher
kulubi (V) • show
kuluk kalak (Adv) • wrong, messy, disorderly
kulumbangi (V) • crawl (pl.sub)
kulune wini (V) • crawl (sg.sbj), creeping up
kulungni (Adj) • quiet, calm, tenang
kulungot (N) • growling (dog)
kulungot wai (V) • to growl

- kuluni** (V) • put down as a base RCV)
kuluni (V) • put down (sg obj)
kulupkut (Adj) • naked
kuluwalat (N) • snail
kum (N) • kind of fish
kumbi (V) • put out (fire?)
kumugap (Adj) • wet, moist
kumun (Quant) • all, together
kumuni (V) • go out (fire)
kumungge natwali (V) • be frank, be honest
kumunggi (V) • say, order, tell, inform
kum (N) • punishment, karma
kum (N) • the rest of the uncut sago palm
kun (Adj) • heavy
kun kani (V) • get punished
kun kombengi (V) • burden someone (sg. RCV), punish someone (sg. RCV)
kun kombeyi (V) • burden several people (pl. RCV), punish several people (pl. RCV)
kung (N) • tip, number 10
kungadin (Adj) • do something before the command comes, beforehand, too early
kunkono (Adj) • awkward
kunum (N) • walnut tree and its edible fruit
kunum (N) • family, relative
kup (P) • you (fem.)
kut (Adj) • symptom
kut (N) • scabies
kut (N) • situation, condition
kut (N) • breadfruit skin, cob
kuweng (N) • sound of a detonation

M m

- madan** (N) • reason, because of (+ Noun)
madan wai (V) • sharpen, sharpen
madek (N) • fangs
madet (N) • stock, something kept, opportunity
madet kombi (V) • store, store an object, save (money)
mak kono (N) • thighbone
mak (N) • kind of banana
mala (N) • raft
man (N) • man, person
man-man (P) • something, anything
mana (N) • offspring (animal)

- manakono** (N) • rib
- manggan** (N) • daughter, female child
- mangganop** (N) • kind of bird, brown bird
- manggi** (V) • to plant (sg.obj)
- manggi** (V) • stab, pierce
- manggunung** (N) • clay
- mankuk** (BI) (N) • cup
- mayakat** (N) • lipp
- mayat** (N) • shoots, tillers, seed
- ma** (PTC) • come on, please (invitation), let's
- ma** (Adj) • other
- ma** (PTC) • how about
- ma** (Conj) • but
- medep** (Adv) • what
- medep adep** (Adv) • how, when, how much, how much (prices)
- medepkot** (Adv) • why
- mekmet** (N) • veins, pulse
- mekmet kono** (Adv) • tenaciously, diligently
- mekmet kono** (Adj) • too hard, too difficult
- mekono** (N) • neck
- men** (N) • traditional Papuan bag, bag
- men tawayak** (N) • kind of string bag, to carry things
- men kodop** (N) • fishnet
- menbon** (N) • very large estuary area
- mendem kono** (Adj) • calm
- mene nanggi** (V) • arrive
- menen** (N) • kind of banana, wild banana
- meneng** (N) • mistake
- menengyop** (Adj) • greedy, like to do things
- menggadi** (DEM) • up there
- menggani** (DEM) • down there
- menggi** (V) • to cook on a leaf oven (banana leaves or other leaves)
- meni** (V) • take a baby from his parents or from someone., take a woman as a wife.
- meni** (V) • pick up, pick up someone
- menmana** (N) • jaw
- mep** (N) • white and soft material attached to the palm fronds
- mewot** (N) • esophagus, throat, throat
- midik** (Adj) • dark
- midiki** (V) • to get dark
- midik madak** (Adj) • cloudy
- midikoden** (N) • evening
- midikono** (Adj) • black
- midim** (N) • magical ways to kill someone's soul.

- midin** (N) • small white shrimps
- mikmoni** (V) • be full, be satisfied (eating)
- milap** (N) • hideout, not bright
- milap balaki** (V) • hide (for persons), hide oneself
- milap kombi** (V) • hide something
- mim** (num) • number 1
- mim kim** (N) • one way, same direction
- mimyon** (Adv) • last, final, gone forever
- mimop** (N) • heart, love
- mimkono** (N) • spine
- mimo-mimo** (Adv) • one by one
- mimtot** (Adv) • sometimes, once upon a time, once
- minggiling** (Adv) • ready, ready
- minggi** (N) • son, son
- minggi** (V) • cook food using tree bark / banana leaf
- mini** (V) • come, arrive, until
- minidem** (Adj) • narrow
- minidem** (Adj) • difficult, difficult
- mininggiti** (Adj) • cautious
- mininggiti** (Adv) • carefully
- minok** (Adv) • still, slowly
- minok** (Adv) • then, another time
- mit ambip** (N) • public housing, hotel, lodgement
- mit kayi** (N) • gift
- mit ot** (N) • treasure
- mit ot wonong** (N) • rich woman
- mit** (Adj) • prepared (e.g. food, instant food, etc.), ready
- mit** (N) • money
- mo** (N) • ADV
- mo** (Adv) • only, just
- modai** (V) • remember (unusual things)
- modan bomi** (V) • remember, remember a strange, unique, or extraordinary event as a history, remember
- modenen** (N) • history
- modenen** (N) • ancestors, ancestors
- mokalik** (Adv) • still
- mokap** (Adv) • formerly, previously
- mokap** (Adv) • already, already
- moko** (INTJ) • Oh no!
- mok** (INTJ) • Come on!
- molok** (Adj) • queasy, qualmish, feeling of having to vomit, absurd
- mom** (N) • uncle
- momban** (N) • fishtrap made of bamboo or wire
- mombi** (V) • shoot, shoot with arrow
- mon wanggi** (V) • cut down to make a new garden
- monali** (N) • damage, ruin

- monani** (V) • inflame
- mondali** (V) • push, refuse, complete
- mondokbi** (V) • divide, share
- mone wani** (V) • prohibit, block
- monekai** (V) • deceive
- mong** (N) • wasp
- mongadep** (Adj) • greedy, greedy
- monggodem** (N) • mouth
- monggodem talep** (Adj) • arrogant, arrogant
- monggom ai** (V) • insult, humiliate
- monggom adi** (V) • insult me, mock me, embarrass me, challenge me
- monggom ayi** (V) • insult (pl. exp), embarrass (pl. exp)
- monggop** (N) • nephew, niece
- monggop** (N) • property, things that are maintained and protected
- monggot** (N) • lip, mouth
- monggot** (N) • kind of tree, white gummy tree, usually used to make boats.
- moni** (V) • buy
- moneki** (V) • separate (oneself)
- monkani** (V) • report, deliver, mention
- monkani** (V) • jump
- monopni** (Adj) • hungry
- monopni** (V) • become tame
- monop** (N) • grandchild
- monop** (Adj) • tame, gentle
- monop** (Adj) • tired
- monwali** (V) • damage, ruin
- monwani** (V) • jump
- mon** (N) • a place / forest that has just been cleared for gardening.
- mon wanggi** (V) • give grass, saplings, etc. to make a garden
- mon** (N) • jungle fowl's nest/maleo
- mopni** (V) • be shocked, be frightened
- moptelebi** (V) • to be shocked (pl.sbj.)
- mot** (N) • cigarette butt
- mot** (N) • youngest child
- moyon** (INTJ) • this is crazy, My goodness!
- moyoni** (V) • regret
- mudok** (N) • nasal mucus
- modu** (N) • the end of a boat or ship where there is a hole for fastening it.
- modu yip konop aip** (N) • wait and see
- mudukim** (N) • area
- mudukono** (N) • snout, nose
- mudumbin** (N) • dirt that usually sticks to the face/nose
- mudumbum** (N) • anchoring pin
- mudunim** (N) • rings that are usu-

ally attached to the nose

muduyonkap moni (V) • to do a somersault, salto

Mui (N) • river Mui/Muyu

muk (N) • milk

muk ambokono (N) • nipples

ena yu muk ok (N) • breast milk

muk ninggi (N) • milk tooth

mukteleluk (N) • kind of fruit

muli (N) • ridges of houses, buildings, etc.

mulik (N) • kind of bird, black

mulung (N) • sound, voice

mulunggi (V) • to make a sound

mun (N) • kind of tree

mun (Suff) • suffix to form designations for persons, connoted negatively

mung (N) • gall, bile

mung noki (V) • polite expression for 'to die'

munop (Adj) • for free

munopmo (Adv) • for free

mup (Adj) • narrow, tight

mupni (V) • become tight, become narrow

mut (N) • wild banana, wild banana growing in the forest

N n

nabanai (V) • make hole, pierce

nabanggi (V) • bring or load things in a large amount, carry things in a large amount

nai (V) • put, fill into (solid objects)

nak (N) • kind of thorny rattan which is usually used to make rattan chairs

nakai (V) • put (pl obj)

naki (N) • noon, early afternoon

naki (V) • the day breaks

nakmoni (V) • be tired, be exhausted, be dead, suffer from

nakok (Adv) • tomorrow, the next day

nakoli (V) • release, liberate, leave

nalili (V) • drop (flowers, leaves, etc.)

nale yikmoni (V) • cut sth. without separating it (cut into)

nali (V) • cut

nali (V) • mention, speak

nam (N) • the name of a white gummy tree and its soft wood

namang (Adj) • forgetful

namang (Adj) • crazy, stupid

- namang** (N) • stem (of a tree)
- nambuli** (V) • put something into a bag, fill a bag with something
- nambulun** (Adj) • tight, strong
- nami** (V) • throw (pl obj), throw away (pl obj)
- nami** (V) • play (especially ball games)
- namoni** (V) • put into water
- nanali** (V) • release
- nanangmi** (N) • persuasion, temptation
- nanangmey** (V) • persuade (pl. exp), tease (pl. exp)
- nanangmenggi** (V) • persuade (sg. exp), tease (sg. exp), seduce (sg. exp)
- nanangmedi** (V) • persuade (1SG exp)
- nanap** (N) • funny, joke
- nanaptai** (V) • to joke, to joke
- nane wini** (V) • ride on, drive
- nanggi** (V) • leak, make a hole
- nanggi** (V) • pierce (sg obj) a hole
- nanggi** (V) • arrive
- nanggili** (V) • flip over (like a canoe)
- nanggop** (N) • fungus that can ignite at night
- nangmi** (N) • fight, war
- nangmi** (V) • fight, make war
- nani** (V) • take (heavy obj)
- napnap wai** (V) • drive away, cast out
- natwali** (V) • reveal, appear
- nawan** (Adv) • clear
- nawoni** (Adj) • feeble, weak, weak
- ne** (P) • I (subj), me (obj)
- nea** (PTC) • Q
- neka** (P) • mine, myself
- ne yanop kep yanop** (N) • combined, combination
- nebetki** (V) • scrape, scrape something up using a sharp tool
- neduk** (Adj) • sour, painful
- neggelek-nenggelek** (Adj) • colorful
- nek** (N) • long, fine worms that live in water.
- nek bodobi** (V) • winding of a lose string or nylon that has not been tied firmly
- nekmo** (Adv) • heavily (for rain)
- neknai** (V) • crawl, advance slowly
- nekwai** (V) • prepare
- neleng** (N) • crack, fissure
- neleng tabanggi** (V) • crack
- nelop kapkop** (N) • amulet
- nembeleng** (Adj) • strong
- nembeleng** (N) • spark
- nemen wini** (V) • to roll (Intrans?)

- nemenggadi** (V) • deceive me (1SG exp)
- nemengganggi** (V) • deceive (sg. exp.)
- nemenggayi** (V) • deceive (pl. exp)
- nenekbat** (Adj) • reckless, foolish, stubborn
- nenem** (N) • sexual intercourse
- nenem kemi** (V) • have sex
- nenem ambip** (N) • brothel
- nengganggi** (V) • cook, to cook (big amounts of food)
- nenggan** (N) • older sister
- nenggelek** (N) • letter, alphabet
- nenggeleng** (N) • kind of caterpillars, lives on banana leaves
- nenggetmi** (V) • peel the bark of a tree at the base to kill it.
- nenggi** (V) • to cook (on a fire), to boil (in an ember), to roast, set on fire
- nengneng awot** (N) • oath
- nengneng awot wai** (V) • make an oath, to swear
- nengneng** (N) • kind of banana
- nengutkon** (N) • a small green pombo bird with a red head
- nenok kepnok kemi** (V) • to sabotage
- nenot** (N) • me as a person
- nep** (N) • male striped cuscus
- nep** (N) • grey hair, white hair
- netmoni** (V) • spray
- newong-newong** (Adj) • silent
- neyong** (N) • branch (of tree)
- nigi** (V) • to hold (pl. obj)
- nigi** (V) • catch (pl obj), arrest or detain several people (pl obj)
- nik** (N) • white earthworm
- nikbi** (N) • fold
- niki** (Num) • number 6
- niki** (Adj) • withered
- nikmi** (V) • move left or right while sleeping to find a good position. babies usually do this in bed.
- nilik** (Adv) • long (temporal)
- nili** (V) • dig, dig a whole in the ground
- nili** (V) • carry (sg obj) a bag or something else by putting the handle on your head
- nimbin** (N) • women
- nimbin tana** (N) • family
- nimidi** (V) • hate me (1SG obj)
- nimin** (Adj) • hot, warm
- nimin keli** (V) • become hot
- nimin kombi** (V) • to heat an object
- niminggi** (V) • hate someone (sg. obj)

- niminggi** (V) • carry (pl obj) on shoulder, carry (pl obj), transport (pl obj)
- nimiyi** (V) • hate several people (pl. obj)
- Nimut** (N) • Nimut (name of river), river Mandobo
- nin** (N) • snake
- nin wanggam** (N) • kind of snake
- nin kinim** (N) • kind of snake
- nin kulu** (N) • kind of snake
- nin wadan** (N) • kind of snake
- nindami** (V) • to carry (pl obj)
- nine alabi** (V) • hold
- nine anggi** (V) • embarrass someone
- nine kani** (V) • understand, be able to do
- ninggi keni** (V) • smile
- ninggi katbai** (V) • smile
- ninggi yopnong** (N) • gums (mouth)
- ninggiduk** (N) • tooth
- ninggilim** (N) • centipede
- ninggi** (V) • grab something/someone
- ninggi** (V) • dig
- ninggi** (V) • carry
- ninggi** (N) • younger brother
- ningtem** (Adv) • under
- mimjop ningtem** (N) • in the heart
- nini** (V) • seize, hold (sg obj), hold on
- nininggono** (N) • shoulder
- nit** (N) • unit of decade in counting
- nitki** (V) • dig, dig the soil with a heavy instrument
- nitnong** (N) • kind of rattan
- niyap** (N) • cassowary
- niyap kip** (N) • animal, animal
- niyi** (V) • catch, hold (pl obj)
- noki** (V) • fall (sg), fall (sg)
- noki** (V) • come off, get loose
- noloni** (V) • touch, touch someone or something once
- nolotki** (V) • touch (several times)
- nom** (Adj) • thick
- nomkono** (Adj) • very thick
- nombe** (N) • for
- nombili** (V) • fall (pl.), fall down (pl.)
- nombi** (V) • park a vehicle
- nombi** (V) • row a boat
- nombi** (V) • lay down (big objects, or objects that can contain many things), put (big objects, or objects that can contain many things), like bags etc.
- nomonen** (N) • kind of bird, small
- non** (PTC) • maybe
- non** (N) • kind of fish, with stings

- nong** (N) • rope, rattan
- nong kombi** (V) • to set a trap, make a snare, entangle
- nonggibi** (N) • medicine, herb
- nonggibi adaman** (N) • medicine
- nonggok** (N) • dew, the remnants of rainwater found in the grass after it rains.
- nonggoli** (V) • hit
- nonggoloni** (V) • walk together while hugging each other, be friends
- nonggonokap** (N) • bicycle, motorcycle
- nonggop** (N) • cassowary feather (hard feather from its wing)
- nongtom adom** (N) • many kinds of
- nonot** (N) • strange
- nop** (Adj) • high
- not-not** (Adj) • colourful, spotted
- nowan** (N) • not, nothing, no problem, empty, don't have
- nowan keli** (V) • finish
- noyok** (Adj) • wide, loose
- noyokni** (V) • become loose
- nukmoni** (Adj) • shocked
- nuknak** (N) • noise, tumult, noise (things)
- nulin** (N) • emotion
- numbumi** (V) • put in (pl. obj.)
- numbuni** (V) • share
- numbunggi** (V) • put into (Num?)
- numbuyi** (V) • put in
- nungguli** (V) • to bear (a child), to give birth
- nungguli tana** (N) • biological child
- nunggulip** (N) • good smell, scent
- nungguluki** (V) • to pour (liquids), to spill (liquids)
- nungguluknami** (V) • to pour (liquid), to spill (liquid)
- nunggum** (N) • pig oracle, i.e. a traditional ceremony to find the cause of someone's death by shooting pigs
- nunggun beli** (V) • praise, to cheer someone up to show feelings of anger, affection/happiness
- nunggut** (Adj) • tired from doing something
- nunggutbin** (N) • kind of bird, small parrot that lives in the Anai nest
- nunukman** (N) • emotion, bad mood
- nunun kono** (Adj) • very lazy
- nunutkono** (Adj) • thick, stiff, dense
- nunutni** (V) • become viscous?/stiff?
- nup** (P) • we (subj), us (obj)

O o

- odani** (V) • quarrel, struggle
ode (Adv) • how
odo (N) • equal to
odo (det) • that, this
ogan (N) • person foreign to Papua
ogilan (N) • people foreign to Papua, government
ogo (det) • that
okbon (N) • market
okemi (V) • make someone, CAUSATIVE
oki (V) • to be broken
ok ambenggi (V) • to take a shower
ok woke wini (V) • the tide is going out (lit. the flowing water goes)
ok alamut (N) • garbage / dirt floating on the surface of the water / river
ok ani (V) • to drink
ok ayini (N) • pond, dam
ok balak (N) • bay
ok buluk-buluk (N) • foam
ok buok (N) • water in a puddle or gutter when it rains
ok kamoni (V) • to sink sth. (trans) (sg. obj)
ok Kiup (N) • river Digul
ok kubuni (V) • to sink
ok manggan (N) • tributary
ok nai (V) • to water (plants), irri- gate
ok nananggit (Adj) • sparkle, flash
ok nedembon (N) • coast
ok ninebi (V) • take a shower
ok notbon (N) • port, harbour
ok numbumi (V) • to sink several things (pl. obj.)
ok tamanbon (N) • lowland, river bank
ok tani (V) • hit by a flood
ok tikap (N) • downstream
okbang (N) • ditch
okbulap (N) • mud
okman (N) • black-yellow monitor lizard, monitor lizard
okmana (N) • dam
okmim (Adj) • hazy
okmot (N) • fishing rod, fishhook, fishing line
okmot nami (V) • to fish
okmup (N) • weasel, water rat
oknedem (N) • sand
ok nembon (N) • rocky island
oknum (N) • island
oknum talep (N) • continent
okomip (N) • cap (Verschluss)
oktat (N) • mud
okunanon (N) • maybe
okune (PTC) • like that, like that,

- like that
- okuni** (V) • do like that
- okunon onet** (Adj) • if so, in case of
- oladum** (N) • request, command
- olali** (V) • talk, tell
- olali bon** (N) • gathering
- olanggi** (N) • advice someone (Sg rcv.)
- olayi** (V) • advise several people (pl rcv)
- olok** (N) • longing, pity
- olok tani** (V) • love, feel for, miss
- olok yanop** (Adv) • pity, saddening
- om** (N) • sago, rice
- om akai** (V) • heap soil or rubbish on the staple plant to be fertile
- om anggo** (N) • European / white person, fried sago
- omani** (N) • banana
- ombalin** (Adj) • NEG, NEG
- ombe kale mini** (V) • run to come back
- ombe kilili** (V) • spend all, open and remove everything from its place until clean.
- ombe nikbi** (V) • fold
- ombe mini** (V) • get away and come here
- ombe wini** (V) • run away
- ombenep** (N) • some of the new sago that is released when heated in a furnace.
- ombet** (N) • from that
- ombet** (N) • shrimp trap
- ombi** (V) • break (sg obj), split (sg obj)
- ombili** (V) • break (pl obj)
- omkap kombi** (V) • somersault, salto, tumble, roll over
- omni** (V) • become rotten, to rot
- omodom** (Adv) • long time, past, before
- omodom** (Adj) • old
- omona** (Adj) • crazy, wacky
- omoni** (V) • give birth, deliver (a baby)
- omyat** (N) • invitation
- omyet** (N) • cigarette pipe filters made from sago leaves
- omyet** (N) • fine grained thing
- on** (N) • bird
- on kimi** (N) • bird feather
- on kuduyap** (N) • airplane
- one** (N) • day after tomorrow, day after tomorrow
- one tebi** (V) • appear, appear
- onem tebem** (Adj) • up and down, uneven
- onet** (Conj) • but, although

- onet ko** (Adv) • now
onetko (Adv) • now
ong (N) • tongue
onggano (DEM) • down there far
onggi (V) • surprise someone (sg. exp)
onggo (DEM) • there (specific)
oni (N) • older sister, oldest sister
oni (V) • protect, keep, take care of, maintain
oni (Adj) • upright, straight, erect
oni (V) • breed
onok (N) • eagle
onong (N) • whistling that is used by the Muyu while dancing the Ket-mon dance
onong gemi (V) • whistle
onongmi (V) • make
onongmi (V) • fix, improve
opkon bomi (V) • to memorize, to remember
opkoni yanop (Adj) • with(?) purpose, useful, meaningful
opkoni (V) • imagine
opkoni (V) • analyse
opkoni (V) • think
opkodi (V) • miss me
opkonggi (V) • miss someone
opkonggi (V) • think several times
opni (V) • to become evening
- opnon** (N) • time of day (15-18 PM)
ot (N) • money, leaf
ot ambip (N) • bank
ot amot (N) • treasure
ot ano (N) • conversation, nagging, complaint, hatred
ot kombi (V) • pay
ot nop (Adj) • expensive
ot yeman yali (V) • sell (pl. obj)
otben kemi (V) • to beg, to request
otbenmun (N) • beggar, requester
otbop (N) • language, talk, talk
otbob nowan (N) • no problem
otbop bon (N) • meeting
otkaden (N) • complaint
otkaden wai (V) • to complain
otkat (N) • anus, rectum
otkatmun (Adj) • greedy, greedy, stingy
otkenep (N) • emotion
otwami (V) • seduce (between sexes)
owetkono (N) • knife made of split bamboo/reed
owet (N) • charcoal, combustion residue
owet (N) • bamboo
owet nup (N) • kind of bamboo, small
owet kolop (N) • kind of bamboo, big

- owonggom** (N) • noise, nonsense
oya (DEM) • there
oyamin (PTC) • until there
oye (DEM) • of that
oyen (det) • that's it, that was it
oye kaduk (Conj) • about
oyi (V) • surprise several people (pl. exp)
oyip (Adv) • also
- oyom** (DEM) • together with (that)
oyop (N) • light
oyopni (V) • become light
oyot kole (Adj) • if so
oyot (N) • worm
oyot (N) • that's why, that's why
oyot (PTC) • DEM.CONTR

T t

- ta** (PTC) • prefix meaning repeat, return, once again
ta (Conj) • and, or, but, and then, also
tabadap (Adj) • thin, flat
tabak (N) • fork on the arrow made from palm leaves or small irons
tabakat (Adj) • stubborn, stubborn
tabalakmi (V) • close, close the window or door very tightly
tabalakmi (V) • hold, hold on tight, catch, catch tight
tabami (V) • to drip (liquid) (steady stream)
tabanggi (V) • to split (into pl obj), shatter, to cut (into pl obj)
tabap (Adj) • severe, grave, hard
tabatki (V) • wash
- tabatki** (V) • sharpen, sharpen
tabek keli (V) • to move quickly
tabetwani (V) • almost do
tabili (V) • break through
tabin (Adj) • clear, clear
tabin mo (Adv) • clearly
taboki (V) • mix, join, cluster
tabok-tabok (N) • composite, association
tabon (Adj) • almost
tabuk ket ambip (N) • ashtray
tabuk (N) • cigarette, tobacco
tabuk (N) • name for people from Java/people who are not Papuans
tabulu wai (V) • to turn, make someone or something turn around and get dizzy.
tadom (N) • heel (body part)

- tai** (V) • shave
tai (V) • take out
take wani (V) • pin, pinch
take wani (V) • press, suppress
taki (V) • close, block
takole tebi (V) • pass, cross border, miss
takoli (V) • leave, pass
takolonggi (V) • leave
talai (V) • bind, bind a fish with a string
talai (V) • put on (in a row, like stitching, or decorating with bird feathers)
talai (V) • stay, hang on
talak (N) • grilling (event), grill (device)
talakbai (V) • to grill
talam (N) • kind of vegetable
talep keli (V) • grow
talep (Adj) • big
talep (Adj) • wide, large
talili (V) • disperse
talili (V) • burst (sg.obj.)
tali (V) • make a way/road
tali (V) • lift part of the cover / parcel to look for / see something
tama (N) • termite
tamaken (Adj) • weak
tamanggi (N) • ridicule, insult
tamanggadi (V) • insult me (1SG exp)
tamanggayi (V) • insult several people (pl. exp)
tamangganggi (V) • insult someone (sg. exp)
taman (Adj) • far
taman (N) • younger brother or sister, form of address, to male+female-younger
tamap (Adj) • tasteless, tasteless
tamat (N) • stone adze, adze
tamayop (N) • young adult, single
tambang (N) • hand clapping
tambang moni (V) • to slap
tambongmone kani (V) • grab, grasp
tamenenggi (N) • to roll
tami (V) • erase, wipe off, clean
tamonombi (V) • turn, reverse, upside down
tamtawot (N) • amusement
tana (N) • child
kaduk tana (N) • male child, son
tana kaba (Adj) • pregnant
tana kanini (V) • be in labor, give birth
tana wat (N) • uterus, uterus
tanali (V) • open, make sth loose
tanami (V) • clean branches or

- branches from the stem
- tandai** (V) • to research, search
- tandinggi** (V) • connect, join
- tane ani** (V) • bite
- tane yali** (V) • split, take out
- tanggalai** (V) • stick (pl obj) (inside sth)
- tanggali** (V) • put out the tongue to insult/challenge someone
- tanggung** (Adv) • rarely, seldom
- tanggin** (N) • bow tip
- tanggi** (V) • start the engine
- tanggi** (V) • shoot with arrows (pl obj), shoot (pl obj)
- tanggi** (V) • to stab so/sth several times, to puncture several times
- tanggi** (V) • harass someone, cuss someone
- tanggi** (V) • trace
- tang** (N) • kind.of.tree
- tang** (N) • name of a dance
- tani** (V) • die, die
- tani** (V) • peel, peel
- tani** (V) • slide down
- tanipya** (N) • day before yesterday
- tankotmi** (V) • merge, put together, mix
- tapni** (V) • broken, become broken, rot, destroyed
- tap** (PP) • under
- tap** (Adj) • bad, bad
- tat** (N) • sole of foot
- tatbo** (N) • barking (dog)
- tatmi** (V) • take out sago flour, clean
- tatbo kemi** (V) • bark (dog)
- tawa** (N) • devil, devil
- tawa ambo** (N) • shaman
- tawak** (Adv) • just, nothing else then, only
- tawakbet** (Adv) • any, whatever, carelessly
- tawap** (PP) • under
- tawat yum** (N) • kind of banana, very fine and soft
- tawayumo** (N) • hopefully
- tayi** (V) • disturb, disturb some people/objects (pl exp/theme?)
- tayi** (V) • scold (pl. obj) several people
- tayobi** (V) • lift a portion of the cover / package to look / see something among many objects
- tayoni** (V) • lift a part of the cover / parcel to look for / see something
- tebeki** (V) • come out (for small things?)
- tebi** (V) • wake up, rise (sun)
- tebi** (V) • grow
- tebi** (V) • move (somewhere else)
- tekai** (V) • pull

- tekbat** (N) • bowstring
- tekmi** (V) • tell
- tekwali** (Adj) • brave
- tekwali kono** (tekwali mo) • Ad
- tekwin** (N) • sparrow
- tek** (N) • shadow, reflection
- tek** (N) • soul, spirit, shadow
- tek** (N) • little finger
- telebi** (V) • to overflow, to overflow
- telebi** (V) • attend, gather, organize
- telekmana** (N) • opportunity
- telen** (N) • leech
- telendani** (V) • repel so/sth, crowded
- teleni** (V) • insert something into another object (sg. obj.), put something into another object (sg. obj.), insert something into another object (sg. obj.)
- teleni** (V) • wear clothes or jewelry, wear clothes or jewelry
- telep** (Adj) • pain when a wound is touched
- telep tani** (V) • to feel pain when a wound is touched
- telep** (Adj) • sweet taste of young coconut milk
- telun telon** (N) • demand
- tembani** (V) • drag (pl Obj), pull (pl.obj)
- temenggi** (V) • insert several objects into another object (pl. obj.), put several objects into another object (pl. obj.), insert several objects (pl. obj.) into another object (sg. obj.)
- temenggi** (V) • wear (pl. obj) (clothes), put on (pl. obj) (clothes), wear shoes
- temetki** (V) • to tap (=put sth onto)
- temi** (V) • see, visit
- temkalang** (Adj) • transparent
- temkodon** (Adj) • firm, tight
- temop** (Adj) • hard (situation), difficult,
- tem** (PP) • in, inside
- tem** (N) • kind of tree
- tendale bi** (V) • to rob (pl obj)
- tendale kani** (V) • to rob (sg obj)
- tenek** (N) • resin
- tene mini** (V) • pull something (in speaker direction)
- enekelam** (N) • Muyu people who live at the shores of the Kowo river
- tenggetmi** (V) • take / pick leaves by pulling from the stalk
- teng** (N) • scabies
- teng** (Adj) • itchy
- teng tani** (V) • to feel itchy
- teni kono** (Adj) • liquid

- teni kono** (Adv) • very slowly
- teni** (V) • melt
- teni** (V) • ripe, mature, light up, flare up
- tenop** (N) • fire tongs
- ten-ten** (Adj) • naughty
- tepmoni** (V) • push/insert an object into a tube by force
- tet** (N) • grasshopper
- tet kobim** (N) • kind of grasshopper, lives in the grass
- tet** (N) • flower, blossom
- tetbo kemi** (V) • to bark (for dogs)
- tetwai** (V) • to blossom
- ti** (N) • kind of banana
- tibilop** (N) • a palm tree whose leaves are used to decorate churches at Easter
- tibilop** (N) • hell, bastard
- tibit** (N) • sneezing
- tibit** (N) • pole, support
- tibit nali** (V) • support
- tidepkono** (Adj) • tasteless, tasteless
- tikabat** (N) • kind of tree
- tika mini** (V) • come back, move backwards
- tikap** (N) • downstream
- tikibi** (Adj) • strong, brave
- tili** (V) • bear fruit
- tiliki** (V) • to sag (clothing), fall off (clothing)
- tilinali** (V) • rub (sth. onto)
- tim** (N) • louse
- timbanggang** (N) • healer
- timbili** (V) • sit (sg subj)
- timbili** (V) • stay, live
- timbon** (N) • place
- timinggi** (V) • carry (pl obj) on the shoulder, carry (pl obj)
- timinggi** (V) • touch, touch, especially touch wounds and cause pain / stinging.
- timkali** (Adv) • not complete, on top
- timbang** (Quant) • many
- tin kele taman kele** (Phrase) • almost certainly, it's almost time
- tinambuk** (Adj) • dizzy
- tinbalin** (Adj) • long (i.e. not short), not close
- tineneng** (Adj) • anxious
- tinggambo** (N) • parts of the human body from waist to toe, hip
- tinggan** (N) • meat
- tinggan** (N) • mouse, cuscus
- tinggan talamat** (N) • meat
- tinggi amot** (N) • finger
- tinggi anggo** (N) • thumb
- tinggi tambang wai** (V) • to clap

- hands
- tinggi yut** (N) • signature
- tinggi yut wai** (V) • to sign (a document)
- tinggi** (N) • hand
- tinggi** (V) • chew
- tinggulut** (N) • kind of bat (small)
- ting-ting** (Adj) • tight
- ting** (EXCL) • alright! okay!
- tinim** (N) • bow
- tinim** (N) • weapon, gun
- tini** (V) • change someones money or treasure
- tini** (V) • reply, revenge
- tini** (Adj) • mature, cooked
- tin** (Adj) • near
- tin** (N) • honey
- tipni** (V) • finish, end up
- tipni** (N) • ready
- tipnoden** (Adj) • enough
- tip** (Adj) • suitable, enough, exactly, appropriate
- tip** (Adj) • good, nice
- tip minip** (Phrase) • Welcome! (lit. you came well)
- tip kadep** (PTC) • thank you
- titki** (V) • bear fruits
- titkono** (Adj) • naughty
- tit** (N) • treasure, dowry
- tit** (N) • flour, contents, filling, essence, product, result
- tiwin** (N) • kind of bird, like a sparrow with red head
- tiwin monggop** (N) • parasite
- tiwit** (N) • ridge
- tiyambu** (N) • kind of tree, leaves/salad from this kind of tree
- tiyami** (N) • hell, son of a bitch
- tiyok** (N) • tree bark which is usually used for cooking
- tobi** (V) • bite
- tobon** (N) • sago / coconut leaf stick
- tobop** (Adj) • straight (tree or stick)
- tokbi** (V) • split something (sg. obj.)
- tokbut** (N) • lie
- tokbut kemi** (V) • cheat, to lie
- toke tebi** (V) • to become full
- toki** (V) • heal
- toki** (V) • slide down, release/fall
- tokmom** (N) • fake, pretension
- tokot** (Adj) • only, just
- tokot** (Adj) • empty, meaningless
- tolewani** (V) • to limit, to block, obstruct, hinder
- toli** (V) • step on once
- toli** (V) • perch on (sg sbj)
- tolok** (PP) • on
- tolonggi** (V) • to warm up the body
- toloni** (V) • queue up, line up
- tombi** (V) • make, attach, put

- tomkot** (Adj) • excellent, calm
tomoni (V) • bite
ton (N) • fish
ton kok (N) • dried fish, salted fish
tonggoleng (N) • grunting, snore
tonggoleng wai (V) • to groan, to snore
tonggop (N) • kind of tree, the bark is fragrant which is usually used to cook sago
tong (N) • star
tong (N) • fireflies
toni (V) • climb
tonop (N) • fire tongs, tongs
tonop (N) • spoon, fire tongs
top (Adv) • only, mere, merely
top (Adj) • oldest
totki (V) • step on, step on something several times
totki (V) • perch on (pl sbj)
totkono (N) • pole
towenebi (N) • to flow
towini (V) • pass, violate
towok (N) • invitation
towok kombi (V) • to invite
towok (N) • crab
towong (N) • whistling
towong gemi (V) • whistle
towong ni (V) • whisper
towot (N) • guest
towot bomi (V) • visit
towot amtiti (N) • guest room
to (Conj) • or
tubuli (V) • to rage, to act blindly
tubulum (N) • footprint, trace
tubuni (V) • to cover
tukni (V) • become short
tuktup (N) • fruit flies
tuk (Adj) • short
tuk (N) • stub
tulip (Adj) • fragrance
tuli (V) • lean something against another object
tulumo (Adv) • alone
tulum (N) • caterpillar
tuluni (V) • heal, heal wounds like medical surgery wounds, close, close again
tum (Adj) • moist
tumanggi (V) • step on, kick
tumbi (V) • turn around, turn one's head
tumbi (V) • return, come home
tumbop (Adj) • wet
tumni (V) • become moist
tumombi (V) • kick someone or something
tun ambip (N) • heaven
tunbili (Adj) • eternal, forever
tunggum (Adj) • short

tunggum (Adj) • debt

tungnet (N) • kind of small pandanus tree

tuni (Adj) • afraid

tunmo (Adv) • always

tunuk (N) • stem

tutbop (Adj) • wet

tutni (V) • become blind

tut (N) • forest

tut (Adj) • blind

tuyang (N) • paddle

U u

ubi kung (N) • cassava leaf

uluk aluk (N) • chirping sound

uluk aluk kemi (V) • to make a chirping sound

ulumbon (PP) • under the tree

umkan (N) • blood

umkan wai (V) • bleed

un alik (N) • cuscus

ungeng (N) • imitation of crickets

ungambi (V) • swell

unin (N) • The name of a broadleaf plant that grows like a taro

up bimi (V) • to smooth, refine, to crush

upneng (N) • breath

upneng nai/upneng wai (V) • to breathe

upneng konom (N) • asthma

up (N) • wind, air

up (N) • waste, rest

ut (Adj) • not filled, lean

ut (Adj) • wrinkled

uwop (N) • steam, smoke

W w

wa (N) • morning bird

wadan (N) • green snake with white spots on its back.

wai (V) • write

wai (V) • pick (pl obj), cut

wai (V) • to nest, make

wakbit (N) • kind of tree

wakoli (V) • stop

waktop (Adj) • clearing, bright place

walakai (V) • cheat, lie

walakaimun (N) • cheater, fraud

- walap** (N) • trap
- wali** (V) • turn on, turn on (an electric device)
- wali** (V) • pierce, put a whole in it, make entry
- walok** (N) • saliva
- waluk** (N) • magic spell
- wam** (N) • inherited money
- waminggi** (V) • hang
- Wambon** (N) • Name of a tribe in the Boven Digoel regency
- wame yi** (V) • to disturb
- wamung** (N) • fly
- wamung gilibak** (N) • blue fly
- wan** (N) • yam
- wan bomi** (V) • check, check a situation or information
- wana** (Adj) • young fruit that falls when still premature and unripe.
- wanali** (V) • cut and throw away
- wanami** (V) • to stab/poke several fruits (pl obj), pick several fruits (pl. obj)
- wane balaki** (V) • disappear, hide away
- wane kali** (V) • cut, break
- wane keli** (V) • to become, move into sth.
- wane kilibi** (V) • recover from illness, recover from illness
- wane kombi** (V) • slip out of the trap
- wan omani** (N) • foods
- wane toli** (V) • be free
- wane wini** (V) • fly
- wanggalong** (N) • kind of shrimp
- wanggaluk** (N) • kind of tree
- wangga** (DEM) •
- wanggin** (N) • praise
- wanggin wai** (V) • to praise
- wanggin** (N) • support, protection
- wanggin wai** (V) • defend, take sides, support
- wanggiyali** (V) • open clothes, undress, break free, get well
- wanggi** (V) • cut down
- wanggi** (V) • write, write several writings
- wanggi wangga** (N) • learnings, writings
- wanggot** (N) • breadfruit flower
- wani** (V) • pick (sg obj)
- wani** (V) • inflame
- wani** (DEM) • down, there
- wani** (V) • stop, finish
- wano** (Adv) • downwards, last time
- wano-wano** (Adv) • previously, before
- wanot** (Adv) • at the back, behind
- wapkok** (N) • kind of lizard

- wat** (N) • kind of fish
- watkeli** (V) • recover from illness
- watmep** (Adj) • healthy
- watmepmo** (Adj) • healthy
- watmi** (V) • pick (pl obj)
- waum** (Adj) • defective, crippled, paralyzed
- waum** (Adv) • inside (container), into (container)
- wawuk** (Adj) • toothless
- wayeli** (V) • evaporate
- wayi** (V) • cut / take something from most objects then give to several people (pl. rcv)
- wayi** (V) • look for (animal object), find (animal object)
- wayok** (Adj) • empty, not filled
- wayuk-wayuk** (Adj) • flexible
- wayut** (N) • kind of bird, parrot
- wayutki** (V) • peek, sticking out the head through a slit/hole
- webuk** (N) • stick to smooth sago stems that have been smoked in the midrib
- webuk wai** (V) • to hit with a stick
- wedambili** (V) • hear
- wedambili** (V) • obedient, submissive
- wedek** (N) • sago midrib
- weget kubuget** (N) • transvestite, third gender
- welen** (Adj) • sick
- weleni** (V) • to be sick
- welen** (Adj) • hard, difficult
- welep** (N) • traditional fishtrap made of thorny rattans
- wemban** (N) • penis, penis
- wenbani** (V) • hit so (feminine)
- wendale kani** (V) • take away property of a woman or female animal
- wendali** (V) • expel so. (feminine), refuse so. (feminine)
- wene** (Conj) • until
- wene kede** (N) • where
- wenekombi** (V) • kill (a woman), fall down (feminine), hit the ground (feminine)
- wenembili** (V) • start to
- wene-wene** (CONJ) • until
- wengkaweng** (N) • type of song
- wengbop** (N) • language
- wen-wen** (N) • brush
- wenwai** (Adj/Adv) • rough(ly)
- wep** (N) • year
- wet** (N) • kind of tree, with hard wood
- wetwon** (N) • gap, rift
- wetwon** (N) • compass
- wiamung** (N) • late at night, midnight

- widanggun** (N) • kind of tree
- wilibi** (V) • to pile in zigzag
- wilibi** (V) • hit so. with force using an obj
- wilini** (V) • lie down, block
- wili-wili** (Adj) • quiet
- wim** (N) • resin tree
- winai** (V) • collect
- windani** (V) • remain silent
- winggai** (V) • vomit
- winggi** (V) • sing
- winggi** (V) • spinning, weaving
- winggi** (V) • cut down several trees (pl obj)
- wini** (V) • go, walk
- wini** (N) • egg
- wini kombi** (V) • lay an egg
- wini** (V) • cut down a tree
- winkali** (V) • collect
- winmonggi** (V) • give, hand over (sg obj, sg rcv), give (sg obj, sg rcv)
- winmoyi** (V) • give, hand over (sg obj, pl rcv), give (sg obj, pl rcv)
- wipti** (N) • right (direction)
- wip** (N) • middle
- wip** (N) • fog
- wiyam** (N) • usual place
- wiyam** (N) • habit
- wok** (N) • kind of ant, long and black
- wokbe** (N) • kind of banana
- woki** (V) • recede (water), recede (water)
- woki** (V) • cut, break
- wolobi** (V) • break (pl obj), divide (pl obj), split several fruits
- wolobi** (V) • get in the way, obstruct, hinder, block
- wom** (Adv) • inside (container), into (container)
- wombe anggani** (V) • cross, pass over, traverse
- wombe tabami** (V) • drip (on drip at a time)
- wombetai** (V) • screw up, mess up, hamper, turn
- wombi** (V) • cut (sg obj), cut (sg obj)
- wombi** (V) • prevent, stand in one's way, block
- won** (N) • a call is usually used by someone as a friend, designation
- wonamen** (N) • creation
- wonami** (V) • create
- wonamtem** (N) • place around the oven
- wone kombi** (V) • represent (?), depict, create
- wongge alini** (V) • crouch (pl. Sbj)
- wongge timbili** (V) • crouch (sg. Subj)

- wonggo** (DEM) • there (unspecific)
woni (V) • cut something then give it to someone (masculine)
wonok monok (N) • going and coming back
wonomenem (Adj) • dizzy
wonon (N) • part
wonong (N) • woman, woman
wonop (N) • firstborn child, oldest
wot adon (N) • world, earth
wotbom (N) • dirt
wot (N) • moon
wot (N) • kind of drum
woya (N) • grandmother
woya (N) • aunt, uncle's wife
wudili (V) • come in, enter
wudo (DIR) • in, into, hither
wudukbon (Adj) • severe (disease), serious (disease)
wukai (V) • take out (of container)
wukap (Adj) • blunt, dull
wuknem (N) • a large two-horned beetle that can damage crops.
- wuli** (V) • to smoke, whisper
wulukmi (V) • make noise
wulunai (V) • shiver
wumi (V) • blow
wumi (V) • smoke
wumtum (N) • naked
wundai (V) • nag
wunem tebem (V) • in and out (lit. enter and move)
wunggi (V) • plan, plot
wuni (V) • enter
wun (N) • poison, name of a tree with a poisonous bark
wun (N) • loud noise that can be heard from far
wup (N) • paint
wupki (N) • brother
wut (N) • food scraps that are usually stuck to the teeth
wut (N) • fish excavated on the ground/sand in the river

Y y

- ya** (PP) • at, to
ya (N) • kind of fish, beautiful scaly yellow striped freshwater fish.
yabalakmi (V) • put out the tongue
- yabat** (N) • clump, ball
yado (DIR) • up
yakmanim (Adj) • rough, rude
yakmat (N) • cheek

- yale koli** (V) • leave sth. (pl obj)
yale kombi (V) • put down (pl. obj) with force (“anger situation”)
yali (V) • lay down (pl obj), put (pl obj)
yalokmene kani (V) • choose, choose an object (sg.obj), look for
yalokmi (V) • look for
yaluli (V) • burst (pl.obj.)
yamadom (Adv) • very bad, awful
yambimop (N) • kind of banana
yami (N) • battle song
yami (V) • throw away (pl obj), throw (pl obj)
yamin (N) • limit, limitation
yamin wai (V) • to limit
yamit ombi (V) • stick out sth. (like tongue)
yamo (N) • always
yamum (Adj) • young (female)
yanam (N) • right, true, truth
yang (N) • a traditional game, making string figures
yanggan (N) • torch
yangganun (Adj) • rough, hard
yanggemop (N) • pipe (to smoke)
yanit (N) • person in charge, intermediary, defender, protector, someone who is concerned
yani (V) • climb onto
yani (V) • cross
yanop (PTC) • have
yanop (PTC) • there is
yatbon (N) • center, grove
yatmi (V) • to fish
yawalep (N) • lemon, jeruk (fruit between lemon and orange)
yawitai (V) • curse, curse someone for their crime
yawok (N) • kind of bird (pigeon?)
ye (N) • he (subj), his, him (obj)
yedang (N) • kind of “string” (liana? vine?)
yedengmi (V) • do something greedily or emotionally, do something in a brutal way, act blindly
yedet (N) • matoa tree with small fruit
yedo (N) • leaf of Nibung tree
yedo moni (V) • make a hut/shade with nibung leaves
yedokmoden (Adj) • since time immemorial, naturally
yedon (Adj) • by itself
yedonombin (N) • a fizzing sound
yedonombin wai (V) • to fizz
yek (Adj) • dishonest, inclined
yekambet (Adj) • up to him
yekat man (N) • person with deep knowledge, male teacher

- yeka-yeka** (P) • each of
- yeki** (V) • tilt, to tilt
- yelemet** (Adj) • boring, lazy, confused
- yelep kani** (Adj) • be busy
- yelep** (Adj) • thirsty
- yelep** (N) • why
- yelo** (N) • reeds
- yeman** (PP) • to, for, have
- yembop** (N) • wound
- yemen** (N) • taro
- yem** (Adj) • slow
- yem** (Adj) • quiet
- yem adep** (Adv) • slowly, quietly, hidden
- yem** (Adj) • secret
- yemo** (Adv) • quietly
- yena** (N) • other, partially, half
- yena** (N) • trail, footprint
- yenbani** (V) • kill (pl obj)
- yenbani** (V) • hit so (pl obj)
- yendale bi** (V) • take many things from many people or animals
- yendali** (V) • expel so (pl obj), refuse so (pl obj)
- yenenggi** (V) • tie, bind
- yenenggi** (V) • to build several houses or buildings
- yenet** (N) • cricket
- yeng** (Adj) • dry
- yeng ani** (V) • to dry
- yenggelekman** (Adj) • rude
- yenggi** (V) • blow, blow like a gust of wind
- yeni** (V) • to build a house or building (sg obj)
- yenkai** (V) • kill several people or animals
- yenkai** (V) • fall (pl.sbj.)
- yenok** (N) • claw (animal)
- yenop** (N) • final, end
- yenot-yenot otbop** (N) • proverb
- yepyep** (Adj) • slippery
- yepyep kono** (Adj) • smooth, smooth
- yetnong** (N) • kind of rattan
- yet** (N) • bracelet
- kono yet** (N) • ankle bracelet
- yet** (N) • kind of tree, with edible fruit
- yewak** (N) • claw (animal), claw
- yewenup** (Adj) • gentle, graceful
- yewulu** (Adj) • fever, fever symptoms, pain
- yibi** (N) • end of a boat or ship
- yibidilim** (N) • kind of cuscus, small
- yibikono** (N) • tail
- yibin** (N) • hand between the fingers and elbows (i.e. arm and hand)
- yibi wai** (V) • to wag (animals tail)

- yik** (N) • thorn
yika (N) • theirs, themselves
yikambet (Adj) • up to them
yiki (V) • relieved
yikmonggi (V) • give (pl obj, sg rcv)
yikmoni (V) • leave (pl obj), give (pl obj)
yikmoyi (V) • give (pl obj, pl rcv)
Yilik (N) • Marind (one of the peoples of South New Guinea), person of the Marind
Yilik man (N) • man of the Marind people
yili (V) • reach out (hand)
yilok (N) • entertainment, enjoyment
yim (N) • shoots (plant)
yim tebi (V) • to sprout (grow)
yimik (N) • kind of bir
yimim (N) • Meranti tree (Shorea)
yimin (N) • limitation
yimindami (V) • to hang sth.(pl obj)
yimin wani (V) • limit, restrict
yiminai (V) • to hang (pl. obj)
yiminanggi (V) • to hang (pl. obj)
yiminggi (V) • to hang (sg. obj)
yin (N) • boil
yinam (N) • jewelry that is usually used by Muyu people as a dowry in ancient times.
yinggi (N) • female (for animals)
yinim (PP) • on
yitbon (N) • yard
yitni (V) • become cold
yi (N) • they (subj), their (possessive), them (obj)
yi (V) • hit (pl Obj), kill (pl Obj)
yobi (V) • to shake
yobodeng (N) • kind of vegetable/salad(?), from the young shoots of the fern
yobotkop (N) • ball
Yok (N) • name of a dance from the Muyu area
yokmi (V) • to shake
yokmom (Adj) • afraid
yokmom tuni (V) • to be afraid
yoknan kanan (Adj) • be limping, lame
yoktot (Adj) • careful
yoli (V) • illuminate, shine
yolokti (Adj) • straight, benevolent
yoloni (V) • cheer, jubilate, shout
yom tani (V) • disturb, interrupt, do wrong, make a mistake
yom (N) • negligence
yom (N) • bat
yombi (V) • try, start

- yomtop** (Adj) • clean
- yom** (N) • muscle
- yom** (N) • meat
- yom** (Conj) • and
- yom** (PP) • together, with
- yon kat** (N) • shoe, sandals
- yonbin** (N) • kick, footstep
- yondem** (Adj) • after, behind
- yongbon** (N) • garden
- yongbon ambon** (N) • foods
- yonggi** (V) • call several times
- Yonggom** (N) • one of the clans of the Muyu people with an own dialect, lies in the east of the Muyu area.
- yoni** (V) • lean on, lean on another person, leaning, leaning something on another object
- yoni** (V) • become infected, get spoiled, get bad
- yonka** (N) • walk on foot
- yon** (N) • foot
- yon** (N) • a kind of small sugar cane
- yop** (N) • fruit, seed
- yopni** (V) • swallow
- yopki** (V) • swallow (pl obj)
- yot** (N) • kind of lizzard, slippery lizards that live in caves or carry rotten wood
- yowo** (N) • traditional bag to store sago
- yowodang** (N) • wallet, bag to put money in
- yowoknai** (V) • do something non-serious/not on target.
- yowoli** (V) • die (pl. sbj),
- yowotki** (V) • die (several living creatures), die (several living creatures)
- yubule ali** (V) • clean plants, etc.
- yubulum** (N) • root (fiber)
- yubutki** (V) • clean
- yuka** (Adj) • hers (f), herself
- yukambet** (Adj) • up to her
- yukat wonong** (N) • a knowledgeable woman, a female teacher
- yuki** (V) • spill, pour (liquid)
- yukim** (Adj) • fast
- yukim mo** (Adv) • fastly
- yukmon** (N) • drizzle (rain)
- yukmup** (Adj) • soft, fine, soft
- yuktolok** (N) • layer
- yuli** (V) • braid (hair)
- yuluk** (Adj) • cold
- yuluk tani** (V) • to feel cold (germ. frieren)
- yuluk wombi** (V) • to refresh (make feel cold in a good way)
- yulun** (N) • kind of fish, catfish
- yulut** (N) • large edible caterpillars
- yulutkuk** (N) • kind of ant, small

and red	yumuni (V) • to ripen, become ripe
yum (N) • banana	yumup (N) • paper
yumbidang (N) • dried palm leaf	yumup (N) • dry banana leaf
yumu (Adj) • red, ripe	yun mim (Num) • number 1.000
yumudimo (Adv) • hard, strongly, with force	yuni (V) • draw water from well
yumun (N) • urine	yunmoni (V) • bless
yumun binggi (V) • to urinate, to pee	yun (N) • problem, topic, issue
yumun kok (Adj) • feeling when one has to go to the toilet to urinate.	yutkuk (Adj) • cold
	yut (N) • trace
	yut (N) • jackfruit tree

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