This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.
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Abstract

This thesis is a description of the grammar of Eastern Momu, a language spoken in Papua New Guinea in the north-western province of Sandaun. This is a region with a fair amount of diversity, with several isolates or small language families, and few detailed descriptions. Momu, or Fas as it is more commonly known in the literature, together with the virtually undocumented Baibai language, forms one of these small language families.

The thesis is structured such that after a general introduction to the people, language, and region, I give chapters covering: phonology, phonotactics and morphophonemics (Ch. 2), word classes (Ch. 3), nominals (Ch. 4), noun phrases (Ch. 5), verbs (Ch. 6), aspect (ch. 7), grammatical relations (Ch. 8), adverbs (Ch. 9), clauses (Ch. 10), non-verbal predicates (Ch. 11), modality and negation (Ch. 12), serial verb constructions (Ch. 13), compounds and coordination (Ch. 14), subordination (Ch. 15) and complementation (Ch. 16).

At first glance, Momu has a relatively uncomplicated five vowel phonology, or ten vowels if one includes length. Glides hold a special position within the phonology, phonotactics and morphophonology, as I have analysed it. Glides interact heavily with adjacent segments including metathesis with adjacent consonants in a predictable fashion. Additional phonetic long high vowels arise from some glide-vowel combinations. Amongst the consonants, there is a bilabial trill. This is an areal feature that is rare amongst the world’s languages.

A marked feature of the verbal system, but also areally, is a relatively high count of verbs coding verbal number. Verbal number in Momu is conservatively estimated to occupy 30% of the verbal lexicon, placing it at the upper end of the typological space. The theme of verbal number runs throughout the thesis as its relatively high frequency makes for contrastive behaviour in
certain domains.

Momu has some classically "Papuan" features such as serial verb constructions and verb-final ordering (albeit not strictly so). This thesis aims to position Momu within the growing body of work describing the incredible features, number and variety of languages of Papua New Guinea, but also to focus on a region within Papua New Guinea with perhaps a higher degree of diversity and lower total count of documentation overall.
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<td>GO.FUT</td>
<td>go/future</td>
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<td>object (§8.2.2)</td>
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<td>progressive (§7.4)</td>
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<td>PROH</td>
<td>prohibitive (§12.1.1.5)</td>
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<td>Short Form</td>
<td>Description</td>
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<td>-------------</td>
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<td>PROP</td>
<td>proprietary (§4.8.6, §11.5)</td>
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<td>present - used in Imonda data</td>
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<td>PST</td>
<td>past - used in Imonda data</td>
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<td>PX</td>
<td>proximal (§3.6.1, §7.4.2.1)</td>
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<td>Q</td>
<td>question particle (§10.3.2.3)</td>
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<td>RCO</td>
<td>representative coordinator (§3.5.5.4, §14.2.3)</td>
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<td>RE</td>
<td>reciprocal-emphatic (§4.1.4, §10.2.2.1)</td>
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<td>realis (§7.4.2)</td>
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<td>relative (§15.1)</td>
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<td>restrictive (§4.8.8, §16.2)</td>
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<td>S</td>
<td>subject (§8.2.1)</td>
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<td>SEEMS</td>
<td>seems predicate (§16.1.2.4)</td>
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<td>SG</td>
<td>singular (§4.1, §6.2, §10.3.3.1)</td>
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<td>STANCE</td>
<td>stance predicate (§11.12.2, §12.1.2.1, §16.1.2.2)</td>
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<td>STVZR</td>
<td>stativiser (§7.5.3)</td>
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<td>TP</td>
<td>tok pisin</td>
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<td>TRANS</td>
<td>transitiviser (§6.5.2)</td>
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<td>VOL.FUT</td>
<td>volitional future (§12.1.1.1)</td>
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<td>VTR</td>
<td>transitive verb forming suffix (§6.3.3)</td>
</tr>
<tr>
<td>YNQ</td>
<td>polar question (§10.3.2.1)</td>
</tr>
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Chapter 1

Introduction

1.1 The Momu language and its speakers

The Bewani Ranges are in the north-western corner of Papua New Guinea, in Sandaun Province. They stretch from the border with West Papua eastward to the Torricelli Ranges. At the eastern end of the Bewani ranges, there are two strings of villages—one each on the northern and southern slopes. Momu is spoken in these villages. An intricate web of tributaries flowing from the ranges has created vast deltas on either side. Some maps indicate that the language spreads north to the coast, but this is not the case. The villages are spread out over a large area, with as little as an hour’s walk, but sometimes up to two day’s walk between them. With so much distance, intermarriage or other direct contact between the eastern-most and western-most villages is unheard of.
While I am aware of some lexical differences between villages within the eastern-most area where I worked, I have had the writings of Wietze Baron (§1.2) to guide me on the life and language of the western-most end. In comparing our two accounts separated by significant distance and more than 30 years, it is clear that the language varies significantly from one end to the other and that it is undergoing rapid change. While proper survey work would be needed to more precisely characterise the differences, at this stage it would be reasonable to make a distinction between eastern and western Momu dialects, though the situation may turn out to be more complex.

Speakers label the difference TP¹ *lait* “light” and *hevi* “heavy” Momu. I observed many younger speakers identifying with the “light” variant. But I also observed many older speakers variously adopting features of “light” speech. These included lexical items, but also the simplification of some phonological distinctions (mostly vowels, §2.6.2) and morphological categor-

¹Throughout this thesis I will mark Tok Pisin material with the abbreviation TP.
ies. Listening to older source material (§1.5) revealed a real difference between materials collected in the west and east. My consultants struggled to understand some of the western materials. From the outset, I begin with reservations about the scope of this work as a grammar of the entire language. The title of the thesis is a little overreaching—this is a study of the eastern dialect of Momu, not a comprehensive study of all dialects within the language. But where I have had access to western materials I have noted it.

Momu is the autonym that was most commonly given to me by speakers both in the villages I worked in and in the main town of Vanimo. *Momu* ("no") follows a common naming pattern within Papua New Guinea and Australia. Many were aware that the language had been given the name Fas, most likely by patrol officers traveling through the area. Unsurprisingly, those that lived far from the namesake Fas village were perhaps the least likely to want this name to continue. Fas is the name adopted by the majority of the literature produced so far, but it has also had other names (§1.1.1). I have adopted Momu as the name for this grammar out of respect for the wishes of the majority of speakers that I encountered.

The environment in which the language is spoken varies from fertile delta-plain soils to steep mountains going up to about 1400m above sea-level. Rivers and streams cut their way through the sides of soft and young mountains, through dense and sometimes impassable forest and swamp. Heavy rainfall in the area means that it is continually being reshaped. The occasional landslide is not uncommon. It is common for the main river upon which the people of Mori village live to flood. It is a predictable enough event, so much so that to describe it as a *tp tait* "flood (from tide)" seemed quite apt to me. When heavy rain falls in the mountains to the south—also a regular event—flooding will follow not long after. Within a few hours, the

---

2The source for languages named "no" in the region may well have been Laycock (1968). In a footnote (2, p64) to his survey of the Lumi sub-district, he says: "...the language names given here are arbitrary; some are from previously published sources such as the SIL surveys. For languages first encountered during the 1967 survey, I have followed the Lumi administrative habit of naming the languages by an anglicised version of the word for ‘no’-except in the case of languages spoken by a single village, in which case the village name usually seemed preferable." In Australia, either a reduplicated form or a combination of "no" with the comitative or proprietive (sometimes referred to as “no-having” languages) is a common language naming strategy (Dixon, 1980, pp40–43).

3I should note that I did encounter a couple of speakers who were adamant that the language should be referred to as *Mony* ‘talk/speech’ (my spelling).
gentle stream, usually only up to 50cm deep and at most 10 meters wide, becomes a raging torrent well over 100 meters wide and deep and strong enough to carry whole trees and heavy rocks. The flooding often starts slowly enough that children playing on the bank of the river sometimes not realise the danger they are in, but builds suddenly enough for them to be swept away. Sadly it seemed that whenever I returned to the village every couple of years, a few children would have drowned in this way.

Rivers and streams serve as the main corridors upon which Momu speakers have traditionally travelled from village to village. Mori and Savamui villages are exceptional in terms of the typical positioning of a village, being down upon the delta. I was told that the Mori, Savamui and Mumuru villages where I did fieldwork had all been moved north by patrol officers (Kiap) in order to make it easier for them to patrol the area. Originally, all were positioned on higher ground. They used to be positioned further south in places that are much more difficult to reach.

These days, the roads that have been built for the extensive logging in the region have opened up the area, making it easier for the people living further south to head into town (the coastal towns of Vanimo or Aitape) via car.

It would have been unthinkable to me during my first trip to Mori village in 2005, but by the last trip in 2012 an iron bridge over the main river Piore was under construction. The bridge is one of the few remaining water crossings needed to complete the “east-west highway” connecting Vanimo to Aitape (with Aitape to Wewak already completed). Since about 2010 many people have started to make their way along the coast to the border town Vanimo, to access cheap Indonesian goods from the batas (“border”) markets.

This is an era of extensive and far reaching change in the lives of many people in the region, with sudden access to temporary flows of income through logging royalties and work for “the company”: a series of contractors logging subsections throughout the region. When I first arrived in Mori village in 2005, life was quiet. The people there lived a subsistence lifestyle, engaging in swidden agriculture to grow a variety of vegetables in the fertile soil of the delta. Some cash crops were grown. Vanilla and cocoa were both grown in Mori, but initially it was difficult to transport these goods to the coast in any great quantity. There was constant chatter about the gold in the region. Enthusiasm for panhandling swept through the area on several
occasions, and there was always talk of companies coming in to mine gold or oil.

Sago is the primary staple in this region, and for those familiar with the distinction, Momu speakers see themselves very much as sago jelly eaters (TP hatwara), eschewing the more coastal habit of making sago pancakes (TP fraim) as the foundation of every meal. Other staples include aibika, taro, TP tulip ("Two leaves" Gnetum gnemon), and, of course, bananas of many varieties. In the lowlands coconuts are plentiful, but I was told that they become more difficult to cultivate at the elevation where Momu is mostly spoken. Game meat is plentiful. Pigs and cassowaries are sometimes raised in the village but are usually caught wild using a bow and arrow. Smaller game that might be caught in traps or shot include ground and tree kangaroos, possums, bandicoots and cuscus. Domesticated chickens, cats and dogs are kept.

Some aspects of the language beautifully reflect the environment in which Momu speakers live. For instance, there is a set of riverine and elevational verbs (§3.6.2.1) that grammaticalise distinctions perfect for traveling via the river and stream "highways". In the orthogonal direction, a distinction is made by what I have labelled the transversal verbs. These capture an important distinction between entering or leaving visibility, usually crossing some real or perceived barrier. The same verbs are used for entering or exiting a house or bush (relative to the deictic centre), crossing rivers and so on. But a similar distinction is captured by the various forms of the progressive, which additionally marks relative distance of the event versus non-visibility or inference (§7.4). Marking the visibility or inferability of referents is thus a common and natural part of speaking Momu. A common narrative style called ukumosy often involves intricate descriptions of named rivers through which the protagonist travels. Depending on the audience, the names might be dropped, and instead a sequence of riverine verbs is strung together. In this way, these seemingly long stories build or reinforce in the minds of the listeners extensive maps of the region.

I began working in Mori village in 2005, accompanying my wife Fiona Honeyman (then Blake) on a trip for collecting data for her Honours Thesis (Blake, 2007). The first thing that immediately leapt out at me was the extensive use of verbal number (§6.6). Seemingly every verb had an alternate form that we would need to learn, and we soon got into the habit of checking.
As work progressed, though, it became clear that this did not occur with the majority of the verbal lexicon, just with high frequency verbs—and this is in fact what one would usually expect of a language with verbal number. Nevertheless verbal number is certainly an interesting feature in Momu. In this grammar, I have used it in defining specific grammatical relations, valency, and event structure in serial verb constructions—all the while maintaining that it is a semantic feature of certain verbs, not a grammatical one.

These are just a few of the many interesting features of the language. I highlight others in the overview of the grammar below (§1.7). But the main purpose of this chapter is not to examine the grammar, but rather to set the scene for the remainder of this thesis.

1.1.1 Momu the language

The exact number of speakers of Momu is a little hard to determine without doing a full survey. At a rough guess I would estimate that there are approximately 5000 people living in the Momu-speaking villages, with fewer than that being fluent speakers. In some parts of PNG (and indeed the world) this would make it a small language, but in Sandaun Province it is a relatively large language.

The generally accepted position of Momu is that it constitutes a family level grouping with Baibai (Baron, 1983b; Hammarström, 2012). In a recent print edition of Ethnologue (Lewis, 2009), this family is labelled “Fas”, which is in turn positioned within the Kwomtari group. This has been updated in the online edition to exclude the Kwomtari grouping (Lewis, Simons and Fennig, 2014b). Glottolog (Hammarström et al., 2016b) goes no further than a family level grouping, labelled “Baibai-Fas”. To avoid confusion, I here refer to groupings as hyphenated forms of the languages in the groups.

Looking closely at all the available materials on Baibai (§1.2) I tend to agree that it is noticeably similar to Momu. However, it should be noted that the total amount of material that this conclusion is based upon is quite small, and as such all conclusions are preliminary. Any higher level grouping with neighbouring languages (discussed below) remains particularly weak at this stage.

Possibly the first reference in the literature to Momu was by Thomas (1941), surveying languages of the north coast of New Guinea. In surveying the many languages along the coast, Thomas referred to the inland “Bembi”
group. From the map provided, the name “Bembi” appears to cover both Momu speaking territory and Pagi speaking territory, and this may be the reason that both languages are also known as Bembi. There are barely any materials on Pagi (Gerstner-Link, 2015; Laycock, n.d.[e]), it is quite clear at least that it is not the same language. Capell (1954) refers to “Bembi dialects” in the Bewani Mountains and goes a step further than Thomas in giving some improperly translated and unsourced but otherwise recognisable sentences in Momu. The paper by Thomas is cited in this work. At the time, it was clear from Capell’s description that very little was known about the area, with the region on the map where Momu is spoken marked as uninhabited.

The first reference to the language based on linguistic data was given by Loving and Bass (1964). The similarity between Momu (Fas) and Baibai was first noted in a survey produced by the pair. Loving and Bass produced lexico-statistical groupings based on comparisons of Swadesh lists of some 180 words. The actual percentage of cognates between Momu and Baibai was quite low in this survey and in fact much the same as between Baibai and Kwomtari. The relationship between Kwomtari and Biaka, however, appeared closer. For these reasons, Loving and Bass grouped Momu and Baibai at the stock level and Kwomtari and Biaka were grouped at the family level, and these were joined at the phylum level (Figure 1.2).

![Diagram of language groupings per Loving and Bass (1964)](image)

Loving and Bass (1964) noted that Momu spanned not just the Amanab subdistrict that they were surveying, but also the Lumi and Aitape subdistricts. Seemingly on the basis of neighbourhood alone, Laycock (1968) speculated that Momu (and hence the Kwomtari Phylum of Loving and Bass) was spoken in these areas as well. The origin of the name is unclear, but if the name collected by Thomas was from a Momu speaker, then it may have originated from an origin myth that I collected which features an ancestor named Bembe. Bembi is not a lexical item in Momu, nor is anything resembling it. It is not the name of any village in the area either.
Bass (1964)) might have been incorporable into his putative Wapei-Palei Phylum. But none of the criteria that he gives to characterise the phylum match Momu. Laycock (1975a) later inverted the sub-groupings of Loving and Bass, placing Momu together with Kwomtari and Biaka with Baibai. Again, however, the evidence for such a conclusion is not apparent. Nevertheless, this classification was generally accepted for some time.⁵

A survey by Baron (1983b) remains the clearest in classifying the languages of the Kwomtari-Biaka and Momu-Baibai families.⁶ Baron, working from materials collected by Loving and Bass, and his own survey materials, revised the lexico-statistics of Loving and Bass significantly, and provided all of his data for review. Amongst other general errors in the Loving and Bass data, he realised the importance of (non-meaningful and synchronic) metathesis processes (§2.5.1.1) within Momu. Taking this into account, he uncovered a wealth of cognate forms between Momu and Baibai. This altered the cognate percentages significantly, making the family status of Momu-Baibai much clearer. Baron also pushed the cognate count higher between Kwomtari and Biaka, and dropped the cognate count between Baibai and Kwomtari from the 14% of Loving and Bass, to just 7%.⁷ Table (1.1) gives excerpted relevant statistics produced by Loving and Bass (1964) and Baron (1983b) for comparison.

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⁵ For instance, these groupings were still given by the ethnologue in 2005 (Gordon and Grimes, 2005) despite subsequent work.

⁶ To simplify the revision to the argument, I am ignoring the important differentiation of the Guriaso language from Kwomtari that Baron’s survey unearthed.

⁷ Although a great deal of data are included in his paper, it is not actually clear which cognates were added or dropped.
Table 1.1: Excerpted lexico-statistics (percentage of cognates)

Baron (1983b) was actually reluctant to place Kwomtari-Biaka with Momu-Baibai into a phylum level grouping, noting that borrowing could easily account for the 7% figure between Kwomtari and Baibai. Hammarström (2012) however does not mince words, declaring that treating the two families as unconnected is the only reasonable level of grouping that can be applied. He accepts the connection between Momu and Baibai but is unwilling to declare any higher level grouping.

Because of the existing Stock and Phylum level hypotheses, I have occasionally compared Momu to Kwomtari and Biaka throughout this thesis. With the publication of a sketch grammar for Kwomtari (Honsberger et al., 2008), this has become possible. For Biaka (Nai) there is a masters thesis on Nai verbal morphology (Hamlin, 1998). Note however that none of the other languages in the putative “Kwomtari Phylum” have any great amount of detail available, beyond wordlists (Baron, 1983b; Laycock, n.d.[a], [b], [c], [d], [e]). For this reason whenever I compare features to other languages in the area, I have commented where I can on structural similarities. My very general impression is that there is little in common between Kwomtari and Momu, but that the nearby Warisic languages (or Border Stock phylum) may with further work eventually be found to be distantly related to Momu-Baibai.  

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8 I do not consider the languages of the Wapei-Palei Phylum as classified Laycock (1968) to be correct in including Momu (Fas).

9 Of particular note is the oblique case marker =m which is clearly cognate with the same form in Baibai (Baron, 1983b). This is extremely similar to what is called a goal marker in Imonda (Seiler, 1985), which in turn has cognate forms (using slightly varying labels) in various Warisic languages. With this as a starting point, I have included, as often
Momu and the surrounding languages are shown in Figure 1.3.

I mentioned in opening this chapter that the name Momu is used at the majority request of speakers of the language. I should also note that Momu also means “no” in Baibai (Baron, 2007a; Laycock, n.d.[b], p2088). Having not spoken with Baibai speakers, I am unaware as to whether they too have a preference for the name. Nevertheless, I continue this switch to Momu, first put forward by Blake (2007).

1.1.2 Economic and cultural life

As previously mentioned, there is now widespread logging activity in the region. This has had a dramatic impact on the lives of Momu speakers. For a start, more money and services are flowing into the region. Most of the Momu speaking villages were previously quite hard to get to. Now, only the central Nebeki village remains difficult to reach. Temporary roads have been made by logging contractors to bring the timber out. Constant trips to town made by contractors to fetch supplies ensure that in areas where there is work underway, transport is relatively easy. Royalties are sometimes big enough for more than one car to be purchased by land-holding clans in each village.

The logging activity is temporary, however, and in the time that I have worked in Mori, I have witnessed a full cycle of boom to bust. When I arrived in 2005 there was no activity, only the remnants of exploratory logging. By 2008 there were surveyors in the area. Full scale logging was evident in 2010, and finally, activity collapsed when the loggers had departed in 2012. In subsequent conversations by phone, I have confirmed that they have not returned. I am told that they move on from an area after logging it for a

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as I could, comparisons of various features with Warisic languages. A line of inquiry that I believe needs pursuing when more data become available is the possibility that Momu-Baibai may belong in a higher level grouping with Warisic languages. A hypothesis put forward by Donohue and Crowther (2005) supports the idea of an expansion that pushed languages westward from the Bewani mountains, and this might support a connection between Warisic languages and Momu-Baibai. Donohue (p.c.) however claims that an “oblique” marker with the form -m possibly has a broader spread than just the Warisic languages. It may, in fact, be an areal feature. But the Warisic languages are the only neighbouring ones that I am aware of that have this marker. At any rate, the marker alone is nowhere near enough to begin grouping Momu-Baibai with Warisic languages. I mention it here only as a tentative hypothesis.

10The turmoil is the subject of a recent documentary (Fedele, 2011).

11Nebeki was still difficult to access in 2012, according to reports that were given to me. The situation may well be different now.
period of years. Areas with the highly prized ironwood (more commonly sold as Merbau in Australia) tend to receive longer and more intense visits.

Mori, however, is well positioned to continue its connection to the wider world as the east-west highway connecting Wewak to Vanimo apparently still runs through the lower side of the village. Previously transporting produce such as cocoa and vanilla beans to the coast was difficult, as they would have to be floated down a main river such as Piore to the coast. Now people come by car from the coast hoping to act as middlemen and make a profit in the transactions with buyers.

An oil palm plantation, clearly visible when flying between Wewak and Vanimo, is fully operational in the Sumo-Rawo-One(lei) speaking region to the north-east of Mori (on the opposite side of the Piore river). This is supposedly a long term project and if so ensures that there is still economic activity in the immediate area. In 2012, many people in Mori made some extra money by selling produce at a weekend market. But for the most part, the boom times of logging in Mori and Savannui have passed. Now I am told that the loggers will return, but it is unclear when (or if) that may be.

In 2012, life had mostly returned to that which I had witnessed in 2005. Many in the village returned to swidden agriculture and hunted for game meat. Sago palm had once again replaced rice as the staple carbohydrate. During the most intense period of royalty payments a schism formed in the village. Previously, everyone had lived close together on Sumo land on the northern side of Iwolo mountain (which was a boundary marker for the people of Mori and Sumo villages). As the money from royalties started to flow in, those that had a claim to the money moved up onto Iwolo and built timber houses. Poor or limited access to garden plots and water make for the possibility that things may return to their initial state, but the lower areas also have the disadvantage of flooding every couple of years.

In 2005, there were just three patrilineal clans in Mori: *Makumene, Safnamui*, and *Farsisu*. The last two are also present in other Momu speaking villages, and across other villages there are other clans as well. *Makumene* is a continuation of a clan and identity that pre-dates Momu speakers in Mori. In later visits, *Makumene* had split into several smaller sub-branches seemingly because of the division of the spoils from logging. *Safnamui* and *Farsisu* clan members, as I understood it, had to return to the village of their (grand)parents if they wished to claim a stake in royalty payments.
Exogamous marriage was reported to me as the preferred marriage pattern historically, but then I was also told that younger people largely ignored this.

Marriage outside the village often brings individuals or families from the non-Momu speaking coastal groups—especially in Mori village where many people have ties to the coast. Marriage in Savamui village is more inland focussed. My impression is that inter-marriage between villages is more common than marriage within the village. Traditionally a system of sister exchange was practiced, and is still sometimes expected. Financial compensation is sometimes sought when this is not fulfilled. The traditional ceremony associated with marriage is not practiced in Mori village, but there is a text from a speaker in Savamui that describes it (§A).

Traditionally, families were divided into men’s and women’s houses, but this is less common these days. A *Haus Boi* for unmarried young men is still common, however. The houses are raised on stilts, but in peaceful times these stilts are not as high. The roofs are constructed from dried sago leaves. The walls were traditionally made from bark, but these days are more commonly made with sago palm stems, standing vertically. Floors are constructed with the bark of the Toddy palm.

Sorcery is still practised (or at least feared as practised) by older men. The sorcery described to me involved disembodied travel or invisible arrows quietly assassinating targets. Usually someone would die within three days of being attacked. Other forms such as “smoke bombs” were used for killing large numbers of people. Deaths not directly attributed to a murder or clear accident but are assumed to have been the act of a sorcerer. Many superstitions such as the taboo on stepping over someone, or the necessary destruction or hiding of bodily waste appear to be practices brought from the coast.

12Traditionally young men undergo initiation, but this is no longer practised in Mori village. A description is given in the same text that details marriage ceremonies (§A).

13This indirect form of sorcery is quite different to that practiced in the neighbouring Onelei group. There, sorcery involved building traps designed to kill (Donohue, p.c.).

14I have collected details on practises that I assume to be based not on the magic of Momu speaking people, but rather Pin (Womo) (§1.1.3). The most reliable sources are those from Savamui informants.

15When someone in the neighbouring Onelei speaking village of Mafoka died during a 2010 field trip, tensions between Mori and Mafoka increased as it was assumed that a sorcerer from Mori was involved. Symbolic acts, like the dumping of sago pith on the border mark between the two villages escalated the conflict, before a fight broke out between young men from both villages. The compensation paid due to a major injury arising from that fight appeared to be the end of the conflict.
Haus Tambaran (men’s ceremonial house) are no longer practiced in Mori. Traditionally there were ceremonies for initiation of young men, hunting and war parties (before and after) that all involved a haus tambaran.

1.1.3 Language use in the community

The use of Momu in Mori village is in decline but appears vigorous in Savamui and Mumuru villages. This decline is particularly apparent in families where one parent has married in from a (usually coastal) non-Momu speaking village, a situation which is more common in Mori due to its location on the north-eastern edge of the Momu speaking area. In such ‘mixed’ families the default language is generally Tok Pisin. Children have some awareness of their parents’ languages, and can respond to commands and other key phrases. But typically they do not speak in Momu unprompted. Inter-marriage with Malol speakers is reasonably common, and it was sometimes casually remarked that Malol may displace Momu at some point. Many that I spoke with did not express a strong connection with language as part of their identity, but then Mori people, in particular, have had a number of generations of outside marriages.

There are families where both parents are Momu speakers however, and in those, I observed children speaking in both Momu and Tok Pisin. I met no speaker of Momu who didn’t also speak Tok Pisin, but I was told that in Nebeki I might find some older speakers (especially women) who only spoke Momu. In Savamui, it was far more common for both parents to be Momu speakers, with intermarriage common with the Momu speaking villages of Utai, Mumuru, Nebeki and Mori.

School in Mori village is taught in Tok Pisin by teachers from areas where Momu is not spoken. A single school is run in Mori, and children attend from both Savamui and Mori. In 2005, the school was in Savamui and grades 1 and 2 were taught by two teachers. With the logging, more funding was directed to the school, and it expanded to four teachers (and an aid post), teaching up to grade 6 by 2012. I was not aware of a school in Mumuru at the time I visited in 2010. As I write this, I understand that despite the departure of the logging company, the school at Mori is still staffed.

Church services are a twice weekly event in Mori, usually running for several hours. These are conducted mostly in Tok Pisin, but some hymns have been translated into Momu, and some sermons are given in Momu.
In Mori and Savamui, there is a single church—the New Apostolic Church. In Mumuru, there is the Christian Brethren Church (CBC), and the New Apostolic Church has a minor following. This is different from other places that I visited in Sandaun, where there were often several denominations vying for followers. The Catholic church had otherwise been the first and only prior church in the immediate area. I am told that the Catholic mission is still active in the southern villages, but I cannot confirm this. I am also aware that CBC is more common in the western villages.16

I once observed a large and highly animated meeting to discuss land boundaries that was conducted almost entirely in Momu, but I can’t help but think, given my interest in attending, that the strict use of Momu may have been partly for my benefit, or possibly considered especially appropriate in the context of asserting individual and traditionally held land rights. Otherwise, large gatherings for ordinary business such as village court sessions, or other dispute resolutions were mostly held with Tok Pisin as the main or only language spoken.

Interestingly, in the specific case of Mori village, the gradual shift away from Momu may well be a repetition of what had already occurred for another language. Baron (1983b) briefly mentions in his survey work that Mori was previously a Pin (Womo)17 speaking village.

Pin (Womo) is a highly endangered Sera Hills language. Intermarriage with the coastal village of Onei appears to have resulted in the replacement of Pin by the more dominant Sera and Puare languages. At the time I visited Onei village in 2006, there were just 5 speakers there. In Mori, I met just one very old Pin speaker. Older Mori adults remembered a few words coming from what would usually be just one Pin speaking parent. As far as I could tell, there was a large number of men (possibly women as well) that married...
into Mori from Savamui, Mumuru and Yo villages. At the time that Baron surveyed the area (Baron, 1983b), the shift was reportedly underway.\footnote{There is a tantalising reference to a forthcoming paper co-authored with Whitacre on this topic; however, it seems that it was never published.}

The people in Mori described the shift as the result of intermarriage, but I did not encounter any Pin speakers (or history) in Savamui or Mumuru. The naming of rats in the area may be indicative of conflict between villages, still in living memory. In Mafoka (an One speaking village 45 minutes walk downriver from Mori), speakers told me of a sneak attack by people from Mumuru, that razed their village at some point in the past. The term for rat there is *Mumuru*. In Mori, it is *Onei*, which is odd given the existence of strong family connections with those at Onei village on the coast. Donohue and Crowther (2005) note that there was likely some conflict between Momu speakers and One speakers as the Momu speakers spread north and east. I certainly heard stories of conflict between the two groups.

### 1.2 Previous work

I detail much of the classificatory and survey work produced that includes Momu in §1.1.1. The remaining papers that exist on Momu are few enough in number to briefly review them all here. Where relevant I will return to them in later chapters.

Wietze Baron was a linguist with SIL, based intermittently in Kilifas village between 1977 and 1989. Baron produced a collection of papers—some published, some unpublished or stored within SIL’s archives, all available now on a website that he has created. These constitute an important source of detail on Momu generally, and features of western Momu specifically. There is a gap in the work between 1989 and recent times, but the website now includes more on Momu and a report of a return trip to Kilifas that he made in 2011 upon retirement (Baron, 2011).

Baron was primarily concerned with the interesting phonology of Momu. It is thanks to his published papers that I was able to perceive vowel height qualities that I initially missed.\footnote{To be fair to myself, though, many younger speakers do not make the relevant distinctions. And some older speakers don’t either.}

Baron’s first paper “Light from the dark ages of Chomsky and Halle’s ‘Abstract Phonology’” (1979), includes detail about morphophonemic pro-
cesses and vowel harmonisation across word boundaries. It also includes
details on a phonologically decomposable high vowel set, that I have largely
adopted and added to in this thesis. There are several lexical items in this
paper that I never encountered as well.

Baron produced several papers in 1983. “Cases of counter-feeding in Fas”
is again concerned with the phonology, using morphophonemic processes to
argue about issues in Generative Phonology that were topical at the time of
writing (Baron, 1983a). In “Orthographic Mismatches: Fas vs. Melanesian
Pidgin” Baron (1983c) again reflects upon the same issues in the phonology
but this time in the context of attempting to develop an orthography that
fits some of the more interesting features.

These three papers together contain several useful minimal pairs and
consistent and productive interactions between phonology and the limited
morphology of Momu. Some lexical items are not available in the dialect of
Momu that I worked on.

Also in 1983, Baron produced a survey of the languages of a putative
Kwomtari language family (§1.1.1). This remains the most solid source of
material comparing Kwomtari, Momu, Baibai, Biaka (Nai) and Guriaso lex-
ical items. Particularly notable is that the data are all available in the paper
and that Baron has explicitly noted both questionable correspondences and
those that were moved into cognate status by his knowledge of Momu. Baron
also provides a short list of comparable or non-comparable features across
the languages. These features are not enough to establish a clear cut genetic
relationship between languages, but they are nevertheless interesting from a
typological perspective. I have commented on, in particular, comparisons of
“case” markers between the languages (§4.8.1), of which several are clearly
cognate between Momu and Baibai.

Some of the lexical material in the survey is directed towards establishing
contact and trade routes in the area. Some items like “knife”, “axe”, tobacco”
and so on, likely to have been borrowings, are included in the survey. Kin
terms (address forms for ‘mother’ and ‘father’) are also collated. This work
is then further explored in an unpublished paper presented at the Linguistic
Society of Papua New Guinea Meeting around 1986. There is some detail
on Momu kinship included in this paper—a topic that has been difficult to

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At times where I have drawn on Baron’s work in the Phonology chapter (§2), I have
noted this, but otherwise, I have worked from data that I have recordings of.
explore in Mori given the state of flux of existing languages (and presumably kinship systems) in this village (§4.6 on kinship terminology).

In 1983-1984, Baron began work on a grammar of Momu, but the work was cut short. Fortunately, he generously made his preliminary notes available (Baron, 1984). In these notes he explores the meanings of the marker nu (§9.5.1), and compares what I call the volitional future -mu (§12.1.1.1) and the epistemic future -meta (§12.1.1.2). The examples are extensive enough to provide some insight into many other aspects of the grammar. Perhaps most exciting to me, it also gives details on pre-grammaticalised forms of the inceptive/desiderative -meni (from -m geni ‘oblique + to say’) clearly functioning in the same way as the present grammaticalised version of this category (§12.1.2.4).

After that work, Fiona Blake produced an honours thesis looking at the grammar of space in Momu (Blake, 2007). This work was based on fieldwork that we conducted in parallel (§1.3). This work remains the best source on the specifics of the semantics and grammar of space in Momu. But I have updated a few aspects of the analysis, in particular, detail on the caused locative construction (§13.2.3.3). Blake’s probing of the semantics of, in particular, spatial nominals, is more detailed than my own.

Blake’s work triggered a revisit by Baron to the materials and work that he had done in the 1970’s and 80’s. Baron published a website shortly after Blake’s honours thesis was completed with scanned versions of the papers that were previously available only in SIL PNG’s archives (Baron, 2007b). The website details his findings on the genetic classification of Momu, some notes on the name of the village Kilifas and the language name Fas, and links to his existing papers. To this he added another paper detailing his latest iteration of phonological analysis, also proposing a tentative orthography (Baron, 2007b). This paper brings together many of the same minimal pairs that I use in establishing my own analysis of the phonology.

In addition to materials on Momu, I have also drawn upon materials on the related language Baibai, and on the putatively related Kwomtari. See Figure 1.3 on page 30 for a rough positioning of languages around Momu. Apart from the wordlists collected by Baron (1983b) and also by Laycock (n.d.[b],[c]), there is also a sketch grammar of Kwomtari that has been most useful for making comparisons (Honsberger et al., 2008). For Biaka (Nai), there is a masters thesis on verbal morphology (Hamlin, 1998). Amongst
the Warisic languages, there is a grammar of Imonda (Seiler, 1985) which includes a comparative wordlist of the languages Imonda, Daonda, Waris, Simog (Auwe), Sowanda, and Punda. There are also sketch grammars for Waris (Brown, 1990) and Amanab (Minch, 1992). Within the border stock which includes the Warisic languages, are the Bewani languages. In this family, there is a grammar of Kilmeri, which includes some detail on the neighbouring Pagi language (Gerstner-Link, 2015).

1.3 Fieldwork for this study

The fieldwork that contributed to this thesis was conducted over several trips of varying length starting in 2005-2006, 2008, 2010, and a final short trip in 2012. Altogether I have spent a total of roughly 13 months working on Momu in the field.

The first field trip was conducted in late 2005 to early 2006. I accompanied Fiona Blake while she collected materials for her Honours thesis (Blake, 2007). Out of convenience more than anything else, Fiona established herself in Mori village in a scoping trip in late 2004 – early 2005. She was accompanied by Miriam Corris, who had been working on a grammar of Barupu (Corris, 2008), and it seemed straightforward to walk to Mori from there. This village is one or two days walk from the coast depending on the path you take, and at the time, they assumed it was the closest and most accessible village. Upon arriving Fiona and Miriam discovered that there was a road connecting Mori to Vanimo. So initially, Fiona and I travelled by car, and later by boat and by foot when the road deteriorated.

Savamui village was only one hour away upriver, and we made occasional trips to the village to collect data. It wasn’t so obvious on the first trip together, but in later trips it became apparent that language use was more vibrant in Savamui, and with hindsight, it may have been better to establish ourselves there.

In the second half of 2008, I conducted a trip alone at the beginning of my Ph.D. candidature. For this trip, I worked mainly in Mori, but made

\footnote{Likely unrelated languages adjacent to Momu are the Skou Languages to the north, stretching along the coast (Corris, 2008; Donohue, 2007; Donohue and San Roque, 2004; Marmion, 2010). Nearly adjacent to Momu are the isolate Yade (Nagatman) (Campbell and Campbell, 1987); which is spoken south of Kwomtari, and Namia, which is spoken to the west of Yade (Feldpausch and Feldpausch, 1992). Heading eastwards into the Toricelli Mountains, are the One(lei) languages (Crowther, n.d.; Donohue, 2001, 2005, 2006).}
several trips to Savamui. In late 2010 I conducted another field trip and was joined by Fiona a month into the trip. By this stage, many of the people in Mori village had moved westwards up onto Iwolo mountain. This location is much closer to Savamui. Once again I continued to visit Savamui, but mostly based myself with the families I had lived with down by the river. Some troubles in the village meant that we had to move on from Mori, and we took the opportunity to stay in Mumuru for two weeks at the end of the trip.

In late 2012 I returned to PNG for a short trip to tidy up remaining questions and to return many of the materials that I had collected over the years. I stayed almost the entire trip in Mori, but I did manage to visit Savamui once.

1.4 Consultants

Fiona and I worked with four primary language consultants who were carefully selected to represent the three clans that were extant at the time. I worked with Bernard and Simon, and Fiona worked with Monica and Antonia. In later trips, I mainly worked with Monica and Bernard. Monica and Antonia had both married men from Mumuru and had spent time there. Otherwise, all these informants were from Mori.

When I visited Savamui, I worked with Yarin and Ferdi. Ferdi is originally from Nebeki village and demonstrated many of the conservative or western features of phonology and morphosyntax that I had been otherwise exposed to through the works of Baron (§1.2). Ferdi always maintained that Mori villagers “didn’t speak properly”, but he also sometimes said the same of Savamui. Yarin is from Savamui, and also demonstrated many of the more conservative features of the language. As such, it may be noticeable at times throughout this thesis that I could only draw natural textual examples from Yarin and Ferdi for some specific features.

More than sixteen Momu speaking individuals were recorded, but a majority of the work done was with these six consultants. In the texts that are referenced throughout this thesis, if a story was given by one consultant alone, then their name will be included in the reference. If more than one contributed, then their combined initials are usually used.

Age is almost certainly an important factor, but almost no one knows
their age. I was able to relativise peoples ages roughly by asking if they attended school together or played together as children. Big events for the area, like the conversion from Catholic to New Apostolic faith, never had a fixed date. Relatively speaking, from youngest to oldest I would rank Monica, Antonia, Bernard, Yarin, Ferdi and Simon. I would estimate that they are in their 50’s or 60’s. Some of the other speakers who I recorded that are younger still though are Flerwick,22 Julie and Luke (in their 30’s or 40’s), while the oldest speakers were two different men named Peter, Steven,23 Denis, and Angela (above 60).

1.5 Materials collected

Blake (2007) was able to delve into the semantics of space using kits developed by the Max Planck Institute for Psycholinguistics in Nijmegen. Perhaps influenced by the fine-grained detail of the data collected via this method, I have at times collected data using their stimulus materials in my fieldwork. Particularly useful were the “cut and break” video clips (Bohne-meyer, Bowerman and Brown, 2001), but also the “topological relations” images (Bowerman, 1992), “staged events” videos (Staden et al., 2001) and the “reciprocals” videos (Evans et al., 2004).

The single largest text set was collected as part of the Social Cognition project based out of the ANU, Melbourne University and Griffith University. For this task I followed the procedure described in San Roque et al. (2012). The same set of images were examined multiple times and a story constructed that was told from a third- and then first-person point of view. This allowed me to compare roughly the same content from different perspectives and varying knowledge states. The initial phase contains negotiation and identification while the final phase is simpler and more confidently told. The pictures themselves are deliberately inconsistent so as to create discussion around these inconsistencies, and so as to make the speakers work towards establishing a consistent narrative. As such the texts include a fair amount of stance marking (§12.1.2). The pictures also include speech and thought bubbles intended to trigger the use of reported speech and thought forms (§16.1.1).

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22Flerwick gave his date of birth as 1975.
23Steven gave his date of birth as approximately 1951.
I also collected a body of more standard texts. These include genealogical texts, origin myths, personal historical recollections, novel hypothetical or imagined scenarios, and procedural texts. I was fortunate to add to my texts those that were collected by Blake during her own fieldwork. A brief synopsis of each text, the speakers, date, location and details for locating the source files are given in §B. A sample of texts is given in §A. The entire corpus is archived both with the Pacific and Regional Archive for Digital Sources in Endangered Languages (PARADISEC) and the Endangered Languages Archive (ELAR).

Amongst the texts collected and minimally used within this thesis are transcriptions of recordings made by the Global Recordings Network made circa 1973 (GRN, 1973). I was able to transcribe and translate four of the short stories in this collection. One of my main consultants, Ferdi, could recognise all the voices on the recordings, saying that most likely this was recorded at Amanab station, where he had spent some time as a young man. He told me where each of the speakers came from. Differentiating eastern and western Momu was easy, as my main informants at the time—Monica and Bernard—struggled to translate much of the western material.

It is clear to me from working with these texts that the result of the Global Recordings Network method is at times a little wooden. In attempting to achieve a close translation of individual sentences, the overall result is a loss in coherence across the whole text. Nor could one say that the content of these recordings is culturally grounded. Still, these recordings are the earliest form of audio that I have of Momu. And it is the only audio data that I have on western Momu.

1.6 Approaches to grammar writing

My initial approach to grammar writing followed that laid out in the basic manual by Payne (1997). I began with more elicitation and moved to more time spent collecting texts. The specific avenues of exploration laid out in Payne became quickly exhausted and I moved on to the multi-authored and far more detailed three volume series of Language Typology and Syntactic Description as my constant companion in fieldwork (Shopen, 2007). I have

24This is an organisation that produces evangelising materials through a method of sentence by sentence translation of standard texts. The sentences are then neatly edited into a uniform recording without pauses.
also mentioned above the influence of the “etic grid” approach of stimuli kits developed at the Max Planck Institute for Psycholinguistics. These became an invaluable source of exploration while on fieldwork.

While back at the ANU, a weekly “grammar group” became a platform for a group of junior and senior grammar writers to discuss the grammar of a broad range of languages and a broad range of topics. This group was particularly formative for me, both in the exposure to other ways of looking at the same problems that had developed in localised traditions of grammar writing, and in presenting arguments about grammatical structures in Momu and in other grammars and typological papers in an environment where they could be dissected by many interested minds. It was a fascinating insight into typological variation, thanks to the many languages represented. It was also an excellent avenue for discussion of just what a “grammar of a language” could or should be.

When it comes to situating Momu in the linguistic world, I have tried my best to describe the language in its own terms. In particular, I have tried to strike a balance between the use of abstract representations of structure, and long form prose as two tools that aid in modelling structure and expounding meaning. My approach to grammar writing is, I think, unconsciously influenced by R. M. W. Dixon, who in turn had an influence on the generation of grammar writing linguists in Australia by whom I was taught. Dixon himself has named his approach as “Basic Linguistic Theory”, however, I am reluctant to use the term. I believe that theoretical frameworks are models that more or less fit a problem at hand. I very much agree with Dryer (2006) that I am engaging with descriptive theory, rather than explanatory theory. It is enough for me to attempt to answer the question of “what languages are like” without being caught up in why.

There is very little literature or data available for languages putatively related to Momu, and so a diachronic consideration of Momu cannot incorporate a thorough application of the comparative method until some substantial work has been done on the languages spoken around Momu. However, I tend

\footnote{For instance, the Oceanic tradition of grammar writing is very much grounded in or perhaps served by the reconstruction of Proto-Oceanic. But also, the terminology, distinctions and assumptions around broadly evident features of Oceanic languages are assumed by insiders but at times opaque to outsiders. I don’t mean to single out Oceanic languages here—discussing other languages and language families with other grammar writers in the grammar group made it clear that this was very broadly the case for other language families as well.}
to follow the argument drawn by Rankin (2006) that this does not mean that we should simply give up. Rather I think that the state of diachronic analysis for Momu remains tentative until work on neighbouring languages begins. If the first iteration was the crude lexico-statistics of Loving and Bass (1964), and the second was the insight of the value of metathesis processes by Baron (1983b), then in the absence of much more data, I hope that casting a comparative net over the existing data and analyses of the languages of area may be a third iteration of Rankin’s “complementary and spiral processes” of linguistic comparison and synchronic analysis (2006, p529).

What little data that Baron (1983b) had on Baibai is expanded upon with the additions of Laycock’s fieldnotes (Laycock, n.d.[b]). These data do not alter his lexico-statistics significantly, however. A revisiting of correspondence sets is given in §C.1, but the data set is simply too small to draw firm conclusions about reconstructed proto-phonemes for a Baibai-Momu family. Combined, the two data sources yield a greater number of verb paradigms, which are useful in the discussion of corresponding morphology and correspondence of verbs with and without verbal number (§6.2.1.1). Since Baron’s survey work, another important addition to the description of the languages of the area is a sketch grammar of the Kwomtari language (Honsberger et al., 2008).

On the topic of diachrony, the other avenue available is an exploration of grammaticalisation. At times throughout this thesis, I have explored potential grammaticalisation within Momu. I take grammaticalisation to be a perspective on language rather than a strict theory or unique concept (Heine and Narrog, 2011). That said there are a number of existing approaches and schools of thought about it. Not having a large corpus, or data of reasonable time depth, I have not taken a usage- or frequency-based approach to grammaticalisation (e.g. Bybee, 2011) or focused on the synchronic analysis of, for instance, discourse pragmatic phenomena within variation. Rather I have been interested in uncovering the presumed unidirectional change over time from less grammatical to more grammatical morphs within Momu. I realise, particularly with respect to presumed unidirectionality, that this is a topic with some surrounding controversy.

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26I have not been able to sight the original data produced by Loving and Bass for their survey (1964). Baron did have access to this data, however, and I can only assume which bits of his work were taken from their notes.
Throughout this thesis, I use “diachronic” as a shorthand for hypothesised earlier states, or observations made by prior researchers at an earlier date. In the second case, this is because I have not found the point at hand to still hold. I use “synchronic” as a shorthand for a current state of affairs observed which is contrasted with either a diachronic hypothesis or historical evidence to the contrary.

Although I use the labels this way, I am sympathetic to the notion of not drawing a distinction between the two, particularly that within observed material there is a great deal of variation which may vary in frequency between earlier and later points such that there is no hard line between the two. To this end, I have often declared when specific phenomena are uncommon, or I have unpacked some of the variation that has occurred. A good example of this is variation in the form of the caused location construction (§13.2.3.3), where subject marking is variably marked across the multiple verbs within the construction.

The approach has been particularly useful for me in approaching categories of tense, aspect and modality. Putting aside complexities, pretty much all aspectual distinctions in Momu can be transparently related to verbs, arising from serial verb constructions. A little less transparent, the cline-like state (Bybee, 1985; Bybee, Perkins and Pagliuca, 1994; Hopper and Traugott, 2003) of modality marking in Momu can be mostly considered as arising from the combination of a single complementiser (the oblique $-m$) and a variety of complement-taking predicates (§12.1.2). These are the two domains in which grammaticalisation is a focus in this thesis, but the perspective is there in many aspects of my approach to synchronic analysis. Related to, or rather arising from grammaticalisation, heterosemy is a major feature in Momu (Lichtenberk, 1991). It has been a challenge in this thesis to present forms that are highly heterosemous and then dispersed throughout the thesis while also noting the individual meanings and contexts that constitute their basis.

While still an undergraduate, I was strongly influenced by a paper by Himmelmann (1998) on documentary linguistics. Amongst other points, Himmelmann showed how providing context in textual examples could be used in multiple ways. For languages with little documentation, this was

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27Heterosemy is a special subtype of polysemy where the same form has related but different meanings, but occurs in different morphosyntactic categories.
especially important, and verifiability (in the sense of assertions being confirmed by the documentation) pushes linguistics in the direction of empirical science.

For these reasons, at all times I have tried to minimise the use of elicited data throughout this thesis, and to provide context for utterances via references to the texts (§1.5, §A). I believe that at times including elicited data is unavoidable, and that it is best to indicate this—and to allow the reader to judge its reliability accordingly. The distinction between data from my notebooks and data taken from texts is made via the form of the reference used.\textsuperscript{28} The year and page number are given when working from a notebook, while texts are usually indicated by the speaker, followed by a name for the text. An example without a reference is either so common as to be reasonably drawn from memory, or simple enough for me to be confident in its form (for instance, lexical items in lists).

1.7 A brief typological overview

Momu is a language with a small, classically “Papuan” phonemic inventory (§2.1). There are five phonemic vowels (or ten if counting contrastive length, §2.1.1.6) and ten consonants. One of these consonants is the typologically rare (but areally common) bilabial trill (§2.1.2). Also areally common, but absent from Momu (and the sister-language Baibai) is an \textit{l} phoneme.

Two glides, \textit{y} and \textit{w}, hold a special place in the phonology of Momu. They are not simply the predictable consonantal realisation of high vowels in Momu, but are rather always peripheral. The basic vowel inventory of Momu lacks high vowels, but phonetic high vowels do arise in the context of

\textsuperscript{28}I have not taken this as far as suggested by, for instance, Thieberger (2009). Many have suggested a higher granularity for referencing or cross-referencing data points in a text. I believe that the text identifier is sufficient in the era of search engine technology. The utterance itself is the key to its location within the text and to other similar occurrences. If a reader wants to see the context of one utterance, I would hope they would be interested and enabled to search for all occurrences relevant to the point being made. Linking directly to the utterance can cause problems with the notion of the analysis of a text as fixed and certain. I have found myself at various times uncertain about the status of elements within a text. If I were to revise these elements it might cause either a versioning issue for texts (if I must link to the version of the text correct at the time of excerpting), or an indexing issue within a text (if in altering a text I change the total number of utterances). Neither of these are technically insurmountable problems, but the infrastructure to solve them does not exist at this time. Note that all texts used in the preparation of this thesis are in the process of being made available in both the ELAR (Endangered Languages Archive) and PARADISEC (Pacific and Regional Archive for Digital Sources in Endangered Languages).
glides. Mid-high vowels are pulled higher by a neighbouring glide (§2.1.4.2), resulting in a diphthong or phonetic long high vowel. There are no non-complex high vowels in Momu.

The glides are fragile. In the absence of an adjacent vowel, they are either devoiced or deleted. Glides affect the surface realisation of both consonants and vowels (§2.1.3) by palatalising or labialising consonants and raising or rounding vowels. Glides occupy a special position in the phonotactics of Momu as well. The ideal basic syllable (§2.4) has a preferred linear ordering of consonant-glide-vowel. In some combinations of morphology where a final glide meets an initial consonant, this preference triggers metathesis to generate the preferred ordering of segments (§2.5.1.1). More generally, non-meaningful metathesis of consonants is a reasonably common occurrence in Momu, so much so that it initially obscured a genetic affiliation with Baibai (§1.1.1).

Momu is somewhat analytic, with concatenative morphology mostly occurring in the domain of verbs (§6). The average verb is very commonly unmarked (usually indicating first singular subject and perfective categories), but most commonly will be marked for subject cross-reference, aspectual and or modal categories via a single morpheme in a single slot for each of these three.

Word forming strategies create verbs with selectional properties that pattern on an absolutive basis (i.e., the affected participant). Reasonably common amongst verbs is a pattern of stem alternation such that two different verbs select for the number of an argument along absolutive lines (i.e., verbal number, §6.6). In fact, the ratio of verbal number pairs to other verbs in

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29 The average verb is very commonly unmarked (usually indicating first singular subject and perfective categories), but most commonly will be marked for subject cross-reference, aspectual and or modal categories via a single morpheme in a single slot for each of these three.

30 Syncretism of first and third person singular subjects is essentially driven by the lack of a rounding candidate on consonant-final roots. In glossing, these are readily identifiable in examples throughout this thesis as they have an inferred gloss of “either first or third person singular subject” ([1|3sgS]).

31 In grammar writing, this pattern is very commonly referred to as “suppletive number”
Momu exists at the upper end of what is typologically evident at this point in time (Corbett, 2000). As such, most commonly the stems are regularly derived (§6.5, §6.6.2.3), while a minority are represented by completely different (§6.6.2.1) or partially recognisable forms (§6.6.2.1). Some word-forming “aspectual suffixes” (§7.5.2) also pattern on an absolutive basis. A directional suffix indicates the location or path of an affected participant (§7.5.2.1), and the incompletive suffix indicates the state of completeness of the affected participant (§7.5.2.4).32

Momu has large open classes of verbs and nominals, with small closed subclasses within them. Nominals have minimal inflectional categories, mostly of the dependent marking kind (§4.8), outside of small closed classes like pronouns (§3.5.2), or possessed kin terms (§4.6.2). The verbs are really the powerhouse of the language, especially in the context of extremely common elision of topical referents. As such, it is not uncommon for clauses to almost entirely consist of sequences of verbs (§13).

Momu has a nominative-accusative system of agreement. A basic relational case system differentiates subjects from non-subject arguments via an oblique case marker, which also marks most other kinds of non-subject (§4.8.2, §8.1.2). Subjects are nearly always cross-indexed on verbs (§6.2.1, §8.2.1), objects less so (§8.2.2). Predicates can be verbal or non-verbal, with many intransitive predicates coded by non-verbal forms (§11). Transitive predicates are almost exclusively coded by verbs. There is a single pair of ditransitive verbs: no/tu ‘give one/many’ (§3.1.2.3). Momu employs existential verbs as copulas (§11.12.3) and only in this very restricted case does one find irregular word orders, and a differently coded subject (§8.2.1).34

Considering the other inflectional categories of verbs, Momu possesses a classic viewpoint aspect system of the kind where perfectives are unmarked (§7.2) and imperfectives are marked (§7.3). Modal categories are suffixed on verbs (§12.1.1), and there also exists a small set of “modal predicates”, the majority of which concern epistemic stance (§12.1.2). Negation is marked on clauses via a final particle (§12.2.1) or typologically uncommon complement-

32 Aspectual suffixes are primarily concerned with the internal structure of the event.  
33 Variation in the treatment of objects is both common and clear enough in Momu to be treated as a split (§8.2.2).  
34 The split in the coding of subjects is not significant enough to justify labelling it as a “split subject”, however.
taking predicate (§12.2.2).

Most lexemes have low semantic density. In terms of exponence, typically only one or two categories are encoded in a single morpheme. Subject or object are always combined with number. The multipart progressive (§7.4.2) includes a deictic distinction in the realis form (§7.4.2). As part of the progressive, and other constructions, nominalisation and subject marking are fused into portmanteau morphs (§16.5.1.1). On nominals, the genitive is combined with number (4.8.5).

Like many non-Austronesian languages of New Guinea, the basic word order of a simple clause in Momu is S(O)V (Dryer, 2007b, 2011) or simply verb-final (Foley, 1986, p10). In Momu, all participants in a clause typically occur before the verb and observe a fixed ordering (§8.1.3). Nominal heads are post-modified (§5.1) excepting nouns modifying other nouns (§14.1.2), adpositions are postpositive (§3.5.1, §9.1) and relational and adnominal case marking is post-positive, upon dependents (§4.8.1). This is in line with the general expectation for S(O)V languages. Possession is variably marked (§4.8.5): small closed nominal classes include genitive- (pronouns, §3.5.2) or possessive-marking (possessed kin, §4.6.2). Genitive phrases can freely occur before or after the head that they modify (§4.8.5.2). Inalienable possession (relating to body parts and houses) can be unmarked (§14.1.2.4), and is often externally possessed (§10.2.1).

In “tight” verb or verb phrase coordination (i.e., serial verb constructions, §13), the final verb is usually the prominent host of inflectional categories. In looser coordinative structures, each predicating verb may host inflectional categories. Manner is most commonly indicated by serial verbs (§13.2.1), but small sets of adverbial forms also occur in a similar (preverbal) position in the clause (§9.4, §9.3.1, §9.3.1).

All adverbial subordinators occur on the right edge of the clause (§15), some both pre-modify and post-modify main clauses (often with a difference in meaning), while others are fixed on one or the other order. Nominal modifying subordinate clauses occur in the same position as other lexical modifiers, after the head (§15.1, §15.8). Complementisers also occur after the dependent clause (§16.2). Depending on the complement-taking predic-
ate, some sentential complements can occur before or after the complement-taking predicate while others strictly limit complements to before the predicate (§13).

Sentence types are broadly differentiated by intonation, but questions are also usually indicated by a final enclitic (§10.3.2). Imperatives have special inflectional forms (§10.3.3). Declaratives lack a specific marker (§10.3.1), as is very common across the world’s languages (König and Siemund, 2007).
Figure 1.3: Languages around Momu
Chapter 2

Phonology

I begin this chapter by establishing the phoneme inventory of Momu (§2.1) and the practical orthography used for the remainder of the thesis (§2.2). This is followed by an account of valid phoneme sequences (§2.3) and consequently syllabification (§2.4). Then I consider modifications of phonological forms in the context of various sets of morphology (§2.5). I then look briefly at issues of contact and change, with details on the phonology of borrowed forms (§2.6). Of particular interest to the synchronic state of Momu phonology, is the consideration of changes to the vowels in Momu leading to a flattening of the vowel space (§2.6).

Preliminary sound correspondences between Momu and the closely related Baibai are given in an appendix (§C.1).

2.1 Phoneme inventory

Vowels (§2.1.1), consonants (§2.1.2), and glides (§2.1.3) are established in this section.¹ After giving minimal contrasts to establish the phonemic status of each segment, I give details on major allophonic variation. The glides are an important category in the phonological analysis pursued here. They are

¹In this chapter, I will be using the standard International Phonetic Alphabet for phonetic transcription (International Phonetic Association et al., 2005). I indicate phonetic transcriptions by placing them between square brackets ([ ]). A single segment X between square brackets ([X]) is shorthand for “the (allo)phone X”. When establishing phonemes in this section, I indicate phonemic transcriptions alongside the phonetic ones, by placing them between forward slashes (/ /). A single segment Y between forward slashes (/Y/) is shorthand for “the phoneme Y”; longer sequences between forward slashes then represents a phonemicisation of phonetic data.
not the consonantal realisation of phonemic high vowels—which are notably absent—but are phonemes that I argue are only ever non-nucleic.

Once all simple segments are accounted for, I consider diphthongs (§2.1.4), which arise both as a small set of vowel-vowel combinations and as vowels in combination with glides. Finally, I argue for monophthongal long high vowels arising from an interaction between phonemic glides and mid-high vowels (§2.1.4.3).

2.1.1 Vowel inventory

A phonemic vowel inventory is given in Table 2.1. The corresponding graphemes used throughout the remainder of the thesis are given between angle brackets here (<>).

<table>
<thead>
<tr>
<th></th>
<th>Front</th>
<th>Central</th>
<th>Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid-high</td>
<td>/e/</td>
<td>&lt;i&gt;</td>
<td>/o/ &lt;u&gt;</td>
</tr>
<tr>
<td></td>
<td>/e:/</td>
<td>&lt;ii&gt;</td>
<td>/o:/ &lt;uu&gt;</td>
</tr>
<tr>
<td>Mid</td>
<td>/e/</td>
<td>&lt;e&gt;</td>
<td>/o/ &lt;o&gt;</td>
</tr>
<tr>
<td></td>
<td>/e:/</td>
<td>&lt;ee&gt;</td>
<td>/ɔ:/ &lt;oo&gt;</td>
</tr>
<tr>
<td>Low</td>
<td>/a/</td>
<td>&lt;a&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>/a:/</td>
<td>&lt;aa&gt;</td>
<td></td>
</tr>
</tbody>
</table>

Table 2.1: Proposed vowel inventory

Momu has a basic five vowel system, common amongst Papuan languages (Foley, 1986), but not areally so. The system is expanded to ten vowels with the inclusion of long vowels. Long vowel phonemes are uncommon, and are discussed further at the end of this section (§2.1.1.6).

Minimal contrasts establishing each basic phonemic vowel are given in Table 2.2. Note that nasalisation is conditioned by preceding nasals.

The Warasic languages have higher vowel counts: Imonda has a complex ten vowel system (Seiler, 1985) and Waris has eight (Brown, 1990). Kwomtari has eight (Honsberger et al., 2008) and Bia ka has nine (Hamlin, 1998). At the coast, Barupu has a six- (or possibly five-) vowel system (Corris, 2008). Regardless, all have a pair of phonemic high vowels, and most

---

2 The characters used as phonemes in this analysis are mostly chosen to closely match the phonetic value of a salient allophone for a given phoneme. For instance /a/ has the allophones [a~β], but [a] is the most common and salient allophone, and so I have chosen it as the character to represent /a/.
Contrast  Examples
---  ---
/e/  /se/  [se]  ‘I urinate’
/e/  /fe/  [fr]  ‘shit’
/a/  /fa/  [fa]  ‘child’
/o/  /fo/  [fr]  ‘old’
/o/  /fo/  [fr]  ‘s/he opens it’
/e/  /ne/  [ne]  ‘I perform’
/a/  /na/  [nə]  ‘s/he marries’
/o/  /no/  [nɔ]  ‘s/he gives it’
/o/  /no/  [nɔ]  ‘s/he performs’

Table 2.2: Contrasts in vowels

represent four heights. The system in Momu is markedly different in that it lacks a row for high phonemic vowels.

This may seem an odd gap, but phonetic high vowels [i] and [u] do occur. They arise as allophones of the mid-high vowels when preceded by glides (§2.1.4.3). Supplementary contrasting forms to Table 2.2 are given below.

/fje/  [fi]  ‘water’
/nje/  [ndi]  ‘ancestor’
/wo/  [ndu]  ‘mustard flower’

Certain environments have the same effects on all basic vowels. In closed environments, all vowels are realised as short, slightly raised and slightly centralised. Word-initially, they may become slightly creaky. Nasalisation spreads rightwards to vowels immediately preceded by a nasal. Nasal spread is blocked by intermediary glides (§2.1.3). Thus, nasal high vowel allophones are notably absent. Nasalisation does not generally spread leftwards to a vowel that precedes a nasal. In open monosyllabic words like those given in Table 2.2, the vowels are lengthened slightly (§2.4.1). Final vowels in polysyllabic words have the same quality as the open monosyllables in Table 2.2, but without additional lengthening.

For the remainder of this section, I detail major allophony for each basic phonemic vowel, ending the section with a combined discussion of phonemic long vowels.

33
2.1.1.1 /e/ \(<\text{i}\>\)

Table 2.3 gives examples of major allophony for the phoneme /e/. Most commonly, it surfaces as a short [i] or [ɪ] between consonants. Word-finally, the vowel is longer and lower. When preceded by a nasal, it is nasalised. Compare the surface form of the same phonemic vowel in /keme/ [kɪmɛ] ‘you two sleep’. The two allophones in this example differ in length, centralisation, and nasalisation.

<table>
<thead>
<tr>
<th>Allophones</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>[e]</td>
<td>/se/ [se] ‘I smell it’</td>
</tr>
<tr>
<td>[ɛ]</td>
<td>/ne/ [nɛ] ‘I perform’</td>
</tr>
<tr>
<td>[ɪ]</td>
<td>/ecn/ [ʔɪrn] ‘I pull it’</td>
</tr>
<tr>
<td>[ɪ]</td>
<td>/nememo/ [nɪmɪmø] ‘you two will perform’</td>
</tr>
<tr>
<td>[ɪ]</td>
<td>/sem/ [sɪm~sɪm] ‘you pl. smell it’</td>
</tr>
<tr>
<td>[ɪ], [ɛ]</td>
<td>/keme/ [kɪmɛ] ‘you 2 sleep’</td>
</tr>
<tr>
<td>[ɪ]</td>
<td>/tjen/ [tɪn] ‘throw’</td>
</tr>
<tr>
<td>[ɪ]</td>
<td>/jeme/ [jɪmɛ~jɪmɛ] ‘man’</td>
</tr>
<tr>
<td>[ɪ]</td>
<td>/wewawa/ [wɪwawa] ‘a swing’</td>
</tr>
</tbody>
</table>

Table 2.3: Major allophones of /e/

In words where /e/ is preceded by a glide, such as /tjen/ [tɪn] ‘throw’ or /wewawa/ [wɪwawa] ‘a swing’, the /e/ is raised to a high front vowel [i]. Initial /je/ sequences sometimes surface as a long high vowel, or as [ɪ], as shown in /jeme/ [jɪmɛ~jɪmɛ] ‘man’.

2.1.1.2 /ɛ/ \(<\text{e}\>\)

Table 2.4 gives examples of major allophony for the phoneme /ɛ/. Most commonly, it surfaces as [ɛ]. Between consonants, /ɛ/ reduces and may also centralise such as in /ɛt/ [ʔɔt~ʔɛt] ‘build a house’, where it is sometimes [a] and sometimes [ɛ]. When preceded by /w/ the vowel sometimes also centralises producing [wa].

2.1.1.3 /a/ \(<\text{a}\>\)

Table 2.5 gives examples of major allophony for the phoneme /a/. Most commonly, it surfaces as [a]. Between consonants it is raised and shortened.
Table 2.4: Major allophones of /ɛ/

<table>
<thead>
<tr>
<th>Allophones</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ɛ/</td>
<td>[ɛɾ] 'shit'</td>
</tr>
<tr>
<td>[ã] ~ [ë]</td>
<td>/ɛt/ [ʔêt ~ ʔët] 'build (house)'</td>
</tr>
<tr>
<td>[ã] ~ [ë]</td>
<td>/nêpré/ [nêpré ~ nêpré] 'take'</td>
</tr>
</tbody>
</table>

Table 2.5: Major allophones of /a/

<table>
<thead>
<tr>
<th>Allophones</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>[a]</td>
<td>/hat/ [haɾ] 'aunt'</td>
</tr>
<tr>
<td>[a]</td>
<td>/pa/ [paɾ] 'father'</td>
</tr>
<tr>
<td>[ã]</td>
<td>/fêna/ [fêna] 'lightning'</td>
</tr>
<tr>
<td>[œ]</td>
<td>/atj/ [ʔatj] 'banana'</td>
</tr>
<tr>
<td>[õ]</td>
<td>/man/ [møn] 'bag'</td>
</tr>
<tr>
<td>[æe]</td>
<td>/tæe/ [tæe] 'I do'</td>
</tr>
<tr>
<td>[œ]</td>
<td>/na/ [næ] 's/he married'</td>
</tr>
</tbody>
</table>

2.1.1.4 /ɔ/ <o>

Table 2.6 gives examples of major allophony for the phoneme /ɔ/. Of all the vowels, this one appears the most resistant to centralisation. It is still shortened between consonants. It always surfaces as (or near) [ɔ], with shortened and/or nasalised counterparts in the environments previously described.

3Note that for /a/, a word-initial form is treated as closed, being preceded by a phonetic glottal stop. The /h/-initial form, however, surfaces in the same way as the allophone for open environments.
### Allophones Examples

<table>
<thead>
<tr>
<th>Allophones</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ɔ]</td>
<td>/tɔ/ [tɔ]  'my'</td>
</tr>
<tr>
<td>[ɔ̌]</td>
<td>/mɔ̌n/ [mɔ̌ndɔ]  'talk'</td>
</tr>
<tr>
<td>[ɔ̌, ɔ̣̌]</td>
<td>/okɔ/ [ɔ̌kɔ]  'ground'</td>
</tr>
</tbody>
</table>

Table 2.6: Major allophones of /ɔ/

### 2.1.1.5 /o/ <u>

Table 2.7 gives examples of major allophony for the phoneme /o/. Most commonly, this surfaces as [o], between consonants. Following a nasal, /o/ is nasalised. In parallel to the effects of glides on the other mid-high vowel /e/, when /o/ is preceded by a glide, it is raised, e.g., /swo/ [swo] 'it burns’ or /jonje/ [jundi] ‘sun’.4

<table>
<thead>
<tr>
<th>Allophones</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>[o]</td>
<td>/so/ [so]  's/he smells it</td>
</tr>
<tr>
<td>[ō]</td>
<td>/mo/ [mō]  'woman’</td>
</tr>
<tr>
<td>[ʊ]</td>
<td>/o/ [ʊ]  'sago’</td>
</tr>
<tr>
<td>[u]</td>
<td>/ow/ [ow]  's/he shoots it’</td>
</tr>
<tr>
<td>[ō]</td>
<td>/okwan/ [ɔkwan]  'search for’</td>
</tr>
<tr>
<td>[ō]</td>
<td>/monj/ [m̩ndj]  'aibika’</td>
</tr>
<tr>
<td>[u]</td>
<td>/pwon/ [p̩wɔn]  'get many’</td>
</tr>
<tr>
<td>[u]</td>
<td>/wo/ [wɔ]  'it (inan.) exists’</td>
</tr>
<tr>
<td>[u]</td>
<td>/jonje/ [jundi]  ‘sun’</td>
</tr>
</tbody>
</table>

Table 2.7: Major allophones of /o/

### 2.1.1.6 Long vowels

Long vowels counterparts to the five basic vowels are rare but attested for all but /oː/. Examples (often the only ones) are given in Table 2.8. Also given are examples of the far more common phonetic long high vowels (§2.1.4.3).

4 Note that in /jonje/, the glide not only blocks nasal spread but also partially denasalises the preceding nasal (also in /monj/) producing /nd/ (§2.1.3).
The most common source for these long vowels is a set of verbs with the final segments /no/ or /ne/. The likely diachronic source for all of these verbs is the combination of (nominal) forms with a verb-forming suffix /-no/ (§6.3.2). These /no/-final forms only demonstrate the long vowels /ɛː/, /ɔː/ and /aː/ and the complex high vowels /je/ and /wo/, however.

(2.2) demonstrates the only known minimal pair amongst the long vowels, contrasting length between mono-morphemic forms.

(2.2) (a) /tɛtɛ/ [tɛtɛ] ‘a (green) parrot species’
    (b) /tɛ:tɛ/ [tɛːtɛ] ‘red’

There are only two examples of /ɛː/. They are /seːkɛ/ [seːkɛ] ‘sugarcane’ and /feːkɛ/ [feːkɛ] ‘near’. Across speakers, the vowel quality of /ɛː/ in these two words seems quite unstable. Most commonly it is [ɛː], sometimes lower ([ɛː]) and sometimes higher ([iː]).

The doubled vowels /aa/ and /oo/ arise from combinations of morphology. In fact, I am not aware of any instance of /oo/ not arising from the combination of morphemes. It is possible to compare doubled and non-doubled vowels in contrastive pairs.

(2.3) (a) /naːræːo/ [nɑːræːo] ‘we two married + NZR’
    (b) /naːræːo/ [nɑːræːo] ‘we two are doing something’

(2.4) (a) /foː/ [foː] ‘s/he opened it’
    (b) /foː/ [foː] ‘open + NZR’

Table 2.8: Long vowel examples

<table>
<thead>
<tr>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ɛː/</td>
</tr>
<tr>
<td>/ɔː/</td>
</tr>
<tr>
<td>/aː/</td>
</tr>
<tr>
<td>/ɛː/</td>
</tr>
<tr>
<td>/jeː/</td>
</tr>
<tr>
<td>/woː/</td>
</tr>
</tbody>
</table>

5 The long vowels of these /no/-final forms may be a remnant of open syllable lengthening (§2.4.1) of open monosyllabic forms.

6 Only on the basis of symmetry with the remainder of the system do I assume that /oː/ is possible.
The forms are rare enough that it is unclear whether they all have conditioned nasal allophones in the context of a preceding nasal. I am not aware of examples for /εː/, /ɛː/ and /ɔː/.

### 2.1.2 Consonant inventory

The consonant inventory is heavily skewed to the anterior of the mouth, with an equal number of labial and coronal pairs of stops, fricatives, trills and nasal consonants. Voicing is not distinctive. The outlying consonants are therefore /k/ and /h/. This is almost identical to the surrounding languages, with the notable lack of a lateral, which is otherwise common in the area (Brown, 1990; Honsberger et al., 2008; Seiler, 1985). Some languages such as Baibai or Kwomtari lack the bilabial trill, but nevertheless have a bilabial stop and pre-nasalised stop or fricative.

A basic inventory of consonants for Momu is shown in Table 2.9 (with corresponding graphemes). As a special case in the phonology of Momu requiring more evidence, glides (/j/ and /w/) are established separately in §2.1.3. However, glides are a major trigger for sometimes dramatic allophony, as such, this allophony is considered here.

<table>
<thead>
<tr>
<th></th>
<th>Labial</th>
<th>Coronal</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop</td>
<td>/p/</td>
<td>/t/</td>
<td>/k/</td>
</tr>
<tr>
<td>Trill</td>
<td>/n/</td>
<td>/r/</td>
<td></td>
</tr>
<tr>
<td>Fricative</td>
<td>/f/</td>
<td>/s/</td>
<td>/h/</td>
</tr>
<tr>
<td>Nasal</td>
<td>/m/</td>
<td>/n/</td>
<td></td>
</tr>
<tr>
<td>Glides</td>
<td>/j/</td>
<td>/w/</td>
<td></td>
</tr>
</tbody>
</table>

Table 2.9: Consonant inventory

Tables 2.10 and 2.11 show relevant contrasts to establish all consonant phonemes.

Table 2.10 contrasts word-initial consonants. Note that /h/ is restricted to word-initial position, and contrasts with the absence of an initial consonant (realised as a phonetic glottal stop).

---

7 More work is needed, but voicing is not straightforwardly conditioned by, for instance, an intervocalic environment. Voicing is not distinctive in the area where Momu is spoken, with the exception of Kwomtari (Honsberger et al., 2008). Voiced phonemic stops in Imonda entail phonetic pre-nasalisation (Seiler, 1985).
Table 2.10: Initial consonant contrasts

Table 2.11 contrasts final consonants. Note that the phoneme /r/ does not occur word-initially.8

Table 2.11: Final consonant contrasts

The most common environment for major allophonic variation of most consonant phonemes is when preceding a glide. Tables 2.12 to 2.14 give examples of this variation.9

Palatalisation triggered by /j/ is shown in Table 2.12. Obstruents followed by glides may become palatalised or labialised. When the coronal obstruents /s/ and /t/ are followed by /j/ they are palatalised. This palat-

---

8While /r/ does not occur word-initially, it can occur as a syllable onset word-medially.

9/V/ is shorthand for any phonemic vowel in Momu.
alisation could be characterised perceptually as a relatively sustained period of higher pitched noise or turbulence. For [s] there is a rise in pitch across the sibilant, and for [t] this could be described as a burst of higher pitched aspiration.

| Examples |
|-----------------|-----------------|
| /sj/ /wosj/ wusj| 'lobster' |
| /sV/ /wose/ wusè| 'they are (inan.)' |
| /tj/ /tjen/ tjr| 'shoot' |
| /tV/ /ttn/ ttn| 'many die' |

Table 2.12: Palatalisation by glides

Labialisation triggered by /w/ is shown in Table 2.13. Velar and labial consonants attract labialisation when followed by /w/. This results in greater lip protrusion and rounding. In the case of /k/ it sometimes results in a realisation further back in a uvular position. There is a great deal of variation amongst speakers. This is a stronger feature for older, more conservative speakers, and also speakers of western Momu. As such, I am aware that it happens, but do not have a great deal of data on it.\(^{10}\)

| Examples |
|-----------------|-----------------|
| /kw/ /kwɔ/ [kʰɔ ~ kʰwɔ] | 'tree' |
| /kV/ /hakɔ/ [ha’kɔ] | 'egg' |
| /fw/ /fwa/ [fʰwa] | 'bad smell' |
| /fV/ /foe/ [foe] | 'I open it' |

Table 2.13: Labialisation by glides

In his most recent writings on Momu phonology, Baron (2007b) noted that obligatory labialisation may accompany the bilabial trill. Phonologically, this raises the question of whether placing a perceived /w/ after the bilabial trill may be redundant. In forms like /nasə/ [nʰasə] ‘child’ the labialisation is there, but it seems stronger to me in forms like /nwamə/ [nwa’mə] ‘younger (same sex) sibling; sister’. For now, I will include /w/ when it is perceptually stronger.

Denasalisation triggered by glides is shown in Table 2.14. Denasalisation varies from speaker to speaker. In the least eventful form, a glide between

\(^{10}\) Labialisation behaves very similarly in Imonda and Kwomtari (Honsberger et al., 2008; Seiler, 1985). Velar and labial consonants followed by /u/ are labialised, and the vowel sometimes loses syllabicity.
a nasal and vowel simply blocks the spread of nasalisation to the vowel. Usually, however, that denasalisation invades the nasal consonant to some degree. This is what I am representing in phonetic transcription with two segments: [nd], [nt], [mb] and [mp].\(^{11}\) In the most extreme cases, there is no nasality at all.\(^{12}\) Rather than transcribe all this variation, I have chosen to represent the medial value. Baron (p.c.) has not found this interaction between nasals and glides in Western Momu.

**Examples**

<table>
<thead>
<tr>
<th>/njV/</th>
<th>/nenja/</th>
<th>[nindja]</th>
<th>‘tree kangaroo’</th>
</tr>
</thead>
<tbody>
<tr>
<td>/nV/</td>
<td>/wanj/</td>
<td>[wantj]</td>
<td>‘I shoot you’</td>
</tr>
<tr>
<td>/nw/</td>
<td>/nwo/</td>
<td>[ndu]</td>
<td>‘mustard flower’</td>
</tr>
<tr>
<td>/nV/</td>
<td>/no/</td>
<td>[nɔ]</td>
<td>‘s/he performs’</td>
</tr>
<tr>
<td>/mj/</td>
<td>/kemj/</td>
<td>[kimpj]</td>
<td>‘we eat’</td>
</tr>
<tr>
<td>/mV/</td>
<td>/keme/</td>
<td>[kɪmɛ]</td>
<td>‘you 2 sleep’</td>
</tr>
</tbody>
</table>

Table 2.14: Denasalisation by glides

Word-final glides can cause devoicing in some cases. Note that the denasalisation in Table 2.14 results in a (denasalised) voiceless stop when the glide is word-final. Similarly, /r/ may also be devoiced when followed by a word-final glide (e.g., /jɛrj/ [jɛrɛj] ~ [jɛː] ‘we (pl.)’).

The phoneme /n/ has the allophones [n] and [ŋ] which are in free variation. Older, more conservative speakers are more likely to use the trill. Indeed, the bilabial trill is a strong marker of identity for the Momu speakers I have worked with in the east (despite its apparent decline as a trill). Areally, the feature is surprisingly common, occurring in Bewani, Mbu, Sumararu, Rawo and Ninge (Donohue et al., 2013). Additionally, where there are no trills, there are commonly prenasalised stops (e.g., in Imonda and Baibai), which can be a precursor to bilabial trills (Ladefoged and Maddieson, 1996, pp227–228). While sporadically present in places across Papua New Guinea (but especially in Sandaun province (Hajek, 2007)), bilabial trills are quite rare across the world’s languages. Donohue et al. (2013) record 38 languages containing bilabial trills within a sample of 3798.

The bilabial trill is always voiced in Momu. Counter to the expectation laid out by Ladefoged and Maddieson (1996, pp227–228), /n/ is not typically

\(^{11}\)Voiceless denasalised forms occur word-finally.

\(^{12}\)In early fieldwork, prior to understanding the effects of glides, it seemed as though nasals freely alternated with non-nasal counterparts in specific lexemes.
released into a high rounded vowel. It is released into any of the vowels in Momu. A minor amount of lip protrusion accompanies high back vowels, but not so for the unrounded vowels. The trill is produced with the majority of the lips. For some speakers, especially those who use a bilabial trill for /n/ instead of a [β], a word-final /m/ may be trilled ([ã]). This is rare, however.

For some speakers /k/ is pronounced further back as [q] while for many others it is [k]. /k/ frequently attracts labialisation, but I have yet to determine a conditioning factor, beyond the fact that it appears more common in older, more conservative speakers, and in western Momu (Baron p.c.).

/t/ and /r/ are very nearly in complementary distribution. Some /r/- or /t/-initial suffixes alternate freely between the two. For instance the first plural subject marker /-t/ also occurs as /-r/. Generally speaking /r/ tends to occur as a coda, and /t/ tends to occur as an onset. But I have counterexamples for both. Regardless, I have never encountered /r/ occurring word-initially.

/h/ has an extremely limited distribution. It occurs only word-initially before an /a/, and contrasts with its absence (where the /a/-initial word begins with a phonetic glottal stop). Contrastive pairs are given in Table 2.17, along with further discussion in the next section.  

2.1.3 Glide inventory

As we have already seen in the conditioning of many consonants and vowels, glides are an important part of the particular phonological analysis of Momu that I am pursuing here. In this section I will mostly be examining glides outside of diphthongs, while the specific diphthongs formed with glides are examined separately (§2.1.4). Glides are also a critical component of phonetic long high vowels (§2.1.4.3).

The glide phonemes and major allophones are listed in Table 2.15 on the facing page. Word-final glides preceded by a consonant are devoiced. In all other cases glides sit on the edge of a vowel forming a diphthong, or in the case of /je/ and /wo/, they form long high vowels (§2.1.4.3).

Table 2.16 contrasts final devoiced glides, vowels and glide-vowel sequences. All are preceded by a consonant chosen to demonstrate the effects

---

13The reader may note that positing a phonemic glottal stop /ʔ/ would be a reasonable alternative. Full consideration of the phonemicisation of /h/ or /ʔ/ cannot however be considered until the glides have been introduced.
of glides. When followed by a glide, the /s/ in /wosj/, /osje/ and /jakesja/ palatalises, while the /s/ before /e/ in /wose/ does not. Nasals do not palatalise. Given the effects on other segments, one might expect the development of palatal nasal (Bateman, 2011). Instead, the effect of the palatal is a reduction in nasality. The /m/ followed by a glide in /kemj/, /kemje/ and /komje/ is partially denasalised while in /keme/ it is not. The glides also block rightward nasal spread, as would any other non-nasal consonant in the same position. In /kemje/ and /komje/ the final vowel is not nasalised.

Examples

<table>
<thead>
<tr>
<th>Word-form</th>
<th>Realisation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/sj#/</td>
<td>/wosj/ [wusj]</td>
<td>‘freshwater lobster’</td>
</tr>
<tr>
<td>/se#/</td>
<td>/wose/ [wose]</td>
<td>‘they (inan.) are’</td>
</tr>
<tr>
<td>/sje#/</td>
<td>/osje/ [osjei]</td>
<td>‘they cut it’</td>
</tr>
<tr>
<td>/sja#/</td>
<td>/jakesja/ [jagisja]</td>
<td>‘they are eating’</td>
</tr>
<tr>
<td>/mj#/</td>
<td>/kemj/ [kimpj]</td>
<td>‘you pl. eat’</td>
</tr>
<tr>
<td>/me#/</td>
<td>/keme/ [kimê]</td>
<td>‘you 2 sleep’</td>
</tr>
<tr>
<td>/mje#/</td>
<td>/kemje/ [kimbi]</td>
<td>‘you 2 eat’</td>
</tr>
<tr>
<td>/mje#/</td>
<td>/komje/ [gõmbje]</td>
<td>‘bandicoot’</td>
</tr>
</tbody>
</table>

Table 2.16: Vowel- and glide-final words

Word-final glides realised as devoiced glides are fragile, making natural textual examples quite rare. When words ending in a consonant-glide sequence are followed by a consonant-initial word (within a phrasal unit), the glides are often deleted, as shown in (2.5a). When these same words are followed by a vowel-initial word, the final glide will re-syllabify onto the beginning of that word, as in (b). A range of consonant-initial suffixes

---

14 Syntactic boundaries also trigger deletion of these word-final CG sequences. Where they occur on a word as a final element in an NP or subordinate clause, they will be deleted. This means that for most CG-final words, a devoiced glide is generally only evident when the lexeme is sentence-final. For this reason, it was a while before I was fully aware of their existence.

15 This was especially the case with demonstratives anu ‘this’ and eru ‘that’, making their frequent use doubly useful as an aid in identifying glide-final words amongst natural texts.
like the oblique marker /-m/ (c) result in the deletion of these final glides (§2.5.3).

(2.5) (a) //wosj prto// → /wos pɛto/ [wus.pɔ.to] ‘a little freshwater lobster’

(b) /wosj anɔw/ [wus.jɛ.nɔw] ‘a big freshwater lobster’

(c) //wosj =m// → /wosm/ [wos.m] ‘freshwater lobster + OBL’

The glides are voiced (and in some cases rounded) when glide-final words are suffixed with a vowel-initial form. For instance, the imperative form of glide-final verbs demonstrates this (2.6a), and so does an emphatic form of nominals (2.7). Both are formed by a suffix /-ɛ/, and differentiated only by intonation.

(2.6) (a) //tatj -ɛ// → /tatjɛ/ [tatjɛ] ‘shoot many (imperative)’

(2.7) //wosj -ɛ// → /wosjɛ/ [wosjɛ] ‘a freshwater lobster (of course)’!

There is a contrast in Momu between glide and vowel-initial words, as shown in Table 2.17. All phonemic vowels can occur word-initially, but are realised with a preceding phonetic glottal stop. Phonetic glottal stops only occur word-initially, and the contrast between initial vowels and glides means that we do not need to posit a phonemic glottal stop.

All vowels can be preceded by a word-initial glide, but for mid-high vowels, the resulting vowel is a near-monophthongal, longer, near-high (or sometimes high) vowel. For /a/-initial words, there is a contrast between a phonetic glottal stop, and an initial /h/. When preceded by a word-initial /h/, the realisation of /a/ is lower. /ɛ/- and /ɔ/-initial forms are always preceded by a phonetic glottal stop.

Mono-morphemic forms in Momu prefer CG ordering, both in onset position and word-finally (§2.3, §2.4). Glide-consonant metathesis is an important and predictable part of Momu morphophonology (§2.5.1.1). §2.1.4 includes glides in diphthongs, and glides are an important part of the long high vowel (§2.1.4.3).

16Diachronically, vowel-initial words possibly arose from the loss of an initial /g/ (§C.1)
17In the interests of noting variation, one of my informants (Monica) preserved initial glottal stops in prefixed forms such as //j- ai- an -wɔ// → /jɛʔan/ [jɛʔan] ‘s/he is looking at one’. Monica was the only one to do this, however, and so I have gone with an analysis that reflects the majority.
Examples

<table>
<thead>
<tr>
<th>Category</th>
<th>Initial Glide</th>
<th>Vowel</th>
<th>Example</th>
<th>Realisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid-high</td>
<td>/#je/</td>
<td>/jenum</td>
<td>jenum</td>
<td>jen</td>
</tr>
<tr>
<td>Front</td>
<td>/#e/</td>
<td>/en</td>
<td>en</td>
<td>?m</td>
</tr>
<tr>
<td>Mid-high</td>
<td>/#wo/</td>
<td>/wosj</td>
<td>wosj</td>
<td>wo</td>
</tr>
<tr>
<td>Back</td>
<td>/#o/</td>
<td>/osj</td>
<td>osj</td>
<td>osu</td>
</tr>
<tr>
<td>Low</td>
<td>/#ha/</td>
<td>/hat</td>
<td>ha</td>
<td>hae</td>
</tr>
<tr>
<td></td>
<td>/#a/</td>
<td>/atj</td>
<td>atj</td>
<td>aet</td>
</tr>
<tr>
<td>(no contrast)</td>
<td>/#o/</td>
<td>/on</td>
<td>on</td>
<td>on</td>
</tr>
</tbody>
</table>

Table 2.17: Initial glide/vowel contrasts

The glides correspond with full high vowels in Baibai (§C.1.5.2). Diachronically, the glides in Momu are reminiscent of the mid-point of the development of *yers* in Slavic languages (Shevelov, 1964, pp432–465). In a similar fashion, /j/ is far more prominent than /w/, and some of the effects of /w/ are being lost. Palatalisation, which entirely transferred to preceding consonants in Slavic languages, is an apparently recent development in Eastern Momu. Baron (p.c.), has not observed the same in Western Momu, and Laycock’s wordlist (1) recorded in Mori give no indication of this either. Labialisation is especially in decline. The fragility of word-final glides (via devoicing or deletion) implies that what may remain of glides in the future is possibly just these secondary effects.

### 2.1.4 Diphthong inventory

A full listing of diphthongs is given in Table 2.18 on the next page. All diphthongs are combinations of a glide and vowel, except for the diphthonal vowel-vowel combinations /æe/ and /oe/. Other vowel-vowel sequences may become diphthonal in rapid speech, but are more distinctly separate vowels in slow speech, possibly with a glide inserted between, with each vowel occupying a syllable nucleus. Many of these diphthongs are quite restricted in distribution (§2.3.1). For instance, glide-final diphthongs occur only word-finally in mono-morphemic forms.

Examples of vowel-glide diphthongs (2.8) and glide-vowel diphthongs (2.9) are given below. All have straightforward realisations except for /we/,
which tends to surface as [wa]. The reverse ordering of /ew/ is prohibited. 
/ew/ is also a prohibited sequence.  

(2.8) (a) /ej/: /kɛj/ [kɛj] ‘hand’  
(b) /aj/: /waj/ [waj] ‘wild pandanus’  
(c) /ɔj/: /kɔj/ [kɔj] ‘eye’  
(d) /aw/: /maw/ [maw] ‘rain’  
(e) /ɔw/: /kɔw/ ‘s/he came downriver’

(2.9) (a) /eː/: /jen/ [jen] ‘follow’  
(b) /ja/: /jan/ [jan] ‘I / s/he went upriver’  
(c) /ɔː/: /jɔn/ [jɔn] ‘it is there’  
(d) /weː/: /pwen/ [pwen] ‘I s/he came’  
(e) /waː/: /wase/ [wase] ‘pawpaw’  
(f) /woː/: /wan/ [wan] ‘I / s/he went upriver’

---

Note that (2.9b) and (f) are synonymous. This pattern extends also to other spatial verbs (§3.6.2.1): /kaj/ (rare) and /wɔj/ ‘go across’, /jar/ and /wɔr/ ‘go down’.  

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Table 2.18: Diphthongs
2.1.4.1 /Ve/ diphthongs

The three vowel-vowel diphthongs, /ae/, /œ/ and /oe/ are perceptually close to the vowel-glide diphthongs /aj/, /œj/ and /oj/. Minimal pairs differentiating them are given below.

The starting points in the diphthongs /aj/ and /ae/ are quite noticeably different. The diphthong /ae/ sometimes drops the final vowel, especially in heavier syllables, but because the fronted [æ] is still present, it is clearly distinguished.

(2.10) /aj/: /aj/ [æj] ‘you (sg.)’
       /ae/: /ae/ [œæ] ‘be (anim.)’

In /œj/ and /œe/ the starting point is the same [œ], but the end point is slightly different.

(2.11) /œj/: /œj/ [œj] ‘type of eagle’
       /œe/: /œe/ [œe] ‘I exchange it’

The starting point for the diphthong /oj/ is higher than /oe/, as it is pulled higher by the glide (§2.1.4.2). In the next section I discuss differentiating /oj/ and /we/ further.

(2.12) /œj/: /œj/ [œj] ‘sago palm sp.’
       /œj/: /œj/ [œj] ‘cassowary’
       /œe/: /œe/ [œe] ‘I open it’

The VV and VG diphthongs can be further differentiated from each other by their very different interaction with suffixing morphology (§2.5).

2.1.4.2 Mid-high vowel and glide diphthongs

The combinations of mid-high vowels (/e/ and /o/) with glides are a special case. Although glides affect the non-mid-high vowels only minimally, in the neighbourhood of glides, mid-high vowels are realised as higher. In the most extreme case—/je/ and /wo/—they surface as monophthongal long pure high vowels (§2.1.4.3).

The combinations /jo/, /œj/ and /we/ are high ([i̯], [u̯], [w]) or near high ([i̯], [u̯], [w]) vowel diphthongs. /ew/ is unattested.

(2.13) /jo/: /jo/ [i̯œj] ‘dog’, /œj/: /œj/ ‘sun’
The choice between the phonemicisation /oj/ and /we/ can be a little difficult to determine. While they contrast word-initially, elsewhere they are non-contrastive (and subject to variation). Take /mwe/ or /moj/ for “cassowary”. Some speakers make a noticeable denasalisation of the initial nasal ([mbwː]), while others do not. Transcribing as /mwe/ with the glide next to the nasal would be one way of indicating this denasalisation. Only a subset of the consonants vary when followed by a glide, so, in this case, it is probably safer to opt for the more generally preferred ordering of GV. VG ordering only occurs word-finally in mono-morphemic words.

The sequences /ej/ and /ow/ arise only in a limited set of lexemes. Firstly they only occur in the verbs /kej/ ‘eat’, /sej/ ‘urinate’, /nej/ ‘shoot one’, /mənej/ ‘lay out’, /nafokej/ ‘carry on shoulder’ and /nokej/ ‘fill up’. These verbs then have corresponding rounded third person singular subject forms /kow/, /sow/, /now/ and /nokow/. Speakers refer to this as TPnek hevi ‘heavy voice’. The starting point of the diphthong varies a little from speaker to speaker, with surface realisations of [ij ~ aj ~ ij] attested with corresponding back variants [ow ~ ow ~ uw].

For a subset of these forms in Eastern Momu, the possibility of the diphthong arising via a linker vowel remains an open question (§2.4.5). This is not an uncommon question amongst papuan languages (Blevins and Pawley, 2010; Jendraschek, 2012), and is made all the more problematic by phonemicisation choices of glides or high vowels, as demonstrated for Iatmul and Kalam by Foley (1986, pp51–52).

19Baron (p.c.) gives several more forms in Western Momu (transcribed in the orthography used here): /fej/ ‘breast(milk)’, /æranej/ ‘talk secretly’, /noonej/ ‘break up’, /rsefjej/ ‘leg’, /rfsenej/ ‘one’, /nafokej/ ‘carry on shoulder’. Many of these (non-verbal) forms I record as long high vowels (/je/ or /wo/) rather than /ej/ or /ow/. This may be a side effect of the general flattening of the vowel space (§2.6.2). Some forms have other differences in Eastern Momu (/rsefjej/ : /rnsjej/, /nafokej/ : /nafokej/). Almost all forms are verbs, and this means that the underlying form is confirmed by glide-consonant metathesis which results in root-final glides being moved from a coda position to the onset of a suffix, and separated from the diphthong (§2.5.1.1). It may be this morphophonological feature that has helped preserve this unusual diphthong in Eastern Momu in higher frequency verbs.
2.1.4.3 Long high vowels

The glide-initial sequences /je/ and /wo/ surface as long high vowels: [ji] ~ [iː] ~ [ji] and [wu] ~ [uː] ~ [wo]. The long high vowels are broadly distributed, word-initially, -medially and -finally.

(2.16) /je/:

(a) /jeme/ [jimɛ] ‘man’
(b) /tjen/ [tʃim] ‘carry many’
(c) /kamje/ [kambiː] ‘clouds’

(2.17) /wo/:

(a) /wone/ [wunɛ] ‘stone’
(b) /pwon/ [pʰun] ‘emerge’
(c) /painwo/ [pæn̪uː] ‘pin down’

These long vowels are markedly different from regular vowels (§2.1.1). The long high vowels remain long in environments where regular vowels are reduced (compare (2.16b) to (2.18a), and (2.17b) to (2.18c)). The long high vowels have no nasalised allophones (cf. /E/ in (2.16a) and (2.17a)), and frequently trigger allophony in preceding consonants like palatalisation (2.16b), labialisation (2.17b), and denasalisation (2.16c, 2.17c) (§2.1.2).

(2.18) (a) /ten/ [tɪn] ~ [tɪn] ‘inside’
(b) /tən/ [tʃn] ~ [tɔn] ‘many die’
(c) /pon/ [pɔn] ‘get many’

Finally, long high vowels arise predictably whenever morphology brings together a combination of a glide and a mid-high vowel, for instance, as the result of glide-consonant metathesis (§2.5.1.1): 21

20 Recall also, that the regular vowels also have rarer long variants, but that the surface form of long mid-high vowels is their lowest allophones (e.g., /feeke/ [fɛke] ‘close’ and /foo/ [fɔ] ‘open /foe/ + nominaliser /-o/’). These either arose because of morphology, or are restricted to a very small number of examples, many of which have diachronic hypotheses accounting for length.

21 When a glide-final verb root (whether in a diphthong (2.19a)-(b) or not (c)) is suffixed by a (consonant-initial) subject marker, the glide and consonant metathesise. This results in a higher vowel when the suffix is of the form /Ce/. Note, however, that when the root is consonant or vowel-final, the surface realisation of that vowel is lower.
(2.19) combinations with /-se/ ‘third person plural subject’

(a) //kəj -se// → /kəsje/ [kəsje] ‘they came down river’
(b) //kej -se// → /kesje/ [kəsje] ‘they ate’
(c) //tatj -se// → /tatsje/ [tatsje] ‘they shot them’
(d) //rt -se// → /rtse/ [rtse] ‘they built (a house)’
(e) //ke -se// → /kese/ [kəse] ‘they slept’

Or suffixing the nominaliser /-o/ or singular genitive /-o/ to a glide-final form (§2.5.4):

(2.20) combinations with /-o/ ‘singular genitive’ or ‘nominaliser’

(a) //jemə anəw -o// → /jemə anəwo/ [jimə?anəwu] ‘of the big man’
(b) //tatj [+round (3SGS)] -o// → /tatwo/ [tatu] ‘s/he shot many + nominaliser’

At this point, it is possible to posit an alternative hypothesis whereby there are phonemic high vowels (/i/ and /u/) in Momu which become glides in syllabification. Long high vowels would be represented by /ii/ and /uu/ rather than /je/ and /wo/ in this analysis, and where /ie/ and /io/ arise as the result of morphology they would be realised as identical to /ii/ and /uu/. An interesting distributional fact in this alternative analysis would be that /i/ always occurs next to another vowel, or failing that, word-finally after a consonant (surfacing as devoiced). In other words, /i/ could never solely occupy a syllable nucleus.

While this works to some degree, it fails to motivate several processes and requires more complex (morpho-)phonological rules. Glide-consonant metathesis is more elegantly explained as limited to adjacent consonants, and more simply represented in transcription. The lack of nasal allophones is similarly easily explained as being blocked by any consonant intermediate to a nasal and vowel. Finally, the distributional facts of glides align well with the idea that they are always peripheral.

What the glide analysis does do, however, is assume that all word-medial long high vowels historically arose from (presumably) the monophthongisation of /je/. It is otherwise clear that long vowels do occur in Momu, and
so it is not unreasonable to assume that in at least some of these cases, word-medial long high vowels did not arise from monophthongisation.

In his writings on the topic Baron (1979; 1983; 1983; 2007) alternated between an analysis including and excluding phonemic high vowels as distinct phonemes. As noted at the end of §2.1.3, glides are a shifting target in Momu and are presently subject to further change (§2.6.2). I believe this analysis captures and motivates some of this change.

2.2 Practical orthography and transcription conventions

<table>
<thead>
<tr>
<th>/e/</th>
<th>/ɛ/</th>
<th>/a/</th>
<th>/ɔ/</th>
<th>/o/</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>e</td>
<td>a</td>
<td>o</td>
<td>u</td>
</tr>
<tr>
<td>/p/</td>
<td>/t/</td>
<td>/k/</td>
<td>/h/</td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>t</td>
<td>k</td>
<td>h</td>
<td></td>
</tr>
<tr>
<td>/s/</td>
<td>/ʃ/</td>
<td>/m/</td>
<td>/n/</td>
<td></td>
</tr>
<tr>
<td>s</td>
<td>ʃ</td>
<td>m</td>
<td>n</td>
<td></td>
</tr>
<tr>
<td>/b/</td>
<td>/r/</td>
<td>/j/</td>
<td>/w/</td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>r</td>
<td>j</td>
<td>w</td>
<td></td>
</tr>
</tbody>
</table>

Table 2.19: Phoneme to orthographic grapheme correspondences

For the remainder of this thesis I will be adopting the practical orthography shown in Table 2.19. I will no longer place these between angle brackets (<>).

The h will not be marked after this chapter, except where I need to contrast a known minimal pair. The diphthong ai will occasionally merge with a in situations where there is a predictable truncation of the glide (§2.5.1.2).

The distinctions between various combinations of glides and high vowels may be collapsed to just i and u in the remaining chapters. This is because this thesis incorporates data from earlier fieldwork before I could consistently hear a difference in certain vowel qualities, but also because many speakers that I worked with either do not, or only variably produce these distinctions further compounding the problem. In examples where there is no source identifier (i.e., the example is common, and drawn from knowledge) or where the year in the source identifier is 2010 or later, the distinction is consistently
made. Where the source identifier is earlier than 2010, the distinction is inconsistently made. See §1.6 for more on the format of source identifiers.

From this point onwards non-English words in the body of the text will be italicised. Tok Pisin forms are preceded by TP. Unless I revert to bracketed conventions for phonemes or phones, the reader can assume that they are viewing data that is phonemic (although lacking in the distinctions I mention above in subsequent chapters).

In example sentences, punctuation is meaningful. The absence of a final period (.), exclamation mark (!) or question mark implies that the example is a sentence fragment within a larger context. This is especially the case if there is a final comma (,). Likewise, the absence of a sentence-initial capitalised letter implies a fragment—for instance, one taken from an embedded clause. I have of course tried to minimise the use of such examples, but for reasons of space (the more naturalistic Momu data in my corpus rarely respects the constraints of a printed page), or because I lack an example sentence otherwise, I have had to do this. At other times, an ellipsis (…) indicates some redacted material. Nevertheless, in the interests of full disclosure, I have spelled out these conventions so that the reader is aware of any changes I have made to source materials. In some cases, the reader may wish to locate the original (§1.5) if they wish to confirm or refute my findings.

2.3 Phonotactics

In this section, I examine the distribution of phonemic segments (§2.3). The primary question of this section is what sequences are allowed and not allowed relative to morpheme boundaries and relative to each other (Blevins, 1995). At no point in this section do I appeal to syllable boundaries in discussing distribution (Steriade, 1999), as I consider the process of syllabification to be fed by the knowledge of phonotactics.

Sequences of phonemes are grouped as combinations of vowels, consonants (exclusive of glides), and glides. In §2.3.1, I examine the distribution of vowels relative to morpheme boundaries, relative to glides and relative to each other. In §2.3.2, I consider the distribution of consonants (inclusive of glides) relative to morpheme boundaries, and importantly for Momu, clusters of consonants arising from suffixing morphology. In discussing sequences of
segments, I use the following conventions: C refers to a member of the set of all consonants excluding glides, G is a member of the set of glides and V is a member of the set of all vowels. K is the union of C and G. Parentheses indicate that a segment is optional.

I give examples of mono-morphemic forms and then details of the extended distribution of segments that arise due to morphology. Throughout this section, some examples will be marked with a small lozenge character (◊). This is an indicator that, to the best of my knowledge, the demonstrated sequence only arises in polymorphemic forms.22

Words in Momu begin with a (C)(G)V. In mono-morphemic forms, words end with V, C, G, or CG, and medially C((C)G) clusters are possible between vowels. Taking into account possible suffixing morphology, this expands to include CC(G) finally on verbs and GC on nominals, and CCK medially on verbs. Medial GC sequences are rare but possible in compounds.

This section gives no phonetic detail, as I am concerned only with sequences of phonemes. Phonetic detail for sequences demonstrated here is given in the section after this one, when I discuss their syllabification (§2.4).

2.3.1 Vowels

Monophthong vowels are broadly distributed, occurring initially, medially and finally. Examples of these distributions for all vowels are given in Table 2.20.

<table>
<thead>
<tr>
<th>Initial</th>
<th>Medial</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>in ‘plant’</td>
<td>tin ‘inside’</td>
</tr>
<tr>
<td>e</td>
<td>et ‘build’</td>
<td>ten ‘many die’</td>
</tr>
<tr>
<td>a</td>
<td>ar ‘do’</td>
<td>tan ‘centipede’</td>
</tr>
<tr>
<td>o</td>
<td>on ‘look’</td>
<td>mong ‘talk’</td>
</tr>
<tr>
<td>u</td>
<td>usy ‘mosquito’</td>
<td>futy ‘sago beetle’</td>
</tr>
</tbody>
</table>

Table 2.20: Monophthong vowel distribution

Long vowels (like VV sequences) are relatively rare (§2.1.1).23 Examples are given in Table 2.21. Included for comparison are the phonetic long

22I do not mark forms that are polymorphic for which there mono-morphemic examples of the same segmental distribution.

23The similarity in form for some of the examples is probably due to a hypothesised intransitive verb-forming suffix -nu (§6.3.2). The long vowels are possibly remnants of open monosyllable lengthening prior to verbalisation. Note that uu only arises due to combination with the nominaliser -u.
high vowels that I have analysed as arising from the sequences \textit{yi} and \textit{wu} (§2.1.4.3). These complex GV monophthongs are common and broadly distributed.

<table>
<thead>
<tr>
<th>Initial</th>
<th>Medial</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>\textit{ii}</td>
<td>\textit{siiki} ‘sugarcane’</td>
<td></td>
</tr>
<tr>
<td>\textit{ee}</td>
<td>\textit{peenu} ‘arrive’</td>
<td></td>
</tr>
<tr>
<td>\textit{aa}</td>
<td>\textit{kaanu} ‘be split’</td>
<td>\textit{panaa} ‘s/he got one?’ ◇</td>
</tr>
<tr>
<td>\textit{oo}</td>
<td>\textit{poonu} ‘be broken’</td>
<td></td>
</tr>
<tr>
<td>\textit{uu}</td>
<td>\textit{fuun} ‘open + NZR + OBL’ ◇</td>
<td>\textit{fuu} ‘open + NZR’ ◇</td>
</tr>
</tbody>
</table>

\textbf{Table 2.21: Long monophthong vowels}

Diphthongs are formed by three possible sequencings: GV, VG and a small set of VV diphthongs (\textit{ai}, \textit{oi}, \textit{ui}) (§2.1.4).

GV diphthongs are the most common and broadly distributed while in mono-morphemic forms, VG diphthongs are restricted to word-final position. Examples of each diphthong type are given in Tables 2.22, 2.23 and 2.24. Empty cells indicate that examples are unattested.

Examples of GV diphthongs are given in Table 2.22.

<table>
<thead>
<tr>
<th>Initial</th>
<th>Medial</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>\textit{ye}</td>
<td>\textit{yesy} ‘just’</td>
<td>\textit{tyepri} ‘bring many’</td>
</tr>
<tr>
<td>\textit{ya}</td>
<td>\textit{yaney} ‘God’</td>
<td>\textit{tyako} ‘a nap’</td>
</tr>
<tr>
<td>\textit{yo}</td>
<td>\textit{yonu} ‘food type’</td>
<td>\textit{syoko} ‘door(way)’</td>
</tr>
<tr>
<td>\textit{yu}</td>
<td>\textit{yunu} ‘sun’</td>
<td>\textit{esyub} ‘with a dog’ ◇</td>
</tr>
<tr>
<td>\textit{wi}</td>
<td>\textit{wiwawa} ‘swinging’</td>
<td>\textit{mwikna} ‘crouching’</td>
</tr>
<tr>
<td>\textit{we}</td>
<td>\textit{wes} ‘moon’</td>
<td>\textit{pwen} ‘one comes’</td>
</tr>
<tr>
<td>\textit{wa}</td>
<td>\textit{wasi} ‘pawpaw’</td>
<td>\textit{fwas} ‘one washes’</td>
</tr>
<tr>
<td>\textit{wo}</td>
<td>\textit{wony} ‘go up’</td>
<td>\textit{kwobo} ‘not know’</td>
</tr>
</tbody>
</table>

\textbf{Table 2.22: GV diphthong vowel distribution}

VG diphthongs, on the other hand (Table 2.23), occur only word-finally. Word-medial and initial VG sequences only occur with a following vowel or

\footnote{\textit{mwe} ‘salt water’ is a Mori specific variant of \textit{moye}.}
occur finally on morpheme boundaries.\textsuperscript{25}

The diphthongs \textit{iy} and \textit{uw} are a special case.\textsuperscript{26} These diphthongs occur on only a handful of verbs, and only word-finally (outside of suffixing). The \textit{uw} forms only arise with the rounding applied with third person singular subject inflection (§2.5.1.3).

\begin{table}[h]
\centering
\begin{tabular}{llll}
\hline
Initial & Medial & Final \\
\hline
\textit{ey} & eyer ‘do like that’ & nateyen ‘turn many’ & key ‘hand’ \\
\textit{ay} & ay ‘you (sg.)’, ayer ‘do like this’ & saymu ‘be ripe’ & masay ‘beak’ \\
\textit{oy} & moye ‘salt water’ & koy ‘eye’ \\
\textit{uy} & uy ‘I cut it’, ynu ‘heavy’ & uyenu ‘be hot’ & muy ‘cassowary’ \\
\textit{aw} & awo ‘grandmother’ & sawen ‘close’ & maw ‘rain’ \\
\textit{ow} & owar ‘name it’ & nowo ‘it is here’ & anow ‘big’ \\
\textit{iy} & & kiymu ‘I will eat’ & kiy ‘I ate’ \\
\textit{uw} & uw ‘s/he cut one’, & kuwmu ‘s/he will eat’ & kuw ‘s/he ate’ \\
& uwmu ‘s/he will cut it’ & & \\
\hline
\end{tabular}
\caption{VG distribution}
\end{table}

Finally, there are VV diphthongs (§2.1.4), examples of which are given in Table 2.24. The diphthong \textit{ai} is broadly distributed, but the others are less so. To my knowledge, medial \textit{oi} and \textit{ui} only arise due to suffixing.\textsuperscript{27}

\begin{table}[h]
\centering
\begin{tabular}{llll}
\hline
Initial & Medial & Final \\
\hline
\textit{ai} & aibi ‘lime’ & faino ‘child (esp. of animal)’ & tai ‘I do’ \\
\textit{oi} & oimnita ‘be ruined’ & fenoimu ‘I will leave it’ & fenoi ‘I leave it’ \\
\textit{ui} & fuimu ‘I will close it’ & fui ‘I close it’ \\
\hline
\end{tabular}
\caption{VV diphthong vowel distribution}
\end{table}

2.3.2 Consonants

All consonants can occur word-initially, with the exception of \textit{r}.

\textsuperscript{25}Depending on the boundary and morphology applied, glides resolve in different ways. Deletion (§2.5.7) or metathesis (§2.5.1.1) of the glide are possible, with both strategies functioning to preserve the more general ordering preference of CGV.

\textsuperscript{26}Recall that \textit{yi} and \textit{wu} are phonetically monophthongal (§2.1.4.3) while \textit{iy} and \textit{uw} are diphthongs with starting points roughly around a mid to high central vowel (varying from speaker to speaker) (§2.1.4.2).

\textsuperscript{27}Admittedly, the difference between these VV diphthongs, and the similar VG variants is at times difficult to hear, and so the distribution may be broader than I have concluded.
initial C

\begin{tabular}{ll}
p & pin ‘go’
t & tin ‘inside’
k & kin ‘be quiet’
b & bu ‘who’
r &
\end{tabular}

(2.21) \begin{tabular}{ll}
f & fin ‘salt’
s & sin ‘be unswollen’
h & hat ‘mother’s brother’
m & man ‘string bag’
n & niny ‘above’
y & yar ‘go down’
w & wees ‘moon’
\end{tabular}

Word-finally, consonants are less frequent in mono-morphemic forms. \(N\) and \(r\) frequently occur word-finally, especially as the final segment on verb stems. Glides occur quite commonly in word-final position, either in CG or VG sequences.

The distribution of final consonants varies based on word class. Given that word-final consonant clusters are mostly constructed with suffixing morphology that varies based on word class, separate examples of mono-morphemic nouns and verbs are given in (2.22).28

\footnote{Parenthesised values in (2.22) indicate that the examples are questionable. \(Tep\) is a variant of cutting verbs that I have not heard except in Savamui. The glide-final forms are effectively \(k\)-, \(p\)-, and \(n\)-final as suffixing shifts or deletes the glide in many cases. This is explained further when consonant clusters are considered. \(Ef\) ‘another’ is a marginal nominal. It is used only in the context of counting (§5.5).}
With the addition of regular and frequent morphology, final consonants (or consonant clusters as discussed below) are in fact reasonably common. The segments t, b, r, f, s, and m are all possible suffixes. Also, consonants more commonly occur finally in bound morphs.

### 2.3.2.1 Word-initial consonant clusters

Excluding initial CG sequences, the only attested word-initial consonant cluster is sk, which occurs on words like skub ‘place’ or skabu ‘bad’.29

(2.23) gives examples of initial CG clusters, with those in parentheses being problematic:30

<table>
<thead>
<tr>
<th>final C</th>
<th>verb</th>
<th>noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>p</td>
<td>(tep ‘cut’)</td>
<td>(pup(w) ‘bush knife’)</td>
</tr>
<tr>
<td>t</td>
<td>et ‘build (house)’</td>
<td>tit ‘grandparents’</td>
</tr>
<tr>
<td>k</td>
<td>(wo ky ‘go downriver’)</td>
<td>kukok ‘vine sp.’</td>
</tr>
<tr>
<td>b</td>
<td></td>
<td>fe kob ‘village’</td>
</tr>
<tr>
<td>r</td>
<td>ar ‘do to’</td>
<td></td>
</tr>
<tr>
<td>f</td>
<td>sif ‘hold/detain’</td>
<td>(ef ‘another’)</td>
</tr>
<tr>
<td>s</td>
<td>fwas ‘bathe’</td>
<td>wes ‘moon’</td>
</tr>
<tr>
<td>m</td>
<td></td>
<td>kam ‘shell/gourd’</td>
</tr>
<tr>
<td>n</td>
<td>in ‘plant’</td>
<td>(mony ‘talk’)</td>
</tr>
<tr>
<td>y</td>
<td>key ‘I come downriver’</td>
<td>mey ‘teeth’</td>
</tr>
<tr>
<td></td>
<td>taty ‘I shoot many’</td>
<td>kosy ‘road’</td>
</tr>
<tr>
<td>w</td>
<td></td>
<td>maw ‘rain’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(pup(w) ‘bush knife’)</td>
</tr>
</tbody>
</table>

29 Other initial clusters are possible in TP loanwords. These include combinations of p, t, k and f with r (e.g., TP praim/fraim ‘fry’, traim ‘try’, krai ‘cry’) and combinations of s with p, t and m (e.g., TP spak ‘drunk’, statim ‘start’, smokim ‘smoke’). These are generally preserved as consonant clusters and not broken apart by an epenthetic vowels, but in some earlier recordings epenthesis was more common.

Some combinations also show up in names, especially in Mori Village, where the language of origin is Pin (Womo).

30 I have tried to avoid using phonetic high vowels yi andwu for examples, in case the reader does not agree with my phonemicisation. Note that the list also includes variant forms of pwen ‘come’ and mweke ‘garden’. Some speakers freely vary between y and w producing the variant forms in the y column. The bilabial trill possibly includes obligatory labialisation (§2.1.2), making b(w)amo ‘younger (same sex) sibling; sister’ an over-representation when the w is included. That is, bw may be redundant, and instead may just be b. A word-initial r is unattested.
2.3.2.2 Word-final consonant clusters

I have already noted that word-final consonants are rare in mono-morphemic forms. Less rare are final CG clusters (where the glide is devoiced), examples of which are given in (2.22) above.

Longer consonant clusters otherwise only arise word-finally due to suffixing. Because there are several suffixes comprised of single consonants, it is possible for word-final consonant clusters to be longer. This morphology is most extreme with verbs.

(2.24) verbs

(a) CC#: wonf/wonm/wont ‘you (sg.) / you (pl.) / we (pl.) go upriver’

(b) CCG#: wokfy/wokmy/wokry ‘you (sg.) / you (pl.) / we (pl.) go downriver’

Verb roots can have a final p, t, r, f, s, n and y, and these can combine with f, m, r or t to produce final CC clusters. (b) demonstrates GC-metathesis (§2.5.1.1) which occurs when a consonant-initial suffix is applied to a glide-final root. Attested CG-final verb stem sequences are ty, ky, and ny. These can combine with f, m, and t between consonant and glide.31 A rounding process marks third person singular subjects, and so for verbs, w-final

<table>
<thead>
<tr>
<th>y</th>
<th>w</th>
</tr>
</thead>
<tbody>
<tr>
<td>p  pyini ‘run’ (pyen ‘come’)</td>
<td>pwen ‘come’</td>
</tr>
<tr>
<td>t  tya ‘many’</td>
<td>(twakfan ‘person’s name’)</td>
</tr>
<tr>
<td>k  kyenebo ‘point (bend in river)’</td>
<td>kwa ‘hair’</td>
</tr>
<tr>
<td>b byeniti ‘jump’</td>
<td>(bwamo ‘sister’)</td>
</tr>
<tr>
<td>f  fyi ‘water’</td>
<td>fwas ‘wash’</td>
</tr>
<tr>
<td>s  syesi ‘wind’</td>
<td>swake ‘bird of paradise’</td>
</tr>
<tr>
<td>m  (myeke ‘garden’)</td>
<td>mweke ‘garden’</td>
</tr>
<tr>
<td>n  nyi ‘ancestor’</td>
<td>nwu ‘mustard flower’</td>
</tr>
</tbody>
</table>

31 Hypothetically, these verbs could occur in a complement clauses and thus be marked with the complementisers =s or =m, making an even larger cluster CCC#. These have not been confirmed, however. CCC clusters do occur word-medially (§2.3.2.4).
roots are possible (e.g., *kow ‘s/he comes downriver’ and *tatw ‘s/he shoots many’).\footnote{The form *tatw is marginal in Eastern Momu.}

Marking on consonant-final nominals creates different word-final consonant clusters:\footnote{The markers in (2.25) are OBL ‘oblique’, RSTR ‘restrictive’ and COM ‘comitative’.
}

(2.25) nominals

(a) \[ \text{CC}\#: atm/ats/atb ‘banana + OBL/RSTR/COM’ } \]

(b) \[ \text{GC}\#: keym/keys/keyb ‘hand + OBL/RSTR/COM’ } \]

Possible word-final consonant clusters arising from suffixing morphology combine all consonants except \( r \) with \( m, s, \) or \( b \). Unlike with verbs, final glides are preserved for VG-final roots, making the combination of \( y \) or \( w \) with \( m, s, \) or \( b \) possible. Also unlike verbs, root-final CG clusters are not preserved via metathesis with the markers demonstrated above. These glides are instead deleted. In (2.25a), the form *aty ‘banana’ loses the final glide with suffixing.

2.3.2.3 Gemination

Medial and final gemination arises due to specific combinations of verbal morphology (§2.5.1.1). Possible geminates include \( tt, rr, ss, ff, \) and \( mm \).

2.3.2.4 Medial CC clusters

For medial consonant clusters, CG sequences are the most frequent type (2.26). These very commonly arise in verb formation.

\[
\begin{array}{ll}
& y & w \\
\hline
p & \text{papyer ‘move’} & \text{tekopwan ‘break’} \\
t & \text{etynu ‘be alight’} & \text{titwer ‘forget’} \\
k & \text{sakyen ‘brush by’} & \text{tokwai ‘grass’} \\
b & \text{abyen ‘to name’} & \text{sebwabe ‘crippled person’} \\
f & \text{fifyerb ‘afternoon’} & \text{fufwan ‘blow’} \\
s & \text{esyu ‘dog’} & \text{yeswo ‘pig’} \\
m & \text{kumye ‘bandicoot’} & \text{namwaknu ‘be looking about’} \\
n & \text{ninya ‘tree kangaroo’} & \text{sanwan ‘slide up’} \\
\end{array}
\]

(2.26)
GC sequences are not possible word-medially in mono-morphemic forms. Compounding (§14.1) makes these possible, however. For instance the nominal compound *koyfī* ‘tears’ comes from *koy + fī* ‘eye + water’, and this compounding creates and preserves a GC ordering word-medially.\(^{34}\)

Excluding glides, just about all CC clusters are attested word-medially. Table 2.25 plots attested values. Where I have found no mono-morphemic forms, the combination is given in parentheses.

<table>
<thead>
<tr>
<th>C₁</th>
<th>p</th>
<th>t</th>
<th>k</th>
<th>b</th>
<th>r</th>
<th>f</th>
<th>s</th>
<th>m</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>p</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
</tr>
<tr>
<td>t</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
</tr>
<tr>
<td>k</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
</tr>
<tr>
<td>b</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
</tr>
<tr>
<td>C₂</td>
<td>p</td>
<td>t</td>
<td>k</td>
<td>b</td>
<td>r</td>
<td>f</td>
<td>s</td>
<td>m</td>
<td>n</td>
</tr>
<tr>
<td>p</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
</tr>
<tr>
<td>t</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
</tr>
<tr>
<td>k</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
</tr>
<tr>
<td>b</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
<td>(●)</td>
</tr>
</tbody>
</table>

Table 2.25: Attested medial CC clusters

Examples of various attested combinations are given in (2.27) through (2.34).

\(K\) is the most common segment in forming medial consonant clusters, especially in combination with \(f\) or \(s\). Epenthetic vowels are often and variably inserted between these clusters. Those forms with \(k\) and \(f\) clusters are especially prone to random metathesis. More generally this metathesis is a feature of many stop-fricative sequences in Momu. To my knowledge, this type of metathesis is unmotivated by higher level considerations (for instance, discourse pragmatics).\(^{35}\) A similar sporadic metathesis occurs in Hua (Haiman, 1980, p25).

\(^{34}\)Baron (p.c.) has found that this particular example resolves in Western Momu as *kwefīta*, with the glide moving to the left to preserve CGV ordering. I have heard similar transformations, but it is less common in Eastern Momu.

\(^{35}\)Glide-consonant metathesis is predictable in certain circumstances however (§2.5.1.1).
<table>
<thead>
<tr>
<th>Ck</th>
<th>kC</th>
</tr>
</thead>
<tbody>
<tr>
<td>p</td>
<td>tyepkwen ‘one departs’</td>
</tr>
<tr>
<td>t</td>
<td>tetkutai ‘cut (grass)’</td>
</tr>
<tr>
<td>b</td>
<td>mobke ‘coconut’</td>
</tr>
<tr>
<td>(2.27)</td>
<td></td>
</tr>
<tr>
<td>r</td>
<td>orki ‘cockatoo’</td>
</tr>
<tr>
<td>f</td>
<td>afki ‘close to’</td>
</tr>
<tr>
<td>s</td>
<td>busku ‘jaw’</td>
</tr>
<tr>
<td>m</td>
<td>emki ‘leech’</td>
</tr>
<tr>
<td>n</td>
<td>wunku ‘good’</td>
</tr>
</tbody>
</table>

The segment p is also found in clusters word-medially. However, clusters with other bilabials are unattested, and pC clusters are likely to arise due to p occurring on a morpheme boundary.

(2.28)

<table>
<thead>
<tr>
<th>Cp</th>
<th>pC</th>
</tr>
</thead>
<tbody>
<tr>
<td>t</td>
<td>momsetpan ‘we talk until sunrise’ ◊ naptisa ‘they run away’</td>
</tr>
<tr>
<td>b</td>
<td></td>
</tr>
<tr>
<td>r</td>
<td>kirpan ‘we sleep until sunrise’ ◊ poprai ‘I get many’</td>
</tr>
<tr>
<td>f</td>
<td>saspin ‘hold completely’ ◊ apfu ‘elder same sex sib.’ ◊</td>
</tr>
<tr>
<td>s</td>
<td>saspar ‘fix (of baby)’</td>
</tr>
<tr>
<td>m</td>
<td></td>
</tr>
<tr>
<td>n</td>
<td>senpin ‘go unconscious’ ◊ opin ‘remove many’ ◊</td>
</tr>
</tbody>
</table>

Clusters with t are also found word-medially, but most commonly due to t occurring on a morpheme boundary.

(2.29)

<table>
<thead>
<tr>
<th>Ct</th>
<th>tC</th>
</tr>
</thead>
<tbody>
<tr>
<td>b</td>
<td>sibti ‘nose’</td>
</tr>
<tr>
<td>r</td>
<td>aiarta ‘be doing’ ◊ etrai ‘we two build (a house)’ ◊</td>
</tr>
<tr>
<td>f</td>
<td>sakafta ‘s/he rakes’ ◊ etfi ‘they two build (a house)’ ◊</td>
</tr>
<tr>
<td>s</td>
<td>usmesta ‘be many’</td>
</tr>
<tr>
<td>m</td>
<td>amte ‘my child’</td>
</tr>
<tr>
<td>n</td>
<td>anta ‘do like this’ ◊ titnin ‘tie many’</td>
</tr>
</tbody>
</table>

Fricatives are also common in word-medial clusters. Combinations of f and other consonants are in some cases due to f occurring on a morpheme boundary. The sequence bf is unattested, and to my knowledge cannot be achieved.
morphologically.\textsuperscript{36}

<table>
<thead>
<tr>
<th>Cf</th>
<th>fC</th>
</tr>
</thead>
<tbody>
<tr>
<td>p  <code>apfu </code>elder same sex sib.'</td>
<td><code>uppin </code>you cut through it'</td>
</tr>
<tr>
<td>t  <code>tetfji </code>they shoot them'</td>
<td><code>yafti </code>fly`</td>
</tr>
<tr>
<td>k  <code>akfu </code>reciprocation'</td>
<td><code>yefko </code>mouth`</td>
</tr>
<tr>
<td>b  <code>pifbus </code>you having gone,'</td>
<td></td>
</tr>
<tr>
<td>r  <code>morfa </code>ear'</td>
<td><code>sufrai </code>we two hold it'</td>
</tr>
<tr>
<td>f  <code>nasifji </code>they two watch over'</td>
<td><code>suffi </code>they two hold it'</td>
</tr>
<tr>
<td>s  <code>kusfasi </code>they spit magic'</td>
<td><code>nasifsi </code>they watch over'</td>
</tr>
<tr>
<td>m  <code>amfa </code>were you (there)?`</td>
<td><code>kufmie </code>wind`</td>
</tr>
<tr>
<td>n  <code>onfa </code>modal negative`</td>
<td><code>afnu </code>be turned`</td>
</tr>
</tbody>
</table>

Combinations with s are broadly attested.

<table>
<thead>
<tr>
<th>Cs</th>
<th>sC</th>
</tr>
</thead>
<tbody>
<tr>
<td>p  <code>opses </code>(ant) mound’</td>
<td><code>saspar </code>fix (of baby)`</td>
</tr>
<tr>
<td>t  <code>nartsen </code>once we carried it’</td>
<td><code>sista </code>be worried’</td>
</tr>
<tr>
<td>k  <code>yeksu </code>umbilical cord’</td>
<td><code>faskaney </code>one’</td>
</tr>
<tr>
<td>b  <code>nebsi </code>hold one’</td>
<td><code>esbi </code>bamboo`</td>
</tr>
<tr>
<td>r  <code>worsen </code>fall down’</td>
<td><code>fwasrai </code>we 2 bathe’</td>
</tr>
<tr>
<td>f  <code>kafsi </code>they fish (for shellfish)’</td>
<td><code>kisfwu </code>soup’</td>
</tr>
<tr>
<td>s  <code>fwassi </code>they bathe’</td>
<td><code>nafassi </code>they reveal it’</td>
</tr>
<tr>
<td>m  <code>emsu </code>good’</td>
<td><code>usmesu </code>(be) many’</td>
</tr>
<tr>
<td>n  <code>punsi </code>they get them’</td>
<td><code>esno </code>throat’</td>
</tr>
</tbody>
</table>

Trills are fairly common as the first segment in medial clusters. R very commonly occurs at morpheme boundaries. While Cr orderings are rare in mono-morphemic forms, they commonly arise word-medially in both C\textsubscript{1} and C\textsubscript{2} position due to subject marking morphology (§6.2.1).

<table>
<thead>
<tr>
<th>Cr</th>
<th>rC</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>poprai </code>get many’</td>
<td><code>morfa </code>ear’</td>
</tr>
<tr>
<td><code>tatrayai </code>fly’</td>
<td><code>yirmas </code>hurry’</td>
</tr>
<tr>
<td></td>
<td><code>orki </code>cockatoo’</td>
</tr>
<tr>
<td></td>
<td><code>erni </code>bring down’</td>
</tr>
</tbody>
</table>

\textsuperscript{36} Kufmie `wind’ is taken from Baron (1983b). In Mori and Savamui, the form for `wind’ is syes but kufmie or kufnoye is recognised as a term from villages to the west.
Mono-morphemic medial CC clusters with \( b \) are less common. Restrictions of combinations with labials are noted above. Combinations of \( Cb \) commonly arise due to \( b \)-initial suffixes. \( B \)-final mono-morphemic lexemes are uncommon however, and so \( bC \) are less likely to arise from the addition of suffixing morphology.

\[
\begin{array}{ll}
Cb & bC \\
ukbi 'hammer' & abka 'crab' \\
esbi 'bamboo' & ebsi 'leg' \\
\text{sesobi} & \text{shudder}' \\
sibti & \text{nose}' \\
\end{array}
\]

Word-medial clusters with nasals frequently arise from combinations of morphology. As such, they are broadly attested with other consonants. Examples of mono-morphemic combinations are given below:

\[
\begin{array}{ll}
NC & CN \\
mn & \text{samnyi} \ 'slowly' \\
mk & \text{amku} \ 'back' \\
\text{nf} & \text{onfa} \ 'modal negative' \\
nk & \text{wunku} \ 'good' \\
\text{nk} & \text{wunku} \ 'good' \\
\text{sn} & \text{nismak} \ 'river name' \\
\text{rm} & \text{yirmas} \ 'quickly' \\
\text{fm} & \text{kufnie} \ 'wind' \\
\text{kn} & \text{mwakni} \ 'search' \\
\text{bn} & \text{abni} \ 'be dry (of sore)' \\
\end{array}
\]

Longer medial clusters are possible, but almost always due to the stacking of mono-consonantal suffixes. These all derive from the final CC forms exemplified in (2.24). Such CC-final subject inflected verbs can combine with a suffix with an initial \( p, t, b, s, m, \) or \( n \). These draw from aspectual suffixes (§7.5.2), modal marking (§12.1.1) or subordinators (§15). Overall this creates a large number of possible medial CCC clusters.

Word-medial CCG clusters also occur in mono-morphemic forms such as tatryai ‘I fly’ or tyepkwen ‘one departs’.\textsuperscript{37} For CG-final verb roots, medial CCG clusters can arise from subject marking and GC metathesis (§2.5.1.1).

### 2.4 Syllabification

In the previous section, I identified sequences of preferred and disallowed segments both at word boundaries and within a word. In this section, I use

\textsuperscript{37}It is reasonable to assume that word-medial CCG clusters have arisen historically from processes like compounding. Working out the etymology of these forms is well beyond the scope of this project.
a combination of this knowledge, speaker judgements on mid-word pause boundaries or careful speech and relative sonority to establish syllable boundaries.

In syllabifying the sequences I will often be appealing to the Sonority Sequencing Generalisation (Blevins, 1995):

“Between any member of a syllable and the syllable peak, a sonority rise or plateau must occur.” (SSG)

By implication, segments are usually organised by relative sonority such that they match this rise and fall. In this particular treatment, sonority can be over-ruled by indications of allowed sequences at word boundaries. For instance, sk is an allowable word-initial sequence, and we see that—despite breaking the SSG—it is an allowable onset word-medially.

While most commonly syllable structure in grammars such as these is treated as having internal structure (Blevins, 1995; Goldsmith, 2011), in this treatment I do not appeal to internal structure, and so it is sufficient to describe a flat structure with a consonantal onset, vowel nucleus and consonantal coda.\(^{38}\)

I begin with the smallest possible words, focussing on monosyllables with simple (§2.4.1) and complex (§2.4.2) boundaries. I then consider expanded word boundaries arising from suffixing (§2.4.2), and the syllabification in particular of long word-final consonant sequences. Polysyllabic forms (§2.4.4) are built from repetitions of these simpler established syllable forms, and it is at this point that I establish syllable boundaries inside the word. In §2.4.4 I begin with mono-morphemic polysyllabic forms and then expand into polymorphemic forms. The section ends with a brief discussion of some interesting forms that may underlyingly lack vowels (§2.4.5).

### 2.4.1 Simple monosyllabic forms

Basic monosyllabic words conform to the template (K)V(K).\(^{39}\) That is, they can take the form V, KV, VK, and KVK. Examples are given in (2.35) and (2.37).

---

\(^{38}\)The most common internal structure appealed to is a syllable with an onset and rhyme, with the rhyme containing the syllable nucleus and coda. Put another way, I do not appeal to the concept of a rhyme in order to describe syllabification in Momu.

\(^{39}\)It is at times useful in this discussion to separate out glides from consonants. Here I use G for a glide, C for a consonant that is not a glide, and K for a consonant inclusive of glides.
A basic timing requirement for Momu words is that each word should have a minimum of two morae. As such, the open syllables in (2.35) with non-complex onsets are all realised with compulsory lengthening.\(^{40}\)

<table>
<thead>
<tr>
<th>V</th>
<th>KV</th>
</tr>
</thead>
<tbody>
<tr>
<td>u [ʔo]</td>
<td>ʔag</td>
</tr>
<tr>
<td>o [ʔa]</td>
<td>pa</td>
</tr>
<tr>
<td>a [ʔa]</td>
<td>wu</td>
</tr>
</tbody>
</table>

\(^{(2.35)}\)

In addition to these single V nuclei, there are three diphthongs ai, oi and ui that can also occur as the nucleus of a basic syllable. All other dissimilar VV sequences syllabify as separate syllables (§2.4.4). These diphthong vowels are inherently long, do not require lengthening, and remain so in all but the heaviest of syllables.

Doubled vowel sequences most commonly arise from the addition of morphology, but a handful of forms also exist in some morphologically undecomposable forms (§2.1.1.6). These doubled vowels similarly occupy a single nuclei.\(^{41}\)

<table>
<thead>
<tr>
<th>VV</th>
<th>KVV</th>
</tr>
</thead>
<tbody>
<tr>
<td>ai [ʔare]</td>
<td>fui [foe] ‘I opened (the door)’</td>
</tr>
<tr>
<td>soi [søe]</td>
<td>‘I dealt (it) out’</td>
</tr>
<tr>
<td>tai [tæe]</td>
<td>‘I did (it)’</td>
</tr>
</tbody>
</table>

\(^{(2.36)}\)

A coda of any form counts as a mora, and so lengthening of the vowel in (K)VK forms is not necessary. While this needs to be confirmed by acoustic

\(^{40}\)Half-long length (‘) as indicated in (2.35) is reserved for non-phonemic length contrasts of basic vowels in open monosyllables. Similar non-phonemic vowel length is common in such a context, as can be found, for instance, in Bininj Gun-wok (Evans, 2003). While phonemic long vowels are not found in Bininj Gun-wok, there are minimal phonemic long vowels in Momu. Long vowels (ː) are used for phonetic transcription of the rare phonemic long vowels (§2.1.1.6), the more common phonemic long high vowels as indicated by GV sequences (§2.1.4.3) and sometimes doubled vowels sequences arising from morphology as discussed below.

\(^{41}\)Amongst the examples of contrastive vowel length, there are no examples of open monosyllables.
measurement, it appears that vowel length in closed environments is relative to vowel height. The higher the vowel, the shorter it is.\(^{42}\)

\[
\begin{array}{ll}
\text{KVK} & \text{VK} \\
\text{pin} & \text{et} \ [\text{p˘in}] 'go' \ [\text{?t˘et}] 'build (house)'
\end{array}
\]

\((2.37)\)

\[
\begin{array}{ll}
\text{ten} & \text{uy} \ [\text{t˘en}] 'many die' \ [\text{?˘o˘j}] 'I cut it'
\text{maw} & \text{ay} \ [\text{m˘aw}] 'rain' \ [\text{?˘e˘j}] 'you (sg.)'
\text{hat} & \text{ak} \ [\text{h˘at}] 'aunt' \ [\text{?˘e˘k}] 'reciprocal part.'
\end{array}
\]

The long vowels shown in \((2.36)\) are preserved in closed environments:\(^{43}\)

\[
\begin{array}{l}
(\text{K})\text{VV}
\end{array}
\]

\[
\begin{array}{l}
\text{aib} \ [\text{?˘æen}] 'when there is (anim.)'
\end{array}
\]

\((2.38)\)

\[
\begin{array}{l}
\text{fuib} \ [\text{foe˘n}] 'when I open (the door)'
\text{soib} \ [\text{s˘oen}] 'when I deal (it) out'
\text{taim} \ [\text{tæen}] 'I do (it) + oblique'
\text{fu+u+m} \ [\text{fo˘:m}] 'open + nominaliser + oblique'
\end{array}
\]

\subsection{2.4.2 Complex onsets and codas}

Initial and final CG clusters are possible, but not both in the same syllable (CGV(C) or (C)VCG). Examples are given in \((2.39)\) and \((2.40)\).

The open forms with complex onsets below do not require lengthening. Acceptable VV nuclei (as discussed above) can also occur with a complex onset. As noted in \S2.3.2.1, the only attested word-initial CC sequence is \textit{sk}.\(^{44}\)

\[
\begin{array}{ll}
\text{CGV(V)} & \text{CKVC}
\end{array}
\]

\[
\begin{array}{l}
\text{kwa} \ [\text{k˘wa}] 'hair' \quad \text{skub} \ [\text{skö˘n}] 'place'
\text{syi} \ [\text{s˘i:]} 'bird' \quad \text{fwas} \ [\text{fwa˘s}] 'swim'
\text{mwe} \ [\text{m˘we}] 'saltwater' \quad \text{puen} \ [\text{p˘u˘en}] 'come'
\text{kwo} \ [\text{k˘w˘o}] 'tree' \quad \text{pwat} \ [\text{p˘w˘at}] 'mountain possum'
\text{tyai} \ [\text{t˘jæe}] 'fill up one' \quad \text{byar} \ [\text{n˘jar}] 'turn side on'
\end{array}
\]

\((2.39)\)

\(^{42}\)Admittedly, at times, my close transcription of polysyllabic forms will not reflect absolute length values, but are instead relative to other syllables in the same form.

\(^{43}\)There is a noticeable difference in both vowel quality \textit{and} length when additional suffixes are added to forms with and without double vowels, versus those that would have simply been lengthened as open monosyllable (e.g., \textit{fu} ['fo'] 's/he opens it'). Compare //\textit{fui} (open) -\textit{m} (2PLS)\rightarrow \textit{fum} [f˘u˘m] 'you pl. open it' to //\textit{fu} (open) [+round (3SGS)] -\textit{u} ('nominaliser') -\textit{m} ('oblique')\rightarrow \textit{foom} [fo˘:m] 'at the door handle'.

\(^{44}\)The forms \textit{kripwan/kripnin} 'snip one/many' may be an instance of loanword integration, but if not then \#\textit{kr} is also attested word-initially.
For word-final CG sequences, the glide typically surfaces as devoiced (§2.1.3). These add nothing to the weight of the syllable, and do not contribute to a separate syllable.\(^{45}\)

<table>
<thead>
<tr>
<th>KVCG</th>
<th>VCG</th>
</tr>
</thead>
<tbody>
<tr>
<td>taty [têtl] ‘shoot many’</td>
<td>aty [ʔêtl] ‘banana’</td>
</tr>
<tr>
<td>woky [wôkj] ‘go downriver’</td>
<td>esy [ʔôs] ‘cooked sago’</td>
</tr>
<tr>
<td>pupw [pôp(^w)] ‘knife’</td>
<td>usy [ʔôs] ‘mosquito’</td>
</tr>
<tr>
<td>kosy [kôs] ‘road’</td>
<td>ony [ʔônt] ‘see’</td>
</tr>
<tr>
<td>fiky [fikj] ‘house’</td>
<td>ary [ʔêrj] ‘you (pl.)’</td>
</tr>
<tr>
<td>niny [nûndl] ‘above’</td>
<td></td>
</tr>
<tr>
<td>yery [jërj] ‘we’</td>
<td></td>
</tr>
</tbody>
</table>

2.4.3 Complex word-final clusters arising from suffixing

In §2.3.2.2 I demonstrate word-final CC(G) and GC sequences. Here I discuss the syllabification of these sequences.

Beginning with \(C_1C_2\), these syllabify differently depending on the natural class of \(C_2\) (t, b, r, f, s, m).\(^{46}\) \(C_2\) sonorants (m, b, and r) become syllabic in this position, and \(C_1\) is then assigned as the onset of this syllable.

\[(2.41)\]

(a) pupm [pô.pm] ‘bush knife + oblique’
(b) arm [ʔ.v.rm] ‘you pl. + oblique’
(c) kosm [kô.snm] ‘road + oblique’

\[(2.42)\]

(a) atb [ʔ.tn] ‘when we were (there)’
(b) panb [pa.nbm] ‘when the sun rose’
(c) tukb [tô.kn] ‘with urine’

The first plural subject marker -t/-r has two forms that occur mostly in free variation. The morpheme usually surfaces as \(t\) in word-final \(Ct\) when \(C\) is more sonorous. A syllabic \(r\) is used when preceded by a stop (2.43d).

\(^{45}\)The order of these final CG sequences matches that of an onset. In a limited set of circumstances, the morphophonemic rules of Momu even provides a mechanism for preserving this ordering in the context of suffixing morphology (§2.5.1.1). Given that these word-final sequences have the appearances of an onset, an approach such as Harris and Gussmann (2002) where the word-final coda is instead taken to be the onset of an abstract empty syllable, may be applicable to Momu.

\(^{46}\)Prior to syllabification, many forms given here are subject to morphophonological processes which move or delete glides (§2.5). Only the resolved forms are shown here.
C₂ (voiceless) fricatives (f and s) syllabify relative to the sonority of C₁. If C₁ is more sonorous than C₂, then they together form a complex coda.

If C₁ is of lower or equal sonority, then the fricative is rendered syllabic, with C₁ as an onset.

Word-final geminates (tt, rr, ff, ss, and mm) are also possible with suffixing. There is some variability in their surface realisation and syllabification. Not all combinations have been tested, but subject markers (-t/-r, -f, and -m) are more likely to be preserved and differentiated from the root-final consonant by epenthesis, while nominal markers (=m, =s, =b) are more likely to be flattened to non-geminate forms, and the marking inferred from context.

CCG# clusters arise in verbs only due to metathesis of the final glide in CG# roots (as in (2.40) above) triggered by some subject markers (§2.5.1.1). These sequences syllabify in the same fashion as CC# described above (i.e., as separate syllables with a syllabic sonorant C₂, or as a complex coda). The glide is realised as devoiced in either case. This means that word-final codas can have three segments in Momu, but the specific combinations are more likely to form a separate syllable. In (2.46), (a) shows a three segment coda. In slow and careful elicitation, the geminate form in (b) was given. This is without an epenthetic vowel. In the same session, the trill allomorph was given, shown in (c).

(2.43) (a)  art [ʔurt] ‘we pl. do it’
(b) wast [wast] ‘we pl. show you’
(c) wont [ʔent] ‘we pl. go upriver’
(d) etr [ʔt̪.tr] ‘we build (a house)’

C₂ (voiceless) fricatives (f and s) syllabify relative to the sonority of C₁. If C₁ is more sonorous than C₂, then they together form a complex coda.

(2.44) (a) yanf [yanf] ‘you go upriver’
(a) mons [mâns] ‘only talk’
(c) wobs [wɔns] ‘just himself/herself’

(2.45) (a) tuks [t̪.ks]
(b) wasf [wa.sf] ‘you show me’
(c) etf [ʔt̪.tf] ‘you build (a house)’

(2.46) (a) wanfy [wanf] ‘you sg. shoot me’
GC# clusters arise only in suffixed VG-final nouns.47

(2.47) (a) keyb [krjn] ‘with hands’
(b) meys [mŋjs] ‘only teeth’
(c) koym [kojm] ‘eye + oblique’

2.4.4 Polysyllabic forms

The simplest polysyllabic forms are repetitions of the basic syllable (K)V(K) established in §2.4.1. The length of the vowel nucleus is reduced according to the behaviour in closed syllables described above. This is the case whether non-word-final syllables are open or closed. Only in word-final open syllables are vowels treated the same as the open monosyllables as described above (§2.4.1).

The most basic word internal syllable boundary is between adjacent vowels (2.48). In slow speech, these V.V boundaries are more likely to have a glide inserted between them and in rapid speech these approach diphthongs. Note that this depends on the particular vowels, as the diphthong ai, oi, and ui count as syllable nuclei (2.48c). As noted in the previous section, doubled vowels are also treated as a single nucleus.

(2.48) (a) a.u [ʔa.o] ‘skin/body’
(b) nu.a [n̥u.æ] ‘s/he comes upriver’
(c) nu.ai [n̥u.œe] ‘I come upriver’
(d) u.an [ʔu.ʔan] ‘to dam (of river)’

47Baron (p.c.) reports that in some of these cases where a VGC sequence occurs (e.g., in compounds like koyfi ‘eye + water = tears’) the glide and vowel metathesise to preserve the preferred word internal ordering of CGV (e.g., kwefi). I have found the VG ordering is more commonly preserved in Eastern Momu, but that this does sometimes occur. Another ‘resolution’ of this dispreferred ordering is to delete the glide. For instance, in multiple repetitions in elicitation of the compound key-sebto, I got three variants: key-sebto, kesebto, key-sebto ‘part of hand’ (source: 2010.07 phonology recording). At one point the speaker even produces kesebto.
48(2.48b) demonstrates a “rounded” diphthong (§2.5.1.3). In effect the orthography here underspecifies the rounded variant as the a here is a separate phoneme, whose surface realisation in this context would be more like [e] than [æ].
More commonly word internal syllable boundaries are composed of simple onsets including glides.

(2.49) (a) o.ko [ʔ5.kɔ] ‘ground’
(b) e.fe.ke [ʔɛ.fɛ.kɛ] ‘song type’
(c) mu.mu [mũ.mõ] ‘wing’
(d) wa.wa [wa.wa] ‘bird sp.’
(f) sa.yi.nu [sv.ʃi.ʃo] ‘be ripe’
(g) fe.no [ʃo.ʃo] ‘leave’
(h) fai.no [ʃɛ.ʃo] ‘child (esp. of animal)’

Complex CG onsets (§2.4.2) can also occur word-medially. VV diphthongs can occur as syllable nuclei to complex onsets, but the diphthong is likely to be truncated slightly, given the overall weight of the syllable.

(2.50) (a) te.ko.pwan [tɔ.kɔ.ʃo.na] ‘cut/sever’
(b) a.fwan [ʔe.ʃo.na] ‘turn’
(c) pa.tyai [pʃ.tʃi.ʃo] ‘begin / set off’
(d) fwai.ko [ʃo.wa.wa.na] ‘handle of bag’

Otherwise medial CC sequences are resolved according to the relative sonority of the segments.

The only attested word-initial CC—sk—also occurs word-medially as an onset. Combinations of stops followed by r also syllabify as onsets.

(2.51) (a) bu.sku [nɔ.ʃo.na] ‘jaw’
(b) si.skub [ʃi.ʃo.na] ‘simultaneously’
(c) tye.pri [tʃj.e.pre] ‘I take many’
(d) po.prai [pʃ.pre] ‘I get many’
(e) e.trai [ʔe.ʃtʃe] ‘we two build (a house)’

Medial CCG sequences also arise in some forms from specific subject marking and GC-metathesis (§2.5.1.1). Syllabification in this instance is harder to determine. Speakers pause in slow speech before the cluster, suggesting the syllabification in (2.52a) and (c), or (b) after the first consonant, or (d) lengthening the consonant. In the case of the sequence kry, there is a contrast in voicing depending on the syllabification as well.

49Note, this may be a derived verb.
(2.52) (a) \textit{wo.kryai} [wɔ³.grjæɛ] ‘we two go downriver’ or,  
(b) \textit{wok.ryai} [wɔk.rajɛ̞]  
(b) \textit{ta.ryai} [tw.rajɛ̞] ‘we two shoot many’ or,  
(c) \textit{tat.ryai} [tut.rajɛ̞]  
For medial sequences of \textit{nr}, an intrusive [d] is inserted between the two segments.\footnote{The sequence \textit{nr} only arises with a morpheme boundary between the two segments.}

(2.53) (a) \textit{on.rai} [ʔɔn.dræe] ‘we two see it’  
(b) \textit{wan.rai} [wan.drjæɛ] ‘we two shoot you’  
All other medial CC sequences tend to either be broken up by epenthetic vowel, or broken apart in syllabification as coda and onset, regardless of their relative sonority.

(2.54) (a) \textit{mak.mes} [m̩ɛk.m̩ɛs] ‘far off direction’ or,  
(b) \textit{ma.kmes} [m̩ɛ-g̩ə.m̩ɛs]  
(c) \textit{op.ses} [ʔɔp.s̩əs] ‘ant house’  
(d) \textit{yek.su} [y̩ɛk.so] ‘umbilical cord’  
(e) \textit{habsi} [han.se] ‘wash many’  
(f) \textit{afki} [ʔɛf.ke] ‘close’ or,  
(g) \textit{afki} [ʔɛf.fi.ke]  
(h) \textit{fofkar} [f̩əf.kar] ‘fold’  
Finally, as noted in §2.3.2.4, word-medial CCC sequences are possible. The number of possible word-medial CCC sequences is quite large.\footnote{Given the morphology that generates these sequences, C\textsubscript{1} can be t, k, r, s, f, or n; C\textsubscript{2} can be t, r, f, or m; and C\textsubscript{3} can be p, t, b, f, s, m, or n. This makes 27 possible orderings based on the natural classes of stops, sonorants and fricatives that were relevant in syllabifying word-final consonant clusters. Considering each possible sequence of segments, there are 168 possibilities.} Not all possible combinations are attested.

Syllabification proceeds in the same fashion as with word-final CC sequences. To the best of my knowledge, C\textsubscript{3} is always the onset of a syllable. C\textsubscript{1} and C\textsubscript{2} either form a complex coda if of decreasing sonority (2.55), or a separate syllable with C\textsubscript{1} as onset if C\textsubscript{2} is a sonorant or fricative that can be rendered syllabic (2.56).
As with word-final CC sequences, geminate sequences for C₁C₂ or C₂C₃ can arise. Further testing is needed to confirm the realisation of these geminates, especially the second kind.

As can be seen in the above examples, a lot of testing was limited to modal-marked forms (where C₃ is m). Further testing of other possibilities is clearly necessary, but beyond the scope of the present work.

2.4.5 An aside on underlyingly vowelless forms

As discussed in §2.1.4, the diphthongs iy and uw are rare, and occur only word-finally. In Eastern Momu, they occur only on verbs. Complex interaction with verbal morphology (GC-metathesis, §2.5.1.1) seems to preserved the difference in these verbs, but elsewhere they are rendered as long high vowels (yi and wu).\(^{52}\) For some of these verbs, there is a case to be made that underlyingly they lack a vowel altogether, with epenthesis later inserting the vowel.

The sequence iy only occurs with verbs like kiy ‘consume’, siy ‘urinate’, niy ‘shoot one’ and nukiy ‘fill up’. These verbs then have corresponding rounded third person singular subject forms kwu, suw, nuw and nukuw.

Of the all verbs of this form, only one—niy ‘shoot one’—accepts object prefixing. When object-prefixixed (§6.2.2) with wa- ‘first/second singular object’ the verb surfaces as wany [wantj]. Given this, it is reasonable to conclude that in this specific case the vowel is epenthetic when the lexeme lacks a nucleus (making it ny, not niiy).

Prefixing is not possible with the remaining verbs, and the only other verbal prefix ai- ‘imperfective’ does not trigger the same effect as the object prefix. Nukiy ‘fill up’ is not mono-syllabic however, and doesn’t show a final

\(^{52}\)Baron (p.c.) has noted the diphthong in nouns and verbs. For instance, esfiy ‘leg’, which has become esbyi in Eastern Momu.
devoiced glide. So in some cases, the vowel is not epenthetic.

For two of these verbs, the proximity to the glide does appear to trigger allomorphy in the initial consonant. In the case of *ny* [ndìj] ‘shoot one’, the *n* denasalises slightly, indicating interaction with an adjacent glide. In the case of *siy* (or *sy*) [sìiy], the *s* palatalises slightly, again indicating interaction with an adjacent glide. There is no interaction with *kiy* (or *ky*) ‘consume’ or *nukiy* ‘fill up’.

And so with partial evidence, I can put forward a tentative hypothesis that the verbs should actually be represented as *sy* ‘urinate’ and *ny* ‘shoot one’, lacking an underlying vowel, while *nukiy* has one, and the status of *kiy* (or *ky*) is unknown. With *ny*, the argument is clear enough thanks to the effects of object prefixation, and with *sy* I would argue that the effects of the glide make it possible infer the form.

### 2.5 Morphophonology

Morphophonology refers to modifications to the phonology that arise in the context of morphology. In this section, I will be looking at both specific morphology triggering morphophonemic processes, and at morphophonemic processes that are not limited to a single morphological process.

#### 2.5.1 Subject marking

The full details of subject marking are given in §6.2. This section is concerned only with the morphophonemics that this morphology triggers.

A first person singular subject is indicated by an unmarked stem. All other subject values are marked by suffixes with the form -C(V), or a rounding process in the case of the third singular.

These morphemes are tightly integrated into the phonological word, unlike any other domain of morphology in Momu. In this respect, glides behave in an interesting fashion. When the consonant-initial inflectional morphs join with a glide-final root creating a GC(V) sequence, the glide and consonant

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53 *Nukiy* must have an underlying vowel, otherwise one must motivate why verbs like *woky* ‘go downriver’ or *taty* ‘shoot many’ do not.

54 The rounded third person singular subject form *kuw* (or *kw*) does not, to my ears, demonstrate the labialisation reasonably common to *kw* sequences. So this is possibly evidence that *kiy* is the proper representation.
will metathesise to create CG(V) sequences, where possible. CC sequences created by inflectional morphology trigger deletion or epenthesis rules.

More generally, the addition of subject marking morphology can create sequences that are not otherwise seen in mono-morphemic forms. The phonetic affricate [ts] arises as the surface realisation of the sequence ts which only occurs on verbs roots with a final t or ty and are inflected for the third plural subject -si.

In the following sections I will review the morphophonological processes of metathesis (§2.5.1.1), deletion (§2.5.1.2) and rounding (§2.5.1.3) that arise from subject marking.

### 2.5.1.1 GC metathesis

The general preference in Momu is for CG ordering over GC in both onsets and word-finally (§2.3, §2.4). Where a verb root ends in a glide, the addition of a subject marker triggers metathesis of root-final glide and inflection-initial consonant. GC metatheses on morphological boundaries are found in languages such as Yagua and Zoque, where they are similarly motivated by phonotactic or timing preference resolutions to morphology (Hume, 2002; Semiloff-Zelasko, 1973).

In (2.57), the addition of a single-consonant inflectional morph triggers metathesis of the final glide on the verb root. In these examples, the root ends with a CG sequence, and the addition of a C triggers the G to move to the right edge.

\[
\begin{align*}
(2.57) & \quad \text{(a)} \quad \text{taty ‘shoot many’} + -f \ ‘2sgS’ \rightarrow \text{tatfy} \\
& \quad \text{(b)} \quad \text{woky ‘go down’} + -r \ ‘1plS’ \rightarrow \text{wokry} \\
& \quad \text{(c)} \quad \text{wory ‘come down’} + -m \ ‘2plS’ \rightarrow \text{wormy}
\end{align*}
\]

If the inflection is of the form CV(V), epenthesis is less common but still possible between consonants in C₁C₂G sequences created by metathesis. Given the vowel nucleus in the inflection, syllabification of C₂ will not happen in this scenario. In (2.58a) (and (2.60b) below) the metathesised glide creates a heavy syllable. Note also that in (2.58a), metathesis brings about the sequence tr not otherwise found in mono-morphemic words.\(^{55}\)

---

\(^{55}\)Considering other possible CG-final verb roots, the complex onsets kry, nry [n.dri] and fry all become possible word-medially.
(2.58) (a)  taty 'shoot many' + -rai '1DUSS' → tatryai  
(b)  woky 'go downriver' + -si '3PLS' → woksyi

In (2.58b), note that the metathesis creates a different vowel quality—one further piece of evidence for the GV analysis of long high vowels given in §2.1.4.3. In some circumstances, this means that the vowel quality (and, occasionally, palatalisation of the preceding C) of the inflection differentiates minimal pairs like those shown in (2.59).

(2.59) (a)  kiy 'eat' + -si '3PLS' → kisyi [kiˌsɪ:]  
(b)  ki 'sleep' + -si '3PLS' → kisi [kɪˌsiː]

Where the verb root ends in a glide-final diphthong, the glide and consonant metathesise, as shown in (2.60).

(2.60) (a)  key 'come down' + -f '2SGS' → kefy [kəˌfj]  
(b)  woy 'go across' + -rai '1DUSS' → worryai [wɔˌræjæ ~ wɔˌrær]  
(c)  uy 'cut one' + -si '3PLS' → usyi [ʔʊˌsɪː]

Where this creates a CVC syllable, the vowel is likely to be centralised and shortened (§2.1.1), for instance in (2.60a) the e in key [kɛj] 'come down' becomes [ə] in kesyi [kəˌsɪː] 'they come down'.

**Geminate consonants**  In a small number of cases, geminate consonants occur in verbs as a result of subject inflections. In (2.61), where the final C₁G matches with an initial C₁ in the inflectional morph, a geminate consonant is created after metathesis of the glide.

(2.61) (a)  taty 'shoot many' + -r/-t '1PLS' → tatty [tətɪˌj] or tatry [tətɪrj]  
(b)  si fy 'hold' + -f '2SGS' → sify [ʃɪfj]  

Geminate ss, mm and tt also arise as a result of other suffixing morphology (§2.5.5).

**Structure preservation**  We saw in Example (2.59) that with metathesis, a difference in the vowel quality of the subject inflection may mark the difference between a handful of verb pairs of the form C₁V and C₁G. In a handful of cases, the combination of glide deletion (§2.5.7) and epenthetic vowel insertion would predict homophonous forms of the verb when inflected
for person/number and TAM. In these cases it appears that the difference is marked in the quality of the vowel in the TAM inflection, as in (2.62). Here, metathesis of consonant and glide in (a) produces \textit{kify} and the addition of the volitional future modal marker \textit{-mu} would ordinarily delete the final glide producing the form in (b) \textit{kifmu} after epenthetic vowel insertion. Instead, however, to differentiate these forms, the glide again metathesises with the \textit{m} (and rounds), producing \textit{kifmwu}.

(2.62) (a) \textit{kiy ‘eat’ -f ‘2SGS’ -mu VOL.FUT’ \rightarrow kify \rightarrow kifmyu \rightarrow kifmwu [kim\textsuperscript{u}]}
(b) \textit{ki ‘sleep’ -f ‘2SGS’ -mu ‘VOL.FUT’ \rightarrow kifmu [kim\textsuperscript{mu}]}

This is the only circumstance that I am aware of in which the glide could be described as continuing to move to the right across the boundary between subject markers and TAM inflections.

\textbf{2.5.1.2 VV-final vowel deletion}

VV diphthong-final verb roots delete the final V (which is always \textit{i}) when subject-marked. This could be generalised to include the morphological process for marking the third singular via a rounding process, which in this case simply deletes the final \textit{i} (§2.5.1.3). In other words, all subject inflection results in the deletion of the final \textit{i} in any VV diphthong.

(2.63) (a) \textit{fenoi ‘leave’ + -si ‘3PLS’ \rightarrow fenosi}
(b) \textit{ai ‘there is (ANIM)’ + -rai ‘1DUS’ \rightarrow arai}
(c) \textit{tai ‘do’ -f ‘2SGS’ \rightarrow taf}
(d) \textit{fui ‘open’ + [+round] ‘3SGS’ \rightarrow fu}

This does not apply to verbs with a final CV (2.64), or monosyllabic verb roots of the form CV (§2.4.5). In (2.64) we can see that the final vowel is preserved with inflection.

(2.64) (a) \textit{yeni ‘say’ -f ‘2SGS’ \rightarrow yenif}
(b) \textit{kaani ‘cook’ + -si ‘3PLS’ \rightarrow kaanisi}
2.5.1.3 Rounding

The third person singular subject is marked by a morphological process that rounds the final glide or vowel of a verb root. In the nearby Warisic languages of Amanab, Waris and Imonda, ablaut (raising) indicates plural subjects (Brown, 1990; Minch, 1992; Seiler, 1985).

Where prohibited diphthongs are created by this process, this is resolved by rounding the entire diphthong if possible, or deleting the final vowel. In this section I will cover all possible variants produced by this operation.

(2.65) shows the first and third person singular subject variants of three different verbs with different root-final segments. The roots (a) peeni ‘arrive’ and (b) taty ‘shoot many’, both have suitable root-final candidates for rounding (i and y respectively). The rounded counterparts are shown in the third person column. Both vowels and glides undergo rounding. When the rounding operation is applied to a final i it changes to u as in peenu ‘s/he arrives’. When a final y is rounded it mutates to w as in tatw ‘s/he shoots many’. With no rounding candidate on pin in (2.65c), the distinction between first and third person is neutralised.

For the glossing in (2.65), glossing “one” or “many” on a stem indicates verbal number (§6.6). I will use this convention throughout this thesis (§6.6). Following the Leipzig glossing conventions (Bickel, Comrie and Haspelmath, 2008), the use of square brackets ([ ]) in the glosses in (a) and (b) indicate a value inferred from context. If the reader prefers, these could be considered zero morphs that would apply at the edge of the morph where the bracketed gloss occurs. The backslashes in (a) and (b) indicate a morph marked by a morphophonological operation, the value of which is coded on the right hand side of the backslash. In (2.65a and b), the relevant operation is rounding, which marks third person singular subject (3sgS).

This mutation appears to be more common in Western Momu than in Eastern Momu. For many speakers of Eastern Momu, there is no rounding on a final glide in a CG sequence. So, for instance, the third singular form tatw in (2.65b), would instead be identical to the the first singular form taty.

This is a surprisingly common occurrence in Momu. Many verbs lack a distinction between first and third person subjects. Hence, I gloss them as either, and whichever applies must be inferred from the broader context.
In (2.66) we can see that it is not only the final glide that rounds, but also the preceding vowel. The rounding operation appears to spread from right to left as a form of regressive metaphony, stopping at the first consonant. However, a more plausible explanation is that the VG sequence created by the rounded glide triggers a subsequent mutation in the vowel because the VG sequences ew and iw are not permissible VG sequences (§2.1.4). We will see below that there is a different resolution for incompatible VV sequences that are subject to the rounding operation.

Rounding for VG sequences where the V is a back vowel are limited to rounding of the final glide, as in (2.67).

The only other possible glide-final diphthong ay is so far unattested verb root-finally.
Verb root-final VV diphthongs are also possible. As with final VG sequences *cy* and *iy*, the rounding of the final vowel *i* produces VV sequences that appear to be dis-preferred, and in this case the resolution of these incompatible sequences is deletion of the final *i*. (2.68) shows the combinations of a final (a) *ai*, (b) *oi* and (c) *ui* which then resolve to a final *a*, *o*, and *u* when marked for the third person singular subject.

<table>
<thead>
<tr>
<th>(2.68)</th>
<th>First Person</th>
<th>Third Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) ‘do’</td>
<td><em>tai</em></td>
<td><em>ta</em></td>
</tr>
<tr>
<td>do[1SGS]</td>
<td>do[3SGS]</td>
<td></td>
</tr>
<tr>
<td>(b) ‘distribute’</td>
<td><em>soi</em></td>
<td><em>so</em></td>
</tr>
<tr>
<td>distribute[1SGS]</td>
<td>distribute[3SGS]</td>
<td></td>
</tr>
<tr>
<td>(c) ‘open’</td>
<td><em>fui</em></td>
<td><em>fu</em></td>
</tr>
<tr>
<td>open[1SGS]</td>
<td>open[3SGS]</td>
<td></td>
</tr>
</tbody>
</table>

### 2.5.2 Other rounding processes

The small closed class of adjectives demonstrates a rounding process similar that which applies to third person singular subject marking. Compare the verbalised (inchoative) forms to the adjetival forms below:

(2.69) (a) *anow* ‘big’ → *ane(y)ta* ‘become big’

(b) *fafo* ‘long’ → *fafeta* ‘become long’

(c) *ku* ‘dry’ → *kita* ‘become dry’

*Ta* ‘do’ is a highly heterosemous form, used elsewhere for instance, as an intransitive verb-forming suffix (§6.3.1). In these cases, there is no effect on any preceding vowel. For instance *monwu* ‘sound’ is verbalised as *monwuta* ‘make a noise’ but we see no corresponding change in vowel.

All adjectives and stative verbs end in *u* or *w*, and I suspect that at some point in the past some process that applied to forming adjective and stative verbs resulted in rounding, or the addition of an */-u ~ -w/* segment. Indeed, synchronically the deverbal nominaliser is *-u*. The unrounded forms in the inchoative verbs show a glimpse of a former root no longer accessible.
### 2.5.3 Verb-stem-final segment deletion

Stem-final *n* and *r* segments are optionally deleted from verbs when suffixed. For instance, see the variant forms in (2.70).

(2.70) (a) *pin* ‘one goes’ + -f ‘2SGS’ \(\rightarrow\) *pinf* or *pif*

(b) *kafokyer* ‘be afraid of’ + -fi ‘3DU’ \(\rightarrow\) *kafokyefi* or *kafokyerfi*

(c) *tyin* ‘carry one’ + -rai ‘1DU’ \(\rightarrow\) *tyinrai* or *tyirai*

(d) *saspar* ‘mend’ + -m ‘2PL’ \(\rightarrow\) *saspm* or *sasparm*

This applies only to the final consonant of the stem. It does not apply, for instance, after glide-consonant metathesis (§2.5.1.1) places an *n* or *r* segment next to the initial consonant of a subject marker.

(2.71) (a) *wa*-'1|2SGO' + *ny* ‘shoot one’ + -rai ‘1DU’ \(\rightarrow\) *wanryai* (not *waryai*)

(b) *wory* ‘go down’ + -mi ‘2DU’ \(\rightarrow\) *womyi* (Not *womyi*)

Any additional suffixing morphology on an unmarked verb stem can also trigger optional deletion of a final *n* or */tr/.

(2.72) (a) *pin* ‘one goes’ + -ta ‘IMP[1SG]’ \(\rightarrow\) *pitai ~ pintai* ‘I’m currently going’

(b) *kafokyer* ‘afraid of: VTR:3SGO[Ftsgs]’ + -meta ‘EPI.FUT’ \(\rightarrow\) *kafokyermeta ~ kafokyermeta*

Additionally, in serialisation (§13.1), non-final verbs can exhibit this truncated form. For instance, *pin* ‘one goes’ becomes procliticised to the following word: *pi=fwas* ‘go bathe’. This doesn’t occur with verb-verb compounds (§14.1.3), however.

Similarly, for any stem-final CG sequence that encounters a consonant-initial suffix (outside of subject inflection), the glide is deleted (§2.5.7). This occurs for all word classes that have this shape.

(2.73) (a) *kosy* ‘road’ + =m ‘OBL’ \(\rightarrow\) *kosm* ‘at/on the road’

(b) *taty* ‘shoot many’ + -mu ‘VOL.FUT’ \(\rightarrow\) *tatmu* ‘I will shoot many’

Glides in VG-final sequences are preserved for inflectional morphology other than subject marking. This creates potential GC sequences otherwise not
allowed in mono-morphemic words. Compare the examples in (2.74). The TAM marking in (a) does not trigger metathesis, while in (b) the subject marking does.

(2.74) (a) \textit{key} ‘come downriver’ + -\textit{mu} ‘\textit{VOL.FUT}’ \rightarrow \textit{keymu} ‘I will come downriver’

(b) \textit{key} ‘come downriver’ + -\textit{mi} ‘\textit{2DU}S’ \rightarrow \textit{kemyi} ‘you two came downriver’

Finally, stem-final V\textit{i} diphthongs are truncated in the same ways as described above. Subject inflection truncates the diphthong, as in (2.75a). But, modal inflection does not, as in (b), preserving the difference between first and third person singular subjects (cf (c)).

(2.75) (a) \textit{tai} ‘do’ + -\textit{si} ‘\textit{3PL}S’ \rightarrow \textit{tasi} ‘they did it’

(b) \textit{tai} ‘do’ + -\textit{\empty} ‘\textit{1SG}S’ + -\textit{mu} ‘\textit{VOL.FUT}’ \rightarrow \textit{taimu} ‘I will do it’

(c) \textit{tai} ‘do’ + [+\textit{round}] ‘\textit{3SG}S’ + -\textit{mu} ‘\textit{VOL.FUT}’ \rightarrow \textit{tamu} ‘S/he will do it’

2.5.4 Raising

When a glide-final form meets an \textit{i}- or \textit{u}-initial suffix, the vowel is raised to a (phonetic) high vowel. Given that long high vowels (§2.1.4.3) are represented as sequences of \textit{yi} and \textit{wu}, this raising is not otherwise represented orthographically.

Typically this raising arises with the singular genitive suffix (§4.8.5), or the nominalising suffix (§4.9), which both have the form -\textit{u}.

(2.76) \textit{\slash//koy -u// ‘eye + genitive’} \rightarrow \textit{koyu} [k\textit{j}\textit{u}] ‘of the eye’

\textit{\slash//tatw -u// ‘s\textit{hoot many} + NZR} \rightarrow \textit{tatwu} [t\textit{\ddot{e}tu}]‘something for shooting many people’

There are no glide-initial suffixes in Momu, but in some compounds, a vowel-final word is compounded with a glide-initial one. In these cases, the vowel may be raised:

(2.77) \textit{\slash//mu} ([\textit{m\ddot{o}}] ‘\textit{woman}’) + \textit{yime} ([\textit{ji\textit{m\ddot{e}}}] ‘\textit{man}’) \rightarrow \textit{muyime} [m\textit{\ddot{u}ime}] ‘people’

The other common source of raising is as a result of a metathesised glide moving to before a mid-high vowel (§2.5.1.1).
2.5.5 Gemination

Geminate consonants can arise in verbs with specific combinations of subject marking and TAM marking.

A geminate $m$ is formed when the second plural subject -$m$ is suffixed to a verb and then the verb is inflected with an $m$-initial TAM marker such as the volitional future -$mu$ is further added. Similarly when the first plural subject -$t$ occurs with the imperfective -$ta$, a geminate $t$ is formed.

(2.78) //ina -m -mu// ‘many go + 2PLS + VOL.FUT → inammu
[ʔ.t Emm. mú] ‘you (pl.) will go’

//ina -t -ta// ‘many go + 1PLS + STVZR’ → inatta [ʔ.t mêt tā] ‘we are (currently) going’

These geminates are not subject to the insertion of an epenthetic vowel to break them apart.

2.5.6 Doubled vowels

Long (doubled) vowels can arise when a vowel-final root is suffixed with a vowel-initial suffix. There are emphatic vowels -$a$, -$e$ and -$o$, and the third singular genitive suffix ($§4.8.5$), or the nominalising suffix ($§4.9$), which both have the form -$u$. When the word ends with one of these vowels, the addition of the appropriate vowel suffix produces a long vowel. This long vowel is then syllabified as a single nucleus ($§2.4.1$). In closed syllables it does not shorten and it is not raised.

For instance, while a long $u$ is unattested in mono-morphemic forms, it does arise in (2.79b) the nominalised form of the verb $ni$ ‘to perform’ (built with the third person singular subject form $nu$ in (a)):

(2.79) (a) //ni [+round]// ‘perform + 3SGS’ → $nu$ [nõ] ‘s/he performed’
(b) //nu -u// ‘s/he performed + NZR’ → $nuu$ [nõː] ‘something for performing’

Prefixing morphology is rare in Momu, but a geminate $a$ sometimes arises with the use of the transitivising prefix $na$- on $a$-initial verbs.

(2.80) //na- aknu// ‘TRANS>one- accompanied by’ → $naaknu$ [nãːg(ə)nõ] ‘accompanied by one’
2.5.7 Final CG glide deletion

The G in CG-final forms is deleted when suffixed with any consonant-initial form (outside of subject markers, §2.5.1.1), or when followed by a consonant-initial word.

(2.81) //kosy =m// ‘road + OBL’ → kosm [kɔs.m] ‘at/on the road’

//taty =mu// ‘shoot many + VOL.FUT’ → tatmu [tut.mõ] ‘I/(s)he will shoot many’

//wusy peru// ‘freshwater lobster + small’ → wus peru [wus.põro] ‘a small freshwater lobster’

2.6 Borrowing, contact and change

In this section, I briefly step back from a consideration of synchronic phonology to note a puzzle in borrowings and to consider changes in the phonology of Momu for younger speakers under the circumstances of contact with Tok Pisin.

2.6.1 Borrowing

A curious feature of code switching in Momu is that TP p is rendered as f consistently and unconsciously in the speech of many adults. Given that Momu has both a p and f, I do not have an explanation or motivation for this behaviour but feel that it is interesting enough to note here. I have been told that Tok Pisin first came to Mori village when workers were taken to Kerema (far away on the Gulf of Papua) in the colonial period. They returned bringing Tok Pisin with them.

In Tok Pisin, there is regional variation in what phonemic distinctions are made. In the Tok Pisin of the speakers of the coastal language Barupu, f was lacking, just as Barupu itself lacks an f (Corris, 2008). Tok Pisin lexemes with f are actually reasonably rare as noted at the start of the f section in the Mihalic dictionary (Mihalic, 1971). In Barupuan Tok Pisin it is missing altogether, except in the speech of younger speakers who have had contact with English, or English-influenced Tok Pisin.

While present in many dialects of Tok Pisin, the Tok Pisin of Momu
speakers lacks a voicing distinction and a velar nasal\textsuperscript{59}, just as Momu itself lacks these distinctions. But unlike Barupu, Momu has both a phonemic $p/b$ and $f$. It is curious then that despite this, $p/b$ is fairly regularly rendered as $f$ when using borrowed words in Momu.

Some examples of lexemes that I found consistently transformed when borrowed, but untransformed in regular Tok Pisin are given in (2.82)\textsuperscript{60} and (2.83). Note that Tok Pisin words pronounced locally with an $f$ would remain untransformed. For instance, TP \textit{fani} ‘funny’, \textit{foa(pela)} ‘four’ or \textit{faipvela} ‘five’. Note also that whether the transformation occurred would also depend on the degree of switching. For instance, it wasn’t likely if a whole clause was given in Tok Pisin, amongst Momu speech.

\begin{tabular}{ll}
\hline
Regular Tok Pisin & Tok Pisin loanwords \\
\hline
\textit{paim} (baim) ‘buy’ & \textit{faimta} \\
\textit{pinis} ‘finish’ & \textit{finista} \\
\textit{kamapim} ‘make’ & \textit{kamafimar} \\
\textit{trip} ‘float’ & \textit{trifta} \\
\hline
\end{tabular}

\begin{tabular}{ll}
\hline
Regular Tok Pisin & Tok Pisin loanwords \\
\hline
\textit{kap} ‘cup’ & \textit{kaf} \\
\textit{Kaspar} ‘person’s name’ & \textit{Kasfar} \\
\hline
\end{tabular}

The pattern of transformation does seem to align roughly with differences in word class. Verbs very commonly show the transformation, like those in (2.82). But there are other (verbalised) verbs that do not, such as \textit{pum (bung)} ‘gather’ which verbalise as \textit{pumar}, or \textit{sapim} ‘sharpen’ which verbalises as \textit{sapimata} ‘be sharpened’. Adjectives on the other hand, which are very commonly formed in TP using the \textit{-pela} suffix, preserve the $p$ in that suffix. It could be that the presence of morphology native to each language influences the likelihood of transformation.

Nouns, which generally lack morphology in both languages, are mixed. Nouns like \textit{ped} ‘bed’ or \textit{paret} ‘ditch/stream’ sometimes preserve the $p$, while the forms given in (2.83) do not. Proper nouns are mixed, sometimes preserving, sometimes not.

\textsuperscript{59}Instead the velar nasal usually becomes an $n$ or $m$.

\textsuperscript{60}\textit{-ta} is the intransitive verbaliser and \textit{-ar} is the transitive verbaliser for borrowed verbs (§6.3.4).
The position of the p in the syllable appears to make little difference, except that a p within a consonant cluster is usually preserved. For instance, it occurs in the initial clusters in spirit/sepirit ‘spirit’, tok ples ‘language’ or brukim ‘break’, but then not in the medial cluster in Kaspar (2.83). Otherwise, whether onset or coda, both are open to transformation. Nor does it pattern along lines of preservation of a p/b distinction made in other dialects of Tok Pisin. For instance, both baim ‘buy’ and pasim ‘fasten’ transform p/b to f.

A similar pattern occurs for Tok Pisin loanwords in Imonda. There is a phonological merger in Imonda where a final p is rendered as f (Seiler, 1985, p12) and this may go part way in explaining the pattern in loanwords. In Momu, word-final p is remarkably rare, while a final f is more common. There is no pattern of the merger of the two in a specific context.

2.6.2 Contact and Change

Both through observation and in discussions with Baron (p.c.) about the vowels of Momu, it has become clear to me that some distinctions in the vowel space in Momu are being lost. Younger speakers have flattened out the vowels to be more like the 5 vowel system of Tok Pisin. I consider it likely that this is being driven by contact with Tok Pisin. In Mori village, in particular, I noticed that younger Tok Pisin speakers with passive knowledge of Momu, would sometimes later emerge as speakers of Momu. I am not sure how common this is, though, as there were also children equally competent and conversant in Tok Pisin and Momu.

In part, what I am discussing here is on a cline with features of Eastern Momu, which I would roughly characterise as a simplification of Western Momu phonology. I noticed some of these features for instance in the older recordings (GRN, 1973) that were identified to me as Eastern or “light” Momu, and so some of these features have been around for at least 45 years. I otherwise take the differences between Eastern and Western to be mainly lexical. Proper characterisation of the differences would require a survey of a greater number of villages than the three that I was able to visit during this project.

The flattening of the vowel space means that the generally mid-high

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61 A little further afield, a similar merger occurs word-finally in Mian (Fedden, 2011).
vowels \( i \) and \( u \) are raised and merged with the long high vowels \( yi \) and \( wu \). Length also appears to be becoming less distinctive. This then more closely matches the almost cardinal 5 vowel system of Tok Pisin (Smith, 2008). This is a feature of younger speakers of Momu in Mori—particularly those approximately 30 years old or younger.

Table 2.26 gives some examples of differences in form by my two most conservative speakers—Yarin and Ferdi. Yarin is from Savamui village and Ferdi is from Nebeki. Nebeki is the most centrally located of all Momu speaking villages. Ferdi had also spent time as a young man at Amanab station, which is further to the west and so he was well aware of Western differences and has had contact with Momu speaking people from many areas. I compare these to standard representations with Momu speakers from Mori. For younger people in Savamui village, some of these forms are the norm.

<table>
<thead>
<tr>
<th>Yarin/Ferdi</th>
<th>in Mori</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘ground’</td>
<td>okwo ([\tilde{2}\tilde{3}k^w\ddot{a} \sim \tilde{2}\tilde{3}k^w\ddot{a}])</td>
</tr>
<tr>
<td>‘eye’</td>
<td>koy ([k^w\ddot{a}])</td>
</tr>
<tr>
<td>‘child’</td>
<td>baswo ([\ddot{a}^w\tilde{a}^w\ddot{a} \sim \ddot{a}^w\tilde{a}^w\ddot{a}])</td>
</tr>
<tr>
<td>‘pig’</td>
<td>yeswo ([jes^w\ddot{a}])</td>
</tr>
<tr>
<td>‘bush knife’</td>
<td>pupw ([pup^w\ddot{a}])</td>
</tr>
<tr>
<td>‘leg’</td>
<td>esfiy ([\ddot{a}s\tilde{a}\ddot{a}i])</td>
</tr>
</tbody>
</table>

Table 2.26: Phonological differences between speakers

One of the most immediately notable differences is a trend away from bilabial trills to fricatives. Older and especially male speakers consistently trilled, while everyone else produced a fricative most of the time. Labialisation is a frequent and marked feature of Western Momu (Baron p.c.) and is present to a degree in the speech of older speakers. In some cases, it appears that this labialisation is an accompanying feature of some consonants—especially bilabial trills—but it is not limited to these segments.

Many of the effects of the glides on neighbouring segments are lost in the speech of younger speakers. Denasalisation, palatalisation, and labialisation on neighbouring consonants are generally lost, and devoiced glides are lost altogether (as in \( p\)up ‘bush knife’ in Table 2.26). Word-final glides that “resurface” when reattaching to a following vowel-initial word are generally lost as well for the youngest speakers but are preserved for Eastern Momu.
speakers. Observant readers may notice that forms are sometimes written with or without glides in the remaining chapters of this thesis. This variation in spelling is representative of speaker variation.

A handful of pairs of distinct verbs collapse with the flattening of the vowel space. What has developed in its place is a tendency for these verbs to be accompanied by a dummy object to preserve the difference. For instance, consider *ki* ‘sleep’ and *kiy* ‘eat’. For those that flatten the vowel space, these forms are homophonous. In order to differentiate them, they are nearly always accompanied by a kind of dummy object like *tyako* ‘a nap’ or cognate object like *kwu* ‘food’ respectively. To contrast *si* ‘smell’ and *siy* ‘urinate’, both are accompanied by dummy objects *abka* ‘sweet smell’ or *fwa* ‘bad smell’ and *tuk* ‘bladder’ respectively.
Chapter 3

Word Classes

In this chapter, I define word classes on the basis of morphosyntactic criteria while providing some semantic detail for the purposes of cross-linguistic comparison (Evans, 2000; Schachter and Shopen, 2007). Subsequent chapters and subsections go into greater detail, with cross-referencing provided throughout.

Momu has large open classes of verbs (§3.1) and nominals (§3.2). Verbs are further broken into subclasses on the basis of transitivity (§3.1.1, §3.1.2). Nominals in Momu are broken down into smaller subclasses (§4.2, §4.6, §4.3) that include modifying subclasses (§3.3) that can also all stand as nominal heads. Adverbs are grouped under a common label that gathers many word classes with similar or overlapping distribution (§3.4). Several small closed minor classes are also defined (§3.5). The chapter ends with a discussion of two functionally motivated classes of verbs (§3.6).

3.1 Verbs

Predicate heads to a clause in Momu can be either verbal (§10) or non-verbal (§11). These predicates license one, two or three arguments.1 As the clausal head, the “neutral” word order typically places the head in the clause-final position, setting aside factors like discourse pragmatic restructuring of a clause (Dryer, 2007b).

Verbs are the major host of morphology in Momu and are primarily identified by their ability to inflect for a range of categories including subject

1In considering grammatical relations, predicates are treated in a unified matter (§8).
(§6.2.1), object (§6.2.2), modality (§12.1) and aspect (§7). In addition to this, a large number of verbs can be identified by verb-forming morphology (§6.3).

In this section, I identify the subclasses on the basis of transitivity. That is, the number of objects licensed by the verbal predicate. In Momu, these subclasses are intransitive (§3.1.1) and transitive (§3.1.2) (including ditransitive (§3.1.2.3)) verbal predicates. Other divisions of verbs are made elsewhere. See §7.5.1 for a division of verbs on the basis of lexical aspect. See §8.2 for a consideration of valence (i.e., the number of arguments, not the number of objects). Several types of serial verb construction centre on different semantic subclasses of verbs (§13.2).

3.1.1 Intransitive verbs

Intransitive verbs license a single argument (§8.2.1), and this argument is cross-referenced by a subject marker on the verb (§6.2.1).

The simplest intransitive verbs are free roots. Clause-final non-state verbs with no inflectional marking whatsoever agree with first singular subjects (§6.2.1) and are perfective (§7.2) (i.e., they are “zero-marked” for both features). Depending on the final segment of the root, this may be syncretic with third person singular subjects as well (3.1a). Other cross-reference values (§6.2), aspect (§7.1) and modality (§12.1.1) are marked (b) by suffixes, (c) a prefix in the case of the imperfective (§7.3) or (d) both prefixes and suffixes for the progressive (§7.4).²

(3.1)

(a) *Te ṭin.
    1SG one.goes[1][3SGS:PFV]
    ‘I went.’

(b) *Ay ṭuas-f-mu=fə?
    2SG bathe-2SGS-VOL.FUT=YNQ
    ‘Will you bathe?’

(c) *Fyi a-kjeakin.
    water IMPF-be.boil[3SGS]

²The perfective in Momu is the otherwise unmarked form of a subject-marked verb. In examples this category is assumed if no other TAM applies, and will be marked in glossing only when pertinent to the discussion at hand as [PFV]. Similarly, the reals and irrealis progressive are multi-part constructions built around imperfective-marking. Progressive forms will be indicated as [PROC] only when pertinent to the discussion at hand.
The water is boiling.

(d) Slupi y-a-fyin-o.  
Slupi [PROG]D-IMPF-[one.]swims-3SGS

Slupi is swimming.

A simple test of transitivity is the premodifying use of manner demonstrative verbs in serialisation (§13.2.1). These verbs (e.g., anta/anyer ‘do like this / do to it like this’) have intransitive and transitive counterparts. Only in quite restricted circumstances can a transitive verb precede an intransitive verb (§13.2.3), and so this is a reasonable indicator, and combines very broadly with many verbal predicates. ³

(3.2) Te fyi=m anta=fwas.  
1SG river=OBL do.like.this=wash[1]3SGS

‘I wash like this.’ (said while doing a scrubbing gesture)

Amongst these intransitive verbs are verbs that frequently occur with a pleonastic ‘object’. The “object” usually expresses much the same sense as the verb (while not a “cognate object”) but is often included nonetheless. ⁴

(3.3) (a) Te tyako=m ki.  
1SG nap=OBL sleep[1SGS]  
‘I slept (a nap).’

(b) Te tuk=m siy.  
1SG bladder=OBL urinate[1SGS]  
‘I urinated (a bladder).’

³In some cases the test indicates that a single verb may have multiple subcategorisation frames, and so this test is an indication of a possible frame. A similar restriction on the “verbal core” exists in verb complexes in Dyirbal (Dixon, 1972) and other ergative Australian languages. The verbal core in Dyirbal can be in principle comprised of multiple verbs as long as they agree in transivity. Valence changing devices such as -ŋay are employed if incompatible verbs are combined in a verb core. This restriction is not broadly the case in Momu, but is the case for specific serial verb constructions, such as those employing the demonstrative manner verbs. The opposite is possible in Kayardild, where similar manner verbs are unrestricted (Evans, 1995, pp345–346). For instance, mirrayalkatha ‘do well’ in Kayardild can combine with transitive or intransitive verbs, but in Momu the verbs ikakta ‘do well (vi)’ and ikakar ‘do well to something (vt)’ must agree in transitivity.

⁴It may be that these pleonastic objects are used to differentiate certain minimal pairs in the context of the flattening of vowel distinctions. These verbs contrast a subtle vowel difference that is in decline amongst speakers (§2.6.2). Ki ‘sleep’ and kiy ‘eat’, and si ‘smell’ and siy ‘urinate’ are minimal pairs demonstrating this subtle difference. All four verbs frequently occur with a pleonastic object.
A number of intransitive verbs alternate\(^5\) to indicate the number of an argument on an absolutive basis (§6.6).\(^6\) Most intransitive verbs that pattern this way are differentiated by a prefix *n*a- which marks the plural form. This prefix happens to be identical with the form for deriving transitive verbs that select for a single object (§6.5.1). For verbs that have identical plural intransitive and singular transitive forms (e.g., *pwen/napwen* ‘one/many come’ and *napwen/tyepwen* ‘bring one/many’) these derived forms can be differentiated by their full paradigms: intransitive plurals cannot take singular-subject marking, while (derived) transitive verbs can take full subject inflection.

<table>
<thead>
<tr>
<th></th>
<th>SG</th>
<th>DU</th>
<th>PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>byenetin</td>
<td>na-byenetin-rai</td>
<td>na-byenetin-r</td>
</tr>
<tr>
<td>2</td>
<td>byenetin-f</td>
<td>na-byenetin-mi</td>
<td>na-byenetin-m</td>
</tr>
<tr>
<td>3</td>
<td>byenetin</td>
<td>na-byenetin-fi</td>
<td>na-byenetin-si</td>
</tr>
</tbody>
</table>

Table 3.1: Paradigms for *byenetin* ‘one jumps’ and *nabyenetin* ‘many jump’

Finally, there are intransitive state verbs in Momu that very commonly select for inanimate subjects, and exhibit defective subject marking, fixed upon the third singular form. I divide these into two groups based on morphology: the inchoative verbs (§3.1.1.2) and the stative -*nu* verbs (§3.1.1.3) below.

### 3.1.1.1 Existential verbs

There are two existential verbs. The first, *ai*, selects for an animate subject and the second, *wu*, selects for an inanimate subject. These verbs describe the existence of a referent with a single subject argument. With a locative oblique, the existential verbs are used to form a basic locative construction (Levinson and Wilkins, 2006b).

---

\(^5\)The term “suppletion” has been used to describe the alternation between forms in this domain of verbal number (e.g. Corris, 2008; Donohue, 2008a; Seiler, 1985, to draw upon examples from neighbouring languages). I follow Corbett (2000) in not referring to this as a case of morphological suppletion. My argumentation around this is more fully considered in §6.6.

\(^6\)I will very occasionally refer to verbs of this kind as a pair throughout this thesis. For instance: the intransitive verb pair *pyini/napyini* ‘one/many run’ or transitive verb pair *n*apawan/napupin ‘finish one/many’. This is shorthand for two verb forms with separate glosses that alternate on the basis of the number of the absolutive argument. The verbs may also be referred to individually—*pyini* ‘one runs’ or *napyini* ‘many run’.
In addition to this, the existential verbs are used as copulas, as shown in (3.5). These apply to a subset of attributive clauses (§11.12.3), for linking a referent with an (adjectival) predicate complement.

(3.5) (a) \textit{Te emsu=m}
1SG good/happy=OBL
\textit{n-a-ya.}
\textit{px-[IMPf]ANIM:there.be[COP]-1SGS:NZR}
‘I am good/happy.’

(b) \textit{Emasu te=m n-o-wo.}
good/luck 1SG=OBL \textit{px-[IMPf]inan:there.be[COP]-3SGS:NZR}
‘I am good/lucky.’

The existential verbs are also a part of a cause-effect verb serialisation expressing a caused location (§13.2.3.3). In this construction type, the verb is functioning transitively. In a simple clause, the subject and selectional requirement of an inanimate argument align on the subject. In a caused location construction selection and inflection depart from each other. Here the object introduced by the prior verb or verbs is what is selected for as inanimate argument, and the shared (animate) subject is marked by cross-reference.\footnote{The shared subject of a caused location construction is very commonly elided, and subject cross-reference is variably realised as agreeing with the subject, or coding a sort of pseudo-passive (either as a third singular or plural subject, regardless of the person or number of the referent). Momu lacks a true passive construction, but this is the closest that it gets to expressing one. The clause is really about the object, but the remnants of a grammatical subject linger for many speakers. The translation for (3.6) attempts to reflect this. See §13.2.3.3 for more. The apparent object of the clause in (3.5b) is similarly a case of a subject coded with object-like features. In the case of an attributive clause with a copula, the case is clearer—the adjective is a complement predicate. Serial verb constructions on the other hand raise a question of clause-hood: are all arguments to the first verb technically all arguments to the second?}

(3.6) \textit{Sioko kosy=m otonoi}
door road=OBL lean.one.against[1SG]
y-o-ya.
\textit{D-[IMPf]inan:there.be-1SGS:NZR}
‘(The umbrella) is there leant against the doorway, (I caused it).’
3.1.1.2 Inchoative verbs

Inchoative verbs are the verbalised form of adjectives. They are usually formed with an unrounded adjective root (§2.5.2) and the intransitive verbaliser -ta (§6.3.1).

(3.7) (a) titita ‘become/be painful’ (titu ‘sore’)
(b) skabta ‘become/be bad’ (skabu ‘bad’)
(c) kita ‘become/be dried’ (ku ‘dry’)

These verbs almost always select for an inanimate subject. The exception is aneyta ‘be(come) big’ (cf. anow ‘big’). This is the only verb in this class that takes full subject inflection. Otherwise these verbs are defective in that they are fixed on third person subjects (regardless of number). This is indicated by the deletion of the final i in -tai (§2.5.1.2).

When describing a property of a person, inchoative verbs target an (inanimate) body part as the subject. The possessor of the body part can be added to the clause as a logical subject as shown in (b), or coded internally (c). The externally possessed clauses have the appearance of a mono-transitive construction in having two apparent arguments, except that the possessor is not cross-referenced, and neither argument can be oblique-marked. See §10.2.1 for further discussion.

(3.8) (a) Fyi muti-ta.
    water black-INCH
    ‘The water is/became blackened.’
(b) Te ebsi titi-ta.
    1SG leg painful-INCH
    ‘My leg hurts’
(c) Ebsi to titi-ta.
    leg 1SG:GEN painful-INCH
    ‘My leg hurts’

8It is not entirely clear if the verb is derived from the adjective, or if the adjective is also derived from a bound root.
9This is similar to the expression of human attributes in Japanese via multiple nominatives (ga-marked), e.g., mary ga kami ga nagai ‘Mary’s hair is long’ (Deal, 2013).
3.1.1.3 Stative -nu verbs

Stative -nu verbs are similar to both adjectives (§3.3.1) and inchoatives verbs (§3.1.1.2), without displaying the adjective-inchoative alternation. Instead, all appear to be formed with an alternative intransitive verbaliser -nu (§6.3.2), and no underived adjectival equivalent exists. These verbs both pre-modify verbs in serialisation to express manner serialisations (§13.2.1), and many also modify nouns, in the same fashion as adjectives (§3.3.1).

Almost all of these forms select for an inanimate subject, and do not select for or agree with the number of the subject, as per inchoative verbs above. As such, these forms typically have a fixed form, which carries the appearance of a third person singular subject. By this, I mean that the final segment in the form is u, consistent with the rounding process that marks the third singular (§2.5.1.3). Additional inflectional possibilities such as TAM categories are restricted, in line with these verbs expressing states.

(3.9) (a) fwafnu ‘lie balled up (of dog)’  
(b) uyenu ‘be hot’  
(c) fufnu ‘be swollen (of body part)’  
(d) sayinu ‘be ripe/red (of fruit)’  
(e) pwinu ‘be filled (of container)’  
(f) mwikinu ‘be grimacing (of mouth)’

The semantic spread of these verbs includes both property and locational predicates meanings within the typology of intransitive predicates given by Stassen (1997). Such predicates are more commonly coded by nominal forms in Momu, but these forms sit somewhere between verbal and nominal coding (§11.12). Some terms here are reminiscent of Nen positional verbs which show far more irregular morphology compared to other verbs, and are a morphological indicator of state-hood (Evans, 2014). Momu however has separate postural verbs which do not fall into this class, especially those that apply to human or animate subjects.\footnote{The final u segment could be interpreted as a remnant of the nominaliser -u, as these forms do not have underived counterparts. The closed class of adjectives also have a similar rounded final segment (§2.5.2), but unlike adjectives, these forms do not have special verbalised counterparts. Hence, they are considered less prototypical (intransitive) verbs. These forms most commonly end with the segments nun, which I hypothesised was a formerly productive verbaliser or verb-forming suffix (§6.3.2).}

\footnote{Note the stative -nu verbs exhibit a similar patterning to the inchoative verbs. Al-}
3.1.2 Transitive Verbs

Transitive verbs take all of the inflectional possibilities of intransitive verbs. In addition to licensing a subject argument (§8.2.1), mono-transitive verbs license one of two object types (§8.2.2). These object types are differentiated only by verb class, not by case marking or word order.\textsuperscript{12}

In this thesis I occasionally refer to mono-transitive verbs as high- (§3.1.2.1) and low-transitive (§3.1.2.2) subtypes. The distinction is minor but has some ramifications in serial verb constructions (§13.3.3).\textsuperscript{13} For the purposes of identifying word classes, the two types have differing additional criteria for identification.

3.1.2.1 High-transitive verbs

Members of this word class are straightforwardly identifiable as verbs formed with object cross-indexing verb-forming suffixes (§6.3.3.1).\textsuperscript{14} These verbs express meanings where the undergoer is typically human, such as bakyer ‘ridicule’, ekyen ‘help’, or the speech verb yegen ‘say to’. A minority of these verbs equally target human or non-human referents such as on ‘see (one)’, or kafokyer ‘fear’. Some even appear to more commonly apply to non-human referents (e.g., ien ‘pull’).\textsuperscript{15}

though some of the states described here are of human referents, the target is usually an inanimate body part. Also similar to the inchoative verbs, a description of the position of a body part is often the means employed to describe an emotional state, or the manner in which an activity is performed (§13.2.1).

\textsuperscript{12}It is a bit of a stretch to refer to the two objects types as a “split object” in the sense of Dryer (1986). The features of alignment are consistently accusative in Momu (with exceptions noted below in §3.1.2.2). They do not vary in the fashion of, say, Taba (Bowden, 2001, 2011), where the split is between accusative and absolutive strategies for both subjects and objects. The division is in the constructional sense as employed by Bickel (2010). The bearing that the split has on the syntax is minimal: objects are frequently shared between transitive verbs in serial verb constructions, but not between the two object types. I am not aware of the division affecting any other syntactic constructions.

\textsuperscript{13}While the terms are most notably associated with pragmatic or discourse use per Hopper and Thompson (1980), the binary distinction made in this thesis actually has gradable realisation, morphologically, as considered in §8.1.4, when differentiating predicates types for the purposes of identifying grammatical relations. The intention here is to provide a short label that roughly aligns with the semantics of the division between these classes of transitive verbs. The morpho-syntactic realisation does not perfectly align with the semantic or pragmatic notion of transitivity, however.

\textsuperscript{14}See also §6.4.3, for examples of verbs with full object cross-referencing where the values are fused into the form of the verb. This is also the case for the ditransitive verb pair no/tu ‘give one/many’.

\textsuperscript{15}At the end of the spectrum of human to non-human selectional preferences amongst these verbs are verbs that ambiguously sit on the border between the two transitive verb
Verb-forming suffixes differentiate the person and number of the object. A third person is differentiated from non-third-persons and singular number from non-singular. There are two sets of verb-forming suffixes which I differentiate on the basis of their contrasting final segments: \(n\)-set and \(r\)-set forms (§6.2.2.1).

Each possible object person-number combination is shown in the example below.

<table>
<thead>
<tr>
<th>'fear' SG PL</th>
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<tbody>
<tr>
<td>1</td>
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<tr>
<td>3</td>
</tr>
</tbody>
</table>

Members of this class frequently and redundantly mark the object with a prefix. The prefix is entirely optional, however, and only distinguishes non-third-person values.

(3.11) \(Ay\) \(te=m\) \(wa-pupw-a-f.\)
\(2SG\) \(1SG=OBL\) \(1|2SGO\)-beat-1|2SGO;VTR-2SGS

‘You beat me up.’

3.1.2.2 Low-Transitive verbs

Low-transitive verbs are simply defined as the inverse to the high-transitive verbs. While high-transitive verbs exhibit full object cross-indexation via verb-forming suffixes, low-transitive verbs exhibit a gradient from close to high-transitive, through to lower transitivity. Prototypically this subclass includes verbs that select for non-human objects. Some verbs in this subclass select for the number of the object (§6.6).

Verbs in this subclass include free forms (3.12a), or bound forms combining with verb-forming suffixes (b)-(d). The bound forms draw upon sets of verb-forming morphology (some of which overlap with other sets, including those that form high-transitive verbs). There is a general mono-transitive verb-forming suffix -ar (cf. "ar ‘do to’) used as a verbaliser or (b) to incorporate transitive loanwords (§6.3.4), or sometimes evident in forms without an identifiable bound root (c). The first singular and third plural object suffixes from the \(n\)-final set of verb-forming morphology are sometimes used to form verbs which select for the number of the object.\(^{16}\)

\(^{16}\)Note that what is elsewhere a suffix cross-referencing a first singular object (-an) is used in (d) for a singular object regardless of person.
Some, but not all verbs in this subclass can inflect for non-third-person objects via object prefixes (§6.2.2.2). Unlike with high-transitive verbs, however, object prefixes are obligatory when there is a first or second person referent.

A relatively common pattern in Momu is for verbs to pair, such that they alternate for the number of an argument on an absolutive basis (§6.6), as we have already seen for intransitive verbs (§3.1.1). Again, these vary from free forms (e.g., (3.13a), §6.6.2.1) through to (most commonly) (b) forms derived from a common intransitive base (§6.6.2.3), with some values in between (§6.6.2.2). The majority of these verbs select for a non-human or inanimate object, but in cases where their meaning has expanded to take in human referents, they also employ object prefixes for speech-act participants. In this case, each verb in the pair has a defective paradigm in line with the number of the object.

(3.13) (a) *uy/kwen* ‘cut one/many (tall, upright object)’

(b) *na-pwen/tye-pwen* ‘bring one/many’

### 3.1.2.3 Ditransitive verb

The only ditransitive verb in Momu is the lemma expressed by the stem alternates *no/tu* ‘give one/many’. For this verb pair stem alternation indexes the number of the theme object, and the recipient indirect object is cross-referenced. The indirect object cross-reference is fused into the form of the verb. The two objects have no preferential order apart from both occurring after the subject (§8.2.2). Both objects are oblique-marked.

(3.14) (a) *Slupi te=m wasi=m nera.*

    Slupi 1SG=OBL pawpaw=OBL give:one:1SGIO\3SGS

    ‘Slupi gave me a pawpaw’

(b) *Slupi wasi=m te=m tira.*

    Slupi pawpaw=OBL 1SG=OBL give:many:1SGIO\3SGS

    ‘Slupi gave me pawpaws’
These are the only verbs that exhibit verbal number and full object cross-reference where the two do not align. See §6.4.3 for examples of other irregular cases.

### 3.2 Nominals

Nominals in Momu head noun phrases (§5) but also sometimes clauses (§11). The bulk of the class is occupied by the large open subclass of nouns, with criteria given below. Amongst nominal subclasses are forms that can additionally modify nominal heads (§3.3). For instance, Momu is a language where adjectives (§3.3.1) function both as modifiers of nominals and as heads (both phrasal (§5.2) and clausal (§11.3)).

Nominals can function as the head of NPs (§5), and as such may be modified by one of several modifiers (§3.3), for instance in (3.15a) an adjective, in (b) a demonstrative (§3.5.4) or in (c) a relative clause (§15.1). As shown in (3.15), modifiers follow the nominal head.

(3.15) (a) yime anow
    man  big
    NHEAD  ADJ
    ‘a/the big man’

    (b) yime anu
        man  this
        NHEAD  DEM
        ‘this man’

    (c) yime /wasi kuw eru
        man  pawpaw consume\3sgS that[REL]
        NHEAD  N VTRANS REL
        ‘the man that ate pawpaw’

Almost all nominal modifiers can in turn function as the head of an NP (§5.2), and these, in turn, can be modified by a subset of modifiers. There is a preferential hierarchy of modifiers such that the lower the head in the hierarchy, the fewer the choices in modification (§3.3).

(3.16) (a) Okomaino kefe
    small  some
    ADJHEAD  QUANT
    ‘Some small ones’

    (b) kefe eru
        some  that
        QUANTHEAD  DEM
        ‘Those few’

Nominals can function as arguments to a predicate. (3.17) shows a nominal functioning as (a) a subject to an intransitive verbal predicate (§3.1.1, §10.1.1),
(b) both a subject and object to a transitive verbal predicate (§3.1.2, §10.1.2),
(c) as a subject to a nominal predicate (§11) and (d) as a subject to an adjectival predicate (§3.3.1, §11.3.1).

(3.17)

(a)  
*Kwo poonu.*

  tree broke\3SGS

  N V.INTR

  ‘The tree broke.’

(b)  
*Yeswo muepe=m kuw.*

  pig taro=OBL ate\3SGS

  N N V.TR

  ‘The pig ate the taro.’

(c)  
*Stan rekta.*

  Stan rector

  PN PN

  ‘Stan is a Rector’

(d)  
*Yeswo anow.*

  pig big

  N ADJ

  ‘The pig is big.’

As shown above in (c) and (d), nominals can also function as predicates (§11).

Non-subject arguments can be inflected for oblique case (§4.8.2). Marking is phrase-final (Bickel and Nichols, 2007). Noun phrases are head-initial, and so this is a dependent marking language (Nichols, 1986).

(3.18)  
*Slupi wune anow=m pana.*

  Slupi stone big=OBL get.one\3SGS

  PN N ADJ VT

  ‘Slupi got a big stone’

Similarly case marking with the comitative =b combines with word order to indicate a coordinated subject (§4.8.3.1, §14.2.2), or instrumental obliques (§4.8.3.2).\(^17\) The focus marker =ne (§4.8.9) indicates that an argument is extra-clausal (contrastively focussed).

\(^{17}\)Comitative-marking does not occur with objects (§8.2.2). Additionally, comitative-marking occurs on temporal adverbials (§4.8.3.3).
Within an NP, a dependent to a nominal can be marked as genitive (which also marks the number of the possessor). Both orderings of possessor and possessed are possible for genitive-marked dependants (§4.8.5).

(3.19) ‘Steven’s bow’:

(a) \textit{kumasy} Steven=u
    bow Steven=SG:GEN
    N_{\text{HEAD}} PN=GEN

(b) Steven=u \textit{kumasy}
    Steven=SG:GEN bow
    PN=GEN N_{\text{HEAD}}

In addition to possession, a dependent can be marked as proprietive (§4.8.6), or as a habitative (§4.8.7) relevant to the head noun.

Only amongst minor subclasses is number encoded in nominal forms. The primary means of expressing number is via verbal cross-reference (§6.2), or very commonly it may be reflected for the absolutive argument via high frequency verbs coding verbal number (§6.2) in serialisation (§13.3.4).

3.3 Modifiers

There are several classes of modifiers to nominals in Momu. All modifiers described here are subclasses of the class of nominals. The broad distribution described in §3.2 is assumed for all subclasses discussed here, i.e., they may function as heads of NPs, and given this may function as arguments to a predicate. They may also function as the predicate heads of clauses. They may be modified by a subset of modifiers. But in addition to these general criteria, they may also modify most nominals.

Modifiers exist in a modifying relationship to each other that determines their ordering within a multi-modifier noun phrase (§5). The modifiers in (3.20) can be modified by any word class to their right on the scale.\footnote{The scale in (3.20) under-represents combinatorics at the lower end. See §5.2 for finer detail.}

Thus, demonstratives cannot be modified (within an NP) while nouns cannot modify (outside of certain types of compounding).

(3.20) noun \textgreater adjective \textgreater numeral \textgreater quantifier \textgreater demonstrative
3.3.1 Adjectives

Momu is a language with a small core set of adjectives (Dixon, 1982). These
have special verbalised counterparts (§3.1.1.2).\(^{19}\) The full (known) set is
‘short’, \textit{wafko} ‘strong/hard’ and \textit{fafo} ‘long’, but further investigation may
reveal more.

\((3.21)\) shows the corresponding verbal form for a subset of these adject-
ives.

\[(3.21)\]
\[
\begin{align*}
\text{(a) } \textit{anow} / \textit{aney-ta} & \quad \text{big / be(come) big} \\
\text{ADJ} & \quad \text{INCH.V} \\
\hline
\text{big-INCH} & \quad \text{inch} & \quad \text{inch.v} \\
\end{align*}
\]

\[
\begin{align*}
\text{(b) } \textit{fafo} / \textit{fafe-ta} & \quad \text{long / be(come) long} \\
\text{ADJ} & \quad \text{INCH.V} \\
\hline
\text{long-INCH} & \quad \text{inch} & \quad \text{inch.v} \\
\end{align*}
\]

\[
\begin{align*}
\text{(c) } \textit{motu} / \textit{muti-ta} & \quad \text{black / be(come) blackend/dirty} \\
\text{ADJ} & \quad \text{INCH.V} \\
\hline
\text{black-INCH} & \quad \text{inch} & \quad \text{inch.v} \\
\end{align*}
\]

\[
\begin{align*}
\text{(d) } \textit{ku} / \textit{ki-ta} & \quad \text{dry / be(come) dry} \\
\text{ADJ} & \quad \text{INCH.V} \\
\hline
\text{dry-INCH} & \quad \text{inch} & \quad \text{inch.v} \\
\end{align*}
\]

There is a second set of adjectives which includes properties such as colours,
textures, and complex shapes. These either do not verbalise or they do
not display the same morphophonemic variation in verbalisation as the core
adjectives. Examples are given in (3.22).\(^{20}\) Where these forms verbalise,
they most commonly involve the deletion of the final vowel (where relevant).
Examples are given in (3.23).

\(^{19}\)There are a set of state verbs (§7.5.1.1) which further express meanings that might,
cross-linguistically, be coded by adjectives. For instance \textit{saynu} ‘be ripe’ or \textit{uyenu} ‘be
hot’. Some of these verbs have a distribution similar to adjectives in that they can modify
nominals.

\(^{20}\)On the basis of their more complex morphophonemics, I assume that the first set of
adjectives are older forms and the second set contains newer terms. Source terms for a
neologism are sometimes recoverable, such as \textit{syebo} ‘adjective: white, noun: a bird species
notable as being white’.
(3.22) (a)  petu/peru/peteku
    small
    ADJ
    ‘small’
(b)   iba
    round/flat
    ADJ
    ‘round or flat’
(c)   teete
    red
    ADJ
    ‘red’

(3.23) (a)  skabu / skab-ta
    bad    bad-INCH
    ADJ    INCH.V
    ‘bad / be(come) bad’
(b)   meka / mek-ta
    cold   cold-INCH
    ADJ    INCH.V
    ‘cold / be(come) cold’
(c)   mereke / mereke-ta
    weak   weak-INCH
    ADJ    INCH.V
    ‘weak / be(come) weak’

3.3.2 Numerals

There are two basic numerals, fasni/faskanei ‘one’ and (tye)nebem ‘two’. The system for indicating numbers higher than two is subject to variation from speaker to speaker. Regardless, numbers above three are rarely used in my corpus.\(^{21}\)

Numerals modify nouns (3.24a) or adjectives (b) and can be modified by demonstratives (c).

(3.24) (a)  esyu  faskanei
    dog    one
    ‘one dog’

\(^{21}\)In fact, numerals and quantifiers are rare across my corpus. Code-switching with Tok Pisin numerals is actually rare as well unless referring to dates. The primary means of expressing number is via cross-reference (§6.2) or verbal number (§6.6).
(b) *esyu anou nebem*
dog big two
‘two big dogs’

(c) *esyu nebem eru*
dog two that
‘those two dogs’

Morphologically, *fasni/faskaney* ‘one’ and *(tye)nebem* ‘two’ have uneven distributions. *(Tye)nebem* is frequently verbalised, while *fasni/faskanai* is not. The optional prefix *tye-* has the same form as the plural transitivising prefix (§6.5.2). If this is related to the plural transitiviser, this may hint at a verbal past for this numeral.\(^{22}\)

### 3.3.3 Quantifiers

There are three basic quantifiers: *afa* ‘another/one’, *kefe* ‘some’, and *kwobo* ‘many’. The representative coordinator *tya* can also function as a kind of plural quantifier, but it is a separate word class (§3.5.5.4).

Quantifiers can (3.25a) modify a noun (§3.2), (b) head an NP (§5.2), or (c) clause (§11.3, §11.4.2).

(3.25) (a) *mu afa*
woman another
‘a/another woman’

(b) *Kefe fofke-ta-si.*
some soft-do-3PLS
‘Some are soft.’

(c) *Nyi to kwobo.*
ancestor 1SG:GEN many
‘I have many ancestors (lit. My ancestors are many)’

When heading an NP, quantifiers may be modified by a limited set of nominals (§5.2).

*Afa* has a slightly broader distribution than the other quantifiers. It can be modified by the numeral *fasni/faskanai* ‘one’ (3.26a), and it can be verbalised as an intransitive verb meaning to ‘be different to’ (b).

\(^{22}\)The verbal past of *nebem* would presumably have been to express a pairwise manner in the same fashion that the verbalised form is currently used in serialisation (§13.2.1.4).
(3.26) (a) *Afa fuskanci eru, niny oto-f-mu.*

    another one that above put.one-2SGS-VOL.FUT
    ‘Put that other one up.’

(b) *Te efiyeni fekob afa-ta-u.*

1SG not.want[1SG] village different-INCH-NZR
    ‘I don’t want the village to change.’

3.4 Adverbs

As is often the case with adverbs, in Momu it is really a group of small (sub)classes (Evans, 2000). The traditional use of “adverbs” includes modifiers of adjectives, nouns or verbs. Here I divide adverbs into two: those that modify predicates (seeing as in Momu these can be verbal or non-verbal), and those that modify participants. Some adverbs span this divide, however. Adverbs are examined in greater detail in §9.

3.4.1 Predicate modifying adverbs

Throughout this thesis, overlapping groups of predicate modifying adverbs are considered relative to aspect (§9.5) and modality (§9.6), and in reciprocal clauses (§10.2.2) and clausal coordination (§14.2.7).

These adverbs can be differentiated from nominals by their inability to inflect for case. However, the final segment of many forms is *s, m* or *b*. This is disproportionately the case compared to other mono-morphemic forms. It seems likely, given the semantics of many forms, that this is the result of fusion with the restrictive (*=s*), oblique (*=m*) or comitative (*=b*) markers. Where relevant or possible, details are given below. The most straightforwardly identifiable as predicate modifying adverbs are those adverbs derived from nominals (§9.4).

The predicate modifying adverbs below share some diagnostic criteria, in that they most commonly pre-modify the predicate. I should note immediately, though, that these word classes are not limited to the preverbal position. They may also occur clause-initially, medially (between participant NPs) or finally, sometimes across multiple positions when more than one occurs in a clause. The initial and final positions, however, are mostly assumed to be discourse pragmatic restructuring.
Sometime adverbs occur separated by participants in a clause, such as *mesis* and *yeb*:

\[(3.27)\]  
\[
\begin{align*}
pi=&-\text{anow-ta-sen}, & yime & \text{eru}, & m\text{esis} & \text{mu} \\
\text{GO.FUT}=&-\text{big-INCH}\backslash3\text{SGS-COMPL} & \text{man} & \text{that} & \text{again} & \text{woman} \\
afa & \text{yeb} & na-meta. \\
\text{another} & \text{then} & \text{marry}\backslash3\text{SGS-EPI.FUT} \\
\text{‘Once he has grown up, the man can (in turn) then marry another woman.’}
\end{align*}
\]

But more commonly, adverbs are grouped together. At the present stage of analysis, I have limited detail about the relative ordering and complementarity of adverbs.

### 3.4.2 Participant modifying adverbs

Participant modifying adverbs follow (pro-)nominals, and may be followed by other participant modifying adverbs. The only adverb restricted to participant modification is *sisy* ‘also’ (§9.9). *Menyi* ‘intensifier’ functions as a modifier of nominals (especially adjectives) in both participant and predicate positions (§9.8) and the demonstrative manner adverbs have a broad range of functions (§9.3.2, §3.6.1). Restrictive-marking operates across both domains, but has a different form for each (§9.5.7).

### 3.5 Minor word classes

#### 3.5.1 Spatial postpositions

Postpositions in Momu are limited to a pair of spatial terms (§3.5.1). At the clause level these postpositions signal that the overall phrasal unit is functioning as a locative oblique (§8.2.3). Postpositional phrases can function adnominally in locative NPs.

The spatial postpositions are *niny* ‘above/on’ and *tin* ‘inside’ (3.28). These postpositions occur in complementary distribution with relational markers such as the oblique and directional cases, (3.29). Additional spatial distinctions are otherwise made by spatial nominals (§4.4) or verbs (§3.6.2).

\[(3.28)\]  
\[
\begin{align*}
\text{Fiky} & \text{ niny} & y-o-wo. \\
\text{house} & \text{above} & \text{D-[IMPF]\text{INAN:be.at-3SGS:NZR}} \\
\text{‘It is on/above the house.’}
\end{align*}
\]
(b) *Fiky*  *tin*  *y-o-wo.*  
  house  above  D-[IMP|F]INAN:be.at-3SGS:NZR  
  ‘It is inside the house.’

(3.29) (a) *Fiky=m*  *y-o-wo.*  
  house=OBL  D-[IMP|F]INAN:be.at-3SGS:NZR  
  ‘It is at the house.’

(b) *Fiky=ti*  *y-o-wo*  
  house=DIR  D-[IMP|F]INAN:be.at-3SGS:NZR  
  ‘It is towards the house.’

The spatial postpositions *niny* ‘above’ and *tin* ‘inside’ can stand alone as locative NPs in a clause, as in (3.30).

(3.30) (a) *Niny*  *y-o-wo.*  
  above  D-[IMP|F]INAN:be.at-3SGS:NZR  
  ‘It is above.’

(b) *Tin*  *y-o-wo.*  
  inside  D-[IMP|F]INAN:be.at-3SGS:NZR  
  ‘It is inside.’

### 3.5.2 Pronouns

Personal pronouns in Momu distinguish singular and plural number, and first, second and third persons (§4.1). In addition to this, personal pronouns can be marked with the comitative (§4.1.1), genitive (§4.1.2), or both (§4.1.3). There are additionally special emphatic forms that are fused with the reciprocal-emphatic adverb *ak* (§4.1.4). Finally, there is a unique and rare third singular form *wotine* ‘s/he, for his part’ (§4.1.5).

Momu does not generally employ a relative pronoun unless a possessor of an alienable referent is relativised. In this case, a genitive-marked pronoun is used as a relative pronoun (§15.1.3). There is a single indefinite pronoun *bekubeku* ‘(some)thing(s)’. This is a reduplicated form of the question word *beku* ‘what’—a common source of indefinites in the world’s languages (Haspelmath, 1997, p179). The demonstratives also function pronominally (§5.4.5).

---

23The dimensions of the personal pronouns differ from argument cross-reference in lacking a dual distinction (§6.2.1). Conversely, there are several syncretic patterns in both subject and object cross-reference (§6.4).
Pronouns fill the head of a noun phrase, and combine with far fewer elements than a noun head. Pronouns can combine with a numeral (§5.4.1), or with a nominal referring to a group (usually a proper noun) to form an inclusory construction (§5.4.2).

3.5.3 Question words

Question words are a functionally motivated class that bring together items from different parts of the grammar. The question words divide into two sets which I label based on the common first segment for each set:

\[
\begin{array}{ccc}
 b\text{-set} & & m\text{-set} \\
 b(y)eku/b(y)oku & \text{‘what’} & me(na)nu & \text{‘what (approximative)’} \\
 bu & \text{‘who’} & mena & \text{‘where’} \\
 bekofuf & \text{‘when’} & menfuf & \text{‘when’} \\
 & meta & \text{‘how (manner) / why’} \\
 (bye & ‘whatsit’) & meyer & \text{‘how’} \\
\end{array}
\]

All forms, excluding meta and meyer, are nominal. As such, they can be inflected for case (§4.8.1) and most can also modify a nominal (§5.1.4). All forms can function as predicates to a clause.

The b-set of terms are seemingly built around bye “whatsit”, with some mutation. The final segments ku and fuf on the forms for “what” and “when” do not correspond to anything that I’m aware of. Bu “who” is identical in form to the proprietive marker =bu. However, it is not clear that there is a relationship between the two.

The m-set are built around the common initial segments me. This is the same as the hypothetical future modal marker me which is both suffixed and also prefixed in some cases (§12.1.1.3). The form meta ‘how’ is a verb and was quite likely a verbalised form (using -tai, §6.3.1) or a hypothetical future prefixed form of tai ‘do’. Note that it is identical to the epistemic...

---

24 The “whatsit” form is used to refer to an entity or entities that the speaker is having difficulty recalling. Note that an identical form is used adverbially to express denial of permission (§9.6.3)

25 Glides in the context of bilabial trill are subject to some inter-speaker variation. I presume the b-set forms are built around the “whatsit” form bye, with the who form bu being transformed by a suffix -a (either nominalisation or the genitive). The variation in the form of “what” can be accounted for by the rounding effects of the bilabial trill, such that bye > (b"w e) > bo.
future marker -meta (§12.1.1.2). *Meyer* ‘how’ is a corresponding transitive form. These verbs are used either (3.32a, 3.33a) in serialisation to form ‘how’ questions or (3.33b) nominalised and then used as per other question words. The intransitive form can also stand alone as a predicate (3.32b).

(3.32) (a) \( Ay \) meta=pwe-f=a?
\[
\begin{align*}
\text{2sg} & \quad \text{how.do=\{one.\}comes-2SGS}=Q \\
\end{align*}
\]
‘How did you come?’

(b) \( Ay \) meta-f=a?
\[
\begin{align*}
\text{2sg} & \quad \text{how.do-2SGS}=Q \\
\end{align*}
\]
‘How did you go / how was it?’

(3.33) (a) \( Ay \) meyer(-f) \( ikar-f=a? \)
\[
\begin{align*}
\text{2sg} & \quad \text{how.do.to(-2SGS)} \text{ do.well.to-2SGS}=Q \\
\end{align*}
\]
‘How did you do it?’

(b) \( Ay \) meyer-u=m \( ki-f-mu=a? \)
\[
\begin{align*}
\text{ssg} & \quad \text{how.do.to-NZR=OBL consume-2SGS-VOL.FUT}=Q \\
\end{align*}
\]
‘How could you eat it? (it’s too tough)’

I have no diachronic explanation for the remaining segments \((na(nu))\) in the forms *mena* ‘where’ and *me(na)nu* ‘what’. The form *me(na)nu* does bear some resemblance to the proximal approximative demonstrative *anenu*, and while further work is needed to confirm it, appears to express a similar approximative sense:

(3.34) *Bekubeku* menu-e, fik kwu kaanu-u=m
\[
\begin{align*}
\text{thing} & \quad \text{what-EMPH house food cook-NZR=OBL} \\
\text{wu-ta}=a? & \quad \text{INAN:there.be}\{3SGS\}-\text{STVZR}=Q \\
\end{align*}
\]
‘What kind of food might there be in the kitchen?’

### 3.5.4 Demonstratives

Momu is a language where few demonstratives perform a large number of functions (Himmelmann, 1996). Demonstratives function pronominally, ad-nominally and adverbially in Momu. The demonstratives are given below, with the demonstrative manner adverbs also given for comparative purposes.

---

26 *Meyer* is constructed with the verb-forming suffix -er and nominalised with the nominaliser -u. The transitive form *meyer* ‘how’ can also stand alone as a predicate, marked with the volitional future in a fixed expression, *meyemu* ‘Oh well! (lit. somehow we will do it).’
See also §3.6.1 for an expanded treatment of a functional class of demonstratives.

<table>
<thead>
<tr>
<th>proximal</th>
<th>distal</th>
</tr>
</thead>
<tbody>
<tr>
<td>demonstrative</td>
<td>anu</td>
</tr>
<tr>
<td>shortened form</td>
<td>a-</td>
</tr>
<tr>
<td>approximative</td>
<td>anenu</td>
</tr>
<tr>
<td>(manner)</td>
<td>ane</td>
</tr>
</tbody>
</table>

There are two basic demonstratives: anu ‘this/here’ and (3.36a) eru ‘that/there’. These have shortened bound forms that combine with the oblique marker =m (§3.5.4.1). The approximative forms signal approximations of reference: anenu ‘this kind of’ and (b) ereru ‘that kind of’. These forms are clearly related to the manner demonstrative adverbs (§9.3.2).

(a) \( \text{Eru}=m \text{ momse-rai-mu.} \)
\( \text{that}=\text{OBL} \quad \text{talk-of-1DU=S-VOL.FUT} \)
‘We will talk about that.’

(b) \( \text{Ereru}=m \text{ a-ta-si kubti ere.} \)
\( \text{that.kind.of}=\text{OBL} \quad \text{IMPF-do-3PLS} \quad \text{long.ago like.that} \)
‘Long ago, they were doing that kind of thing.’

When functioning adnominally, the basic demonstratives occur on the rightmost edge of a noun phrase (§5.1). The demonstratives also function as relativisers (§15.1).

Demonstratives can stand alone as an argument to a predication. They may be functioning pronominally, as in (3.37), or a locative adverbial, as in (3.38).

(a) \( \text{Eru \ tye-pwe-si.} \)
\( \text{those} \quad \text{TRANS}>\text{many-come-3PLS} \)
‘They brought those.’

(b) \( \text{Eru}=m \text{ momse-rai-mu.} \)
\( \text{that}=\text{OBL} \quad \text{talk-1DU=S-VOL.FUT} \)
‘We two will talk of that.’

(a) \( \text{Eru}=m \text{ ai-mu.} \)
\( \text{there}=\text{OBL} \quad \text{ANIM:be.at-VOL.FUT} \)
‘It will be there.’

(b) \( \text{Anu}=m \text{ pyen-f=fa?} \)
\( \text{here}=\text{OBL} \quad \text{[one.]comes-2SGS=YNQ} \)
‘You came here?’
3.5.4.1 “Fused” demonstratives

$E=m$ ‘there’ and $a=m$ ‘here’ are simply reduced forms of the general demonstratives ($eru$ ‘that/there’, $anu$ ‘this/here’), with the oblique marker $=m$ together forming a single phonological word. It can be difficult at times to be certain which function (adnominal or adverbial) the demonstrative fills. However, when doubly marked with a full and reduced form, I take it that both meanings are expressed (e.g., ‘that, there’). Given the relative position of each in the phrase, I take the reduced form to be functioning adverbially.

(3.39) (a) $Yime$ $eru$ $e=m$ $y-a-i-tu-wa$.
$\quad$ man that $=OBL$ D-IMPF-give.many:$3SGIO-3SGS:NZR$

‘He is giving them to that man there.’

(b) $Peenu$ $eru$ $e=m$ $a-i-ku-pan$.
$\quad$ arrive:$3SGS$ that[REL] $=OBL$

‘He slept until dawn there, at (the place) that he arrived.’

(c) $Fesi=eru$ $e=m$ $yeb$
$\quad$ again=that $=OBL$ then

‘He brought it and placed it on that (a branch) there, (in) that one (a picture)’

In addition to this, a less reduced form of the proximal demonstrative $anu$ combines with the directional marker $=ti$ to form $anti$ ‘towards here’.

3.5.5 Particles

3.5.5.1 Exclamations

There is a broad range of exclamatory particles. These usually form single-word clauses. Arguably, the higher count of these in portions of direct reported speech are a secondary indicator that one is in fact dealing with reported speech (cf. ‘emotional elements’ in De Roeck, 1994), often bookending the portion of direct reported speech.

(3.40) $yefae$ ‘yikes!’

$ayefo(yefe)$ ‘oh no!’
(ye)nabiye ‘for sure!’ (direct calque of TP nau wanem)

sai(yire) ‘so’ (common start to a narrative)

3.5.5.2 Question markers

Constituent questions are formed with the addition of the marker =a at the end of the clause (§10.3.2.3). There is also an emphatic marker -a with the same form. Interrogative and emphatic marked clauses are only differentiated by intonation.

(3.41) Oo, te meta pi-mu=a?
   EXCLM 1SG how.do one.goes[1][3SGS]-VOL.FUT=Q
   ‘Oh, where do I go from here?’

Polar (yes/no) questions are formed with the addition of a marker -fa at the end of the clause (§10.3.2.1). Again, this is usually accompanied by a rising sentence-final intonation.

(3.42) Ay bokuboku nu pwun-f=fa?
   2SG things just get.many-2SGS=YNQ
   ‘Did you just get the things?’

3.5.5.3 Negative particle momu

The negative particle momu functions as a sentential negator (§12.2.1),27 as a negative possessive predicate (§11.10), and as negative response to a question (§10.3.2).

3.5.5.4 Representative coordinator

The particle tya is a linker for constructing representative conjunction (Haspelmath, 2007a, p24). It functions as a linker of multiple items (3.43), but when occurring on single items, it represents a plurality of those items, and items similar to it (3.44).

(3.43) (a) Nakye tya amseke tya eru boko=m
   spider RCO ant RCO that where=OBL
   a-si-ta.
   ANIM:be.at-3PLS-STVZR
   ‘Where are those spider and ants?’

27In notes from Baron (1984), it would appear that as a sentential negator, the particle used to (or still does in Western Momu) take a single deverbal complement.
It appears that the text is a continuation of the previous page, discussing the functional classes of spatial terminology. The text mentions the linker and its role in modifying the nominal directly. It also introduces two functionally motivated classes of words: demonstratives and verbs of motion. The demonstratives include general and approximative forms, as well as verbalised forms of demonstrative manner adverbs. The verbs of motion are high-frequency and grammaticalised in various parts of the grammar. The text concludes with a discussion on how different parts of the semantics of these verbs emerge.
by prefixes on verbs, is an obligatory feature of the realis progressive (§7.4.2). All are listed below.

<table>
<thead>
<tr>
<th>proximal</th>
<th>distal</th>
</tr>
</thead>
<tbody>
<tr>
<td>general</td>
<td>anu</td>
</tr>
<tr>
<td>approximative</td>
<td>anenu</td>
</tr>
<tr>
<td>manner adverbs</td>
<td>ane</td>
</tr>
<tr>
<td>intransitive manner</td>
<td>anta</td>
</tr>
<tr>
<td>transitive manner</td>
<td>anyer/ayer</td>
</tr>
<tr>
<td>clause linker</td>
<td>anu ane</td>
</tr>
<tr>
<td>unknown adverbs</td>
<td>amse</td>
</tr>
<tr>
<td>realis progressive</td>
<td>n-</td>
</tr>
</tbody>
</table>

The demonstrative manner verbs are used in manner serialisations in non-final position. Transitivity matches that of the verb that follows (hence it is a test of transitivity, as noted in §3.1.1). These verbs index a manner in the same fashion as other demonstrative forms. By default, a proximal form indexes a gestured manner by the speaker, but may extend into a contextually established proximal space in the discourse (Enfield, 2003). The distal form can be considered the neutral space outside of the established proximal bounds.

(3.46) (a)  *Yime yeko anu, key anta anu.*
  man true this hand do.like.this this
  ‘This man here (in the picture), is like this (gives gesture).’

  (b)  *M: Anyer na-pwen.*
    do.to.it.like.this TRANS>one-come[1|3SGS]
    *Fesi=yeb ereyer nepru.*
    again=then do.to.it.like.that take.one\3SGS
  ‘M: (The bird) carries it like this (M points to picture) B: (And the bird) then carries it back like that.’

The phrasal forms *eru ere* and *anu ane* are employed to progress a narrative. For instance, (3.47a) is the typical end of a story. *Eru ere* in this example bridges the final portion of the story to the indication that the story is now over. These forms may be clause-initial (a, c), or (b) preceded by a fronted (topicalised) NP. They are usually preceded by a clear intonational break (a lower than usual terminal contour) that indicates the conclusion of a prior
“portion” in the narrative and the beginning of a new portion, and are after followed by a pause consistent with a topicalised element.

(3.47) (a)  
Eru ere nu, fes eru.  
and.so just enough that  
‘And so now, that’s it (i.e., the story has finished).’  

(b)  
Nunuabu yeb, Makfyi=m narin.  
Makfyi  
Nunuabu then Makfyi=OBL carry.one[1|3SGS] Makfyi  
eru ere, yes yeb, Ifame=m narin eru.  
and.so just then Ifame=OBL carry.one[1|3SGS] that  
‘Nunuabu then bore Makfyi. And so Makfyi then bore just Ifame.’  

(c)  
(4.76sec) Eru tye-pwe-si, (0.31) eru ere  
that TRANS>many-come-3PLS and.so  
yeb ye-nin-mu ‘fes eru’.  
then say.to-3PLO:VTR[1|3SGS]-VOL.FUT enough that  
(0.82) Anu ane es=m kaani-si-mu. (8.2)  
and.now sago.jelly=OBL cook-3PLS-VOL.FUT  
‘They brought them, and so then he would say to them “that’s enough”. And so now they would cook sago jelly.’  

The adverbial forms amse and emse modify both participants and predic- 
ates, but at the present stage of analysis, the semantics of these forms remain totally opaque. The form bears some resemblance to the fused demonstra-
tives am ‘here’ and em ‘there’, but in translation is very similar to the manner demonstratives ane ‘like this’ and ere ‘like that’.

(3.48) (a)  
Taim, yime anow pwen-e, muyime=m  
time man big one.comes[1|3SGS]-EMPH people=OBL  
popra amse.  
get.many\3SGS like.this?  
‘When God (the big man) came, he (Andrew) gathered the people in this way.’  

(b)  
Yey-en “ya mo ay emse, mo  
say.to-3SGO:VTR[1|3SGS] EXCLM yet 2SG like.that? yes  
syi emsu, netyi-pi=y-a-ta-yaf-u  
bird good throw.one-go=D-IMPF-do-COND:2SGS-NZR  
amse, syi ako tya emsu e=m.”  
like.this? bird egg RCO good there=OBL  
‘He said to him “Ah! You’re like: the good birds, you’re throwing them away like so, the good eggs and so on there.’
Finally, a two-way distinction is made in the realis progressive between proximal and distal events, via prefixing with \(n\)- ‘proximal’ and \(y\)- ‘distal’. The distinction may locate the event, but it is usually the absolutive argument that is located.\(^{28}\)

\[(3.49) \quad (a) \quad \text{Kefe tabu} \quad a=m\]

\[\text{some} \quad 1\text{SG:COM:GEN} \quad \text{here}=\text{OBL} \quad n-a-sa.\]

\[\text{Eru fe=yeb}\]

\[\text{[PROG][PX-][IMPF][ANIM:there,be-3PLS:NZR] that INTENS=then} \quad n-a-ya\]

\[\text{nu anu.}\]

\[\text{[PROG][PX-][IMPF][ANIM:there,be-1SGS:NZR] just here} \quad \text{‘A few relatives live here. So I am staying here now.’}\]

\[\text{(b) Esysu yeko anu fyi=m}\]

\[\text{dog true this water}=\text{OBL} \quad y-ai-wo.\]

\[\text{[PROG][D-][IMPF][ANIM:there,be-3SGS:NZR]} \quad \text{‘This dog (points at picture), is at the water (there).’}\]

In addition to this, I note some further forms built around the distal adverb \(ere\):

\[(3.50) \quad \begin{array}{c}
\text{done repeatedly that way} \quad \text{erenwum tai} \\
\text{indicate} \quad \text{ereni} \\
\text{indicate to one/many} \quad \text{eren/erenin}
\end{array}\]

The periphrastic construction \(erenwum tai\) ‘done that way repeatedly’ functions in a similar fashion to the demonstrative manner verbs. A complex event is established via coordinated clauses (usually in serialisation) and is followed by the periphrastic construction. The iterative sense comes from serialisation with the verb \(tai\) ‘do’ (\(\S 7.6\)).\(^{29}\)

\[(3.51) \quad \text{Afa pi=neken,} \quad \text{wok sisy}\]

\[\text{another one.goes=one.turns[1][3SGS] 3SG:RE also} \quad pi=neken, \quad \text{ina=na-neke-si,}\]

\[\text{one.goes=one.turns[1][3SGS] many.go=many.turn-3PLS}\]

\(^{28}\)Where the absolutive argument includes a deictic distinction, it appears to agree with a verb in the progressive. Other arguments or adjuncts are free to depart from the marking of the progressive, allowing for complex mixing of perspectives. In (3.49b) the mixing of distinctions is because in the context of the story, the events are located as far away, but in accompaniment with a gesture locating a referent in a picture in front of them, the speaker uses a proximal form.

\(^{29}\)\(\S 3.51\) includes a progressive form of \(tai\).
na-pwe-si, erenwu=m y-a-ta-sa.
many.-come-3PLS do.like.that=OBL [PROG]D-IMPF-do-3PLS:NZR
‘One goes and turns around, and another (in turn) goes and turns around, and they go turn around and come, and they are doing it repeatedly like that.’ (response to video of people chasing each other) bernard-reciprocals

The deictic form in the periphrastic construction is very similar to the intransitive quotative verb ereni (§16.1.1). There are intransitive and transitive forms built from the distal manner adverb ere ‘like that’. The intransitive is formed with an older intransitive verb-forming suffix -ni (§6.3.2) and the transitive form is built from third singular and plural transitive verb-forming suffixes (§6.2.2.1).

Note that the intransitive manner verb ereta ‘do like that’ and the transitive manner verb ereyer ‘do like that’ contrast with intransitive utterance verb ereni ‘indicate’ and ereyen/erenin ‘indicate to one/many’ by the choice of verb-forming suffix. The first pair are built around the regular and productive intransitive-forming -ta(i) (§6.3.1) and transitive-forming “r-set” (§6.3.3) and the second are built around the older and less productive intransitive-forming -ni (§6.3.2) and transitive-forming “n-set” (§6.3.3). This is the only case that I’m aware of where the same root is used across contrasting sets of both intransitive and transitive verb-forming suffixes to achieve different lexical forms. The use of these suffixes is otherwise lexically determined and non-contrastive.

3.6.2 Motion verbs

There are two important groups of motion verbs. These may not formally be justified as sub-classes of intransitive verbs, but they span a number of important constructions types in Momu, many of which also happen to occur frequently. In addition to having multiple subcategorisation frames, all verbs express motion with two additional semantic components. First, all indicate motion towards, or away from an established deictic centre (defaulting on the speaker). Spatial motion verbs (§3.6.2.1) code a goal (implying a path), while basic motion verbs code the number of participants (§3.6.2.2).

All motion verbs can be transitivised with the transitivising prefixes na-/tye- (§6.5.2), but there is some degree of stem alternation or fusion in the forms discussed below, reflecting their frequency in use. There are additional
intransitive verbs of motion (usually focussed on manner of motion), but these are not considered here (§13.2.2).

3.6.2.1 Spatial motion verbs

Momu has a riverine spatial system, with verbs of motion indicating motion towards and away from the deictic centre:30 up- and down-river, and up and down mountains31 (or more generally, a vertical axis). A further distinction is made in the “across” dimension, which I label transversal motion. This expresses motion towards or away from the deictic centre, crossing some real or imagined barrier such as a doorway, river, or the jungle.

<table>
<thead>
<tr>
<th></th>
<th>come</th>
<th>go</th>
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<tbody>
<tr>
<td>elevation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>down</td>
<td>ti</td>
<td>wor/yr</td>
</tr>
<tr>
<td>up</td>
<td>(nuai)</td>
<td>(won)</td>
</tr>
<tr>
<td>riverine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>upriver</td>
<td>nuai</td>
<td>won/yan</td>
</tr>
<tr>
<td>downriver</td>
<td>key</td>
<td>woky</td>
</tr>
<tr>
<td>transversal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>across</td>
<td>ney</td>
<td>woy</td>
</tr>
</tbody>
</table>

As a part of the semantics of these verbs, they specify a default goal and path component without an explicit oblique. The main river in an area is the default river, but I have seen smaller different rivers (or mountain heads to rivers) in the same location used without an overt oblique coding the difference. In this case, an overt oblique argument must be given. The default barrier for a transversal verb is usually obvious when inside, by a river, in an opening, or in the bush. We see below that these default paths or goals can be called upon exclusive of motion in some uses of these verbs.

Some basic examples of these verbs are given in (3.53).

(3.53) (a) Te yeb won, kwo niny.
        1SG then go.up[1|3SGS] tree above
        ‘I then climbed up the tree.’

(b) Kow come.downriver\3SGS Fine nua.
    come.downriver\3SGS river.name come.upriver\3SGS

30 This is most commonly the speaker, but can shift in the life of the discourse.
31 Sadly, I have worked mainly in an area where the speakers have moved from the mountains to a delta plain. In this environment, elevation does not feature greatly as salient in navigating the landscape. I believe that this explains the confusion I encountered when trying to get consistent results for the mountain terms. Indeed, the riverine terms are frequently used by some speakers to describe the vertical axis. Note also that the vertical axis only consists of original terms for motion in a downwards direction.
‘He came down the a tributary to the river Fine, and then up it.’

These verbs are intransitive, under the criteria given in §3.1.1, but have extended distribution. Riverine verbs commonly appear in more specialised constructions. For instance, there are (3.54) special locative adverbial clause forms, which are formed using a relativising strategy (§15.2). These forms usually refer to a path or goal.

(3.54) (a)  
Yime man eru=ti e=m
eru=ti that go.across\3SGS that[REL]=DIR there=OBL
on-rai.

saw.one-1DUS

‘We two saw that man on the other side.’

(b)  
Kow an=ti
come.downriver\3SGS this[REL]=DIR
bu-f-mu,
put.many-2SGS-VOL.FUT already
mo.

‘Put them coming downriver towards me.’

Spatial motion verbs also occur in serialisation coding the goal or path, with the absence of a motion component (§13.2.2.2). For instance, the transversal verbs are often used in serialisation to (3.55) express location inside or outside relative to the deictic centre (using motion away), or (3.56) a path or vector towards the deictic centre (cf. Antonia’s reply). More complex paths can be built with compound spatial motion verbs (§14.1.3).

(3.55) Sia=m wow y-ai-wo.
chair=OBL go.across\3SGS D-[IMPF]ANIM:be.at-3SGS:NZR

‘It is inside (under) the chair.’

(3.56)

M:  
Nu nebe-ta bun-o fyi=ti.
just two-do put.many[1\3SGS]-EMPH water=DIR
‘Monica: I just put them riverwards.’

A:  
Now yerebu
come.across\3SGS 1PLS
n-a-rai-u=ti.
PX-[IMPF]ANIM:there.be-1DUS-NZR=DIR

‘Antonia: Towards where we are.’
Finally, spatial motion verbs are commonly combined with other verbs to indicate the goal or path of the absolutive argument of that verb (directional-marking, §7.5.2.1). Most likely this is a grammaticalised form of cause-effect serialisation (§13.2.3).

(3.57) *Nakyenon, yemkinu=ti oton-yan.*

  lift.one:go.up half=DIR put.one-go.up[1|3SGS]

  ‘I lift it up and put half on top.’

Spatial motion verbs have transitivised counterparts formed with the transitivising prefixes *na-/tye-* (§6.5.2). Most are clearly segmentable, but many have undergone some transformation. Either the vowel in the transitivising prefix harmonises (*nowon*), the verb is simplified (*nuai > nonai*), or the transitive form bears little resemblance to the intransitive form (*ti > nerni*). Singular object forms are given below.

(3.58)

<table>
<thead>
<tr>
<th></th>
<th>bring</th>
<th>take</th>
</tr>
</thead>
<tbody>
<tr>
<td>elevation</td>
<td>down</td>
<td>nerni</td>
</tr>
<tr>
<td></td>
<td>up</td>
<td>(no-nai)</td>
</tr>
<tr>
<td>riverine</td>
<td>upriver</td>
<td>no-nai</td>
</tr>
<tr>
<td></td>
<td>downriver</td>
<td>na-key</td>
</tr>
<tr>
<td>traverse</td>
<td>across</td>
<td>na-ney</td>
</tr>
</tbody>
</table>

### 3.6.2.2 Basic motion verbs

Basic motion verbs are intransitive verbs that alternate for number. Intransitive and transitivised counterparts are given below. Unlike the spatial motion verbs, these carry no implication of a goal in their semantics.

(3.59)

<table>
<thead>
<tr>
<th></th>
<th>one</th>
<th>many</th>
<th>TRANS &gt; one</th>
<th>TRANS &gt; many</th>
</tr>
</thead>
<tbody>
<tr>
<td>go</td>
<td>pin</td>
<td>ina</td>
<td>nepri</td>
<td>tyepri</td>
</tr>
<tr>
<td>come</td>
<td>pwen</td>
<td>na-pwen</td>
<td>na-pwen</td>
<td>tye-pwen</td>
</tr>
</tbody>
</table>

Basic Motion Verbs commonly occur in a proclitic form (*pi=/ina=*) in serialisation (§13.2.2.1). *Pin* ‘one goes’ has grammaticalised as an aspectual distinction ‘exhaustive’ after verbs (§7.5.2.3) (and in doing so, no longer alternates for number). The singular transitive counterpart *nepri* has similarly grammaticalised as extended aspect. The singular intransitive verbs are used in directional-marking (§7.5.2.1) and also in verbal compounds, especially as the second verb in compounds with spatial motion verbs (§14.1.3).
Chapter 4

Nominals

The class of nominals §3.2, and some of the subclasses (§3.3) are introduced in §3. In this chapter I expand upon pronouns (§4.1), and introduce kin terms (§4.6) and other minor subclasses.

This chapter is mostly concerned in the latter half with nominal morphology. Nominal morphology in Momu is mostly of the phrase-marking kind (§4.8). That is, head-initial NPs are marked on their final dependent element. This marking operates at multiple levels, and can “stack” to a limited degree as is commonly found in many Australian languages (Dench and Evans, 1988).

Derivation of nouns is considered in §4.9.

4.1 Personal pronouns

Personal pronouns include a core set of number and person distinctions. Three persons and two numbers (singular and plural) are distinguished.¹ Note that in comparison to the distinctions made by subject and object cross-reference, there is no dual number distinction (unlike subject marking (§6.2.1)), but first and second person are distinguished (unlike object

¹The full system of pronouns in the genetically related Baibai language appears to be similar to Momu, but needs to be confirmed since notes in Laycock (n.d.[b], p2092) are a little unclear. Other neighbouring languages are quite different. Warisic languages have a four-way system lacking number. Three persons are distinguished and an additional (first) inclusive pronoun (Seiler, 1985). The Bewani family language Pagi has an identical system to the Warisic languages (Gerstner-Link, 2015). Kilmeri is quite unlike its fellow Bewani language Pagi in that it distinguishes three numbers, three persons and clusivity (Gerstner-Link, 2015). Kwomtari distinguishes both number and person and has an interesting and rare plural versus non-plural system (Honsberger et al., 2008).
marking (§6.2.2)).

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<tr>
<th></th>
<th>1</th>
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<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>SG</td>
<td>te</td>
<td>ay</td>
<td>wo</td>
</tr>
<tr>
<td>PL</td>
<td>yery</td>
<td>ary</td>
<td>ni</td>
</tr>
</tbody>
</table>

Table 4.1: Personal pronouns

In addition to these core distinctions, personal pronouns additionally mark the comitative (§4.1.1), genitive (§4.1.2), or both (§4.1.3). Special forms fuse the reciprocal-emphatic ak (§4.1.4). All can be case-marked with the oblique (§4.8.2) to signal a non-subject argument (§8.2.2, §8.2.3).

### 4.1.1 Comitative pronouns

The comitative pronouns incorporate the comitative marker (§4.8.3) into their form (Table 4.2). The first and second person plural are syncretic as between comitative-genitive forms.

<table>
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<tr>
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<tbody>
<tr>
<td>SG</td>
<td>teb</td>
<td>ab</td>
<td>wob</td>
</tr>
<tr>
<td>PL</td>
<td>yerebu</td>
<td>arebu</td>
<td>nib</td>
</tr>
</tbody>
</table>

Table 4.2: Comitative pronouns

Comitative marking on pronouns has overlapping distribution and semantics in comparison to comitative-marked NPs (§4.8.3). (4.1) compares (a) a comitative NP with (b) a comitative pronoun. The comitative marker attaches to the pronoun in (b), not to the edge of the phrase.

(4.1) (a)  
key  fasni=b  
hand  one=COM  
‘with one hand’

(b)  
ni-b  nebem  
2SG-COM  two  
‘with those two’

Further comparing the pronouns with cross-reference, the common segment r for the plural first and second person forms is the same as the first plural subject marker -r. Given GC-metathesis (§2.5.1.1), the second plural form ary is consistent with suffixing of -r to the singular form ay.

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The comitative marker on nominals has different functions to the pronominal marker. It functions as a coordinator of subject NPs (§4.8.3.1, §14.2.2) and marks instrumental obliques (§4.8.3.2, §8.2.3). Temporal adverbs are marked with the comitative (§4.8.3.3). The comitative also marks temporal adverbial clauses (§15.3).

Comitative pronouns are a necessary component of reflexive clauses (§10.2.3.1). However, comitative pronouns are employed in clauses without a reflexive meaning. At the present stage of analysis, I believe such uses are emphatic, however further work is necessary to fully understand it.  

4.1.2 Genitive pronouns

The sub-paradigm for genitive pronouns exhibits some irregularities. First, there exist two different genitive markers differentiated by the number of the possessor. The majority of the plural forms of genitive pronouns are formed with the singular genitive -u. Only the third person plural form uses the plural genitive -nu. The combination of the genitive with the first singular form te results in the form to. The second person plural form is syncretic with the second plural person comitative-genitive form arebu.  

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</thead>
<tbody>
<tr>
<td>SG</td>
<td>to</td>
<td>ayu</td>
<td>wowu</td>
</tr>
<tr>
<td>PL</td>
<td>yer</td>
<td>arebu</td>
<td>ninu</td>
</tr>
</tbody>
</table>

Table 4.3: Genitive pronouns

The genitive forms have a different distribution to genitive NPs. With a genitive NP, the possessed and possessor can commute (§11.4). This is not the case for genitive pronouns, where the order is fixed. (4.2) shows the two

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3Interestingly, in Imonda a similar “emphatic pronoun” is formed by a (possibly cognate) suffix -f and these are used for reflexive constructions (Seiler, 1985).

4One possible interpretation is that the comitative pronouns contrast with non-comitative forms by coding a sense of associativity analogous to the associative function of the comitative case marked on nominals. This doesn’t fit the sense conveyed by the singular comitative pronouns. But with plural forms the sense conveyed is perhaps an indication of an expanded set of referents.

5Although I give a unique form for the first person plural genitive, this form was only found in elicitation. As with the syncretic arebu, I suspect the comitative-genitive form yerebu is more commonly used in place of yeru. This is possibly influenced by the collision of the form yeru with a common pattern of resyllabification of the final y in forms like kosy ‘road’ onto a following demonstrative eru producing a homophonous yeru. Thus, kosy eru ‘that road’ and kosy yeru ‘our road’ are homophonous.
possible orderings of possessor and possessed for a genitive-marked noun. (4.3) shows the fixed ordering of possessed and possessor when the possessor is marked by a genitive pronoun.

\[(4.2) \quad (a) \quad \text{Fiky} \quad \text{Stefan=}u \\
\text{house} \quad \text{Steven}=\text{sg:gen} \\
\text{‘Steven’s house’} \\
(b) \quad \text{Stefan=}u \quad \text{fiky} \\
\text{Steven}=\text{sg:gen} \quad \text{house} \\
\text{‘Steven’s house’} \\
\text{(4.3) fiky} \quad \text{to} \\
\text{house} \quad \text{1sg:gen} \\
\text{‘my house’} \]

### 4.1.3 Comitative-genitive pronouns

Comitative-genitive pronouns are formed straightforwardly with a combination of comitative (-\(b\)) and (singular) genitive (-\(u\)) suffixes.⁶

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</thead>
<tbody>
<tr>
<td>SG</td>
<td>tabu/tebu</td>
<td>abu</td>
<td>wobu</td>
</tr>
<tr>
<td>PL</td>
<td>yerebu</td>
<td>arebu</td>
<td>nibu</td>
</tr>
</tbody>
</table>

Table 4.4: Comitative-genitive personal pronouns

As with comitative and genitive pronouns, the comitative-genitive pronouns have a distribution and semantics that differs from NPs. Despite comitative marking, comitative-genitive pronouns are not used in reflexive clauses (outside of those forms syncretic with comitative forms). These forms all have the same distribution as genitive pronouns.

Baron (1983b), in comparing the first person plural form \(yery\) with the comitative-genitive counterpart labels them as exclusive and inclusive respectively. I have not found this to be the case, but the exact meaning difference remains opaque and is confounded by the syncretism described

⁶Note that the first and second person plural forms are syncretic with both genitive (§4.1.2) and comitative counterparts (§4.1.1).
above.⁷ The particular pattern of syncretism⁸ for the plural first person form and for the second person form means that their distribution is broader than either the (non-syncretic) comitative or genitive forms.

4.1.4 Reciprocal-emphatic pronouns

The reciprocal adverb ak has fused with the personal pronouns to form variant forms that I call the reciprocal-emphatic pronouns. By this, I mean that the forms are used either in emphatic (§5.4.3) or loose reciprocal constructions (§10.2.2.4).

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<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>SG</td>
<td>tak</td>
<td>ak</td>
<td>wok</td>
</tr>
<tr>
<td>PL</td>
<td>?</td>
<td>ayuk</td>
<td>nik</td>
</tr>
</tbody>
</table>

Table 4.5: Reciprocal-emphatic pronouns

There are a couple of irregularities in the paradigm, shown in Table 4.5. The relationship between the singular forms and base forms is clear. Amongst the plural forms, I was unable to elicit a first plural form. The second plural form has the appearance of a second singular genitive. The third plural form is regular.

⁷Given the syncretism described above, the non-third person, plural comitative-genitive forms also occur in clauses in a non-possessive and non-reflexive sense. Comparing yery and yerebu, the exact difference in meaning remains opaque to me. The distinction is available across the entire paradigm, and so the distinction is unlikely to be clusivity. One possibility is that yerebu (and the other plural forms arebu and nibu) expresses a kind of “long-distance” comitative sense. To the best of my understanding, the difference between forms is perhaps best understood as being that the comitative (and comitative-genitive) forms are “inclusive” of a prior or contextually salient referent. This referent is recoverable to the hearer and as such not coded by a full NP. So in contextless elicitation, this would have the appearance of an inclusive pronoun in that the default, contextually salient additional referent would be the hearer. This explanation is incompatible with singular comitative pronouns, however.

⁸The pattern of syncretism is such that first and second plural pronouns have identical comitative and comitative-genitive forms.
4.1.5  Wotine focus pronoun

There is a rare\(^9\) pronominal form which appears to incorporate the focus marker =ne. It also appears to be based on the third singular form wo (and is third singular itself). I do not have many examples in my corpus, and it was not easy to create contexts in elicitation where it was deemed acceptable.

In line with the use of the distribution focus marker, wotine appears to be used in contexts where there is a contrastive switch between two “onstage” topical referents. At this stage however, my understanding of the form is quite preliminary.

(4.4)  
\[A\text{-kefenetin-}o=b, \text{ wotine fu}k\text{o se}f\text{ye}\]
\[\text{IMPF-one.be.hide-3SGS:NZR=COM 3SG:irreg arrow arrow.type}\]
\[\text{bar kumasy bar ye}b\text{ patya.}\]
\[\text{with bow with then start.off\textbackslash3SGS}\]
While she was hiding, he in turn, with his bow and arrows, got up to go.

4.2  Proper nouns

Proper nouns have a limited distribution in comparison with regular nominal forms. They can be pre-modified by plural pronouns (§3.5.2) as shown in (4.5a), or post modified by postpositions (§3.5.1) as shown in (b).\(^10\)

(4.5)  
\[(a) \text{ Arebu } \text{ Slupi}\]
\[2SG:\text{COM:GEN Slupi}\]
\[\text{‘You (including Slupi)’}\]
\[(b) \text{ Tom } \text{ niny}\]
\[\text{Tom above}\]
\[\text{‘above Tom’}\]

\(^9\)The four textual occurrences are all by my most conservative Momu speakers (Yarin and Ferdi).

\(^{10}\)Proper nouns can also be “quirky” phrasal nicknames, especially in the context of a naming taboo for in-laws which results in nicknames that pick out one’s worst features. Consider ofu aney ‘big bones.’ This nickname is irregular or “quirky” in that the form of the adjective is unrounded. Such unrounded forms are not otherwise found. Sometimes these nicknames are inherited such that someone whose namesake has a popular nickname might then inherit this nickname despite it not naming a feature of that person. My impression is that these names get reduced over time until in some cases an etymology is barely recoverable.
4.3 Predicating nominal

Just about all nominals can function predicatively (§11), but there are just two forms whose use is only (or primarily) predicative: *kamefe* ‘know(ledge)’, and *kwobo* ‘ignorance’.\(^{11}\) *Kamefe* functions most commonly as a predicate (4.6). *Kwobo* only functions as a predicate.\(^{12}\)

These forms cannot inflect for verbal categories such as subject-marking, modality, or aspect. They license an experiencer-subject, and both have subcategorisation frames that allow for deverbal sentential complements (§16.1.7). Both can also verbalise with the intransitive verbaliser -ta (§6.3.1). *Kamey/kamefe* can also verbalise as a transitive verb.

(4.6) *Te nu kamefe/kwobo.*

1SG just know/not.know

‘I understand / don’t understand’.

4.4 Spatial nominals

Spatial nominals are not a clear cut class but have overlapping distributions that justify discussing them together. All stand alone as locative NPs, and all modify nominals.

The spatial nominals are:

1. *amku* ‘behind’ (also ‘back’)
2. *asfa* ‘beside’ (also ‘fat padding over kidneys’)
3. *fukufu* ‘front’ (also ‘chest’)
4. *wafkinu/safkinu* ‘under the body’
5. *kufinu* ‘under a house’

---

\(^{11}\)It is possible that *kafoku* ‘fear’ and *sisu* ‘worry, sad’ may also be predicate nominals. These forms are used in older materials that I have collected from the western dialect. It has fallen out of use in the areas where I have collected my own data. I have otherwise only ever encountered in a verbalised form (*kafokta* ‘be afraid’, *kafokyer* ‘afraid of’ and *sista* ‘be worried’). All four terms together cover the same ground in the form of nominal predicates in Kayardild (abbreviated slightly): *mungurru* ‘know’, *burdumbangi* ‘ignorance’, *birrmurdami* ‘sad’, *mularru* ‘jealous’, *bardakayulaanda* ‘scared’ Evans (1995, p319). That is, these cover epistemic or emotional states in nominal form.

\(^{12}\)There is a homophonous modifier *kwobo* ‘many’ that may be interfering with the use of *kwobo* ‘ignorance’ as a modifier.
6. tinu ‘inside’ (also ‘hole’)

7. fiiki ‘close’

8. aفاعki ‘next to / close’

9. skub ‘in the vicinity / close’ (also ‘area’)

10. makwu ‘far’

11. maky ‘middle/between’

12. mamo/famo ‘across’

The terms for (1)–(3) are synchronically related to body part terms. These are the only body part terms with spatial extensions in meaning. The three terms for ‘under’ in (4) and (5), are clearly related to each other in form, however it is beyond the scope of this project to tease them apart further. Tinu ‘inside’ is clearly relatable to the spatial postposition tin ‘inside’ (§3.5.1). (7)–(9) have very similar semantics, and again teasing them apart is beyond the scope of this project. (10) makwu ‘far’ and (11) maky ‘middle/between’ are similar in form, despite differing semantics. Mamo/famo ‘across’ in (12) appear to be in free variation.

As stand-alone nominals, these spatial nominals take the deictic centre as their default ground. In an example like (4.7), we can understand this to mean that x is y to the speaker.

(4.7) [Mobke ku[/x makwu/x y-o-wo.
[coconut dry]/x far/x D-IMPF]INAN:be.at-3SG:NZR

‘The dry coconut x is far y (from me).’

4.5 Time-of-day

(4.8) gives forms for indicating a point in time within a day. Outside of anub ‘now’, Momu does not have forms for time-of-day relative to the moment-of-speech like ‘today’, ‘yesterday’ or ‘tomorrow.’

(4.8) kab ‘morning’

fenyib ‘evening’

anub ‘now’
fifyerb ‘afternoon’

fob ‘day, time’

Anub is clearly derived from the fusion of the comitative marker =b to the proximal demonstrative anu. Kab ‘morning’ and fenyib ‘night/evening’ are not segmentable. The etymology of Fifyerb ‘afternoon’ may be such that this was a recent innovation based on a temporal adverbial clause (§15.3) using a verbal form fifyer (meaning unknown), given that many speakers do not recognise this form.

These time-of-day nouns typically occur as adjuncts in the preverbal position (4.9). They may be post-modified by an intensifier (4.10).

(4.9) (a) Fenyib ai-pin, kafki tya
    night IMPF-one.goes[1|3SGS] tobacco RCO
    koy-nin-mu= e.
    see.many-3PLO:VTR-VOL.FUT=EMPH
    ‘In the afternoon I’ll be going, I will look at all the tobacco and so on.’

    (b) Esy fenyib te-pwe=kaani-f-mu.
        sago.jelly night TRANS>many-come=cook-2SGS-VOL.FUT
        ‘You will fetch and cook some sago jelly.’

(4.10) Te kab menyi patyai.
        1SG morning INTENS began[1SGS]
        ‘I began early in the morning.’

Fob ‘day time’ can combine with nominals to construct a novel point or span of time.13

(4.11) (a) yunyi (uyenu) fob
    sun hot time
    ‘midday, early afternoon (lit. the time when the sun is hot)’

    (b) feminya fob
        flooding time
        ‘during flooding’

    (c) oko maw fob
        ground rain time
        ‘the wet season / when it’s raining’

---

13The comitative marker =b is used to construct an equivalent span or point in time relative to an event (§15.9).
In addition to the forms in (4.8), there are the related forms *kubukubu* or *kubti(kubti)* ‘long ago, before’ (4.12), which can refer to earlier in the day or a long time ago.

\[\begin{align*}
(4.12) \text{(a)} & \quad \text{*Kubukubu nu } a\text{-ten-pin}\text{=}e. \\
& \quad \text{long.ago just IMPF\text{-}many.die\text{-}EXH\text{=}EMPH} \\
& \quad \text{‘Long ago, they all had died away.’} & \text{antonia-sings} \\
\text{(b)} & \quad \text{Mo } kubti \text{ ere } nu \text{ wu} \\
& \quad \text{already before like.that just 1NAN:\text{there}[3SGS]} \\
& \quad \text{momu}\text{=}e. \\
& \quad \text{NEG\text{=}EMPH} \\
& \quad \text{‘Before, this kind of thing just didn’t exist!’} & \text{yarin-tumsona}
\end{align*}\]

The noun *mebke* ‘star’ is used inconsistently across the corpus to indicate the span of a year or month. *Key* ‘hand’ is similarly used to indicate a day or a week.

\[\begin{align*}
(4.13) \text{(a)} & \quad \text{Te } mebke \text{ nu, tempela nu } \ldots \text{ pwen} \\
& \quad \text{1SG star\text{[year]} just ten just [one.]comes\text{[1\text{\text{3}}SGS]}} \\
& \quad \text{eru, that} \\
& \quad \text{‘I came (to Savamuy)...ten years ago.’} & \text{ferdi-savamui} \\
\text{(b)} & \quad \text{Mebke nu fiiki.} \\
& \quad \text{star\text{[month]} just near} \\
& \quad \text{‘The month was close.’} & \text{bernard-christmas} \\
\text{(c)} & \quad \text{U } ta\text{-si } eru \text{ ere } key \text{ anow anu wik anu} \\
& \quad \text{sago do\text{\text{-}3PLS and.so hand\[week\] big this week this}} \\
& \quad \text{ane\text{-}a.} \\
& \quad \text{like.\text{this\text{-}EMPH} } \\
& \quad \text{‘They made sago and then the week (in question came up).’} & \text{bernard-christmas} \\
\text{(d)} & \quad \text{Key nebem ef } eru \text{ yeb patyai.} \\
& \quad \text{hand\[day\] two and.one that then start.\text{off}[1\text{SGS]}} \\
& \quad \text{‘After three days passed, I got ready to start.’} & \text{steven-luke}
\end{align*}\]

### 4.6 Kin terms

Kin terms are used to refer to or directly address individuals via their culturally mediated kin relations as calculated from a specific anchor. This anchor
can be the speaker (especially for address terms), or some other referent (Dahl and Koptjevskaja-Tamm, 2001).

Various kin terms are given in this section with translations in an abbreviated form.\(^{14}\) The terms in §4.6.1 are addressive (i.e., terms used to address the relevant person directly) but a subset are also used referentially (i.e., terms used to refer to a person), while the terms in §4.6.2 are exclusively referential, as calculated via a third person anchor.

Referential terms are further built from these two sets of terms, as shown in (4.14). The addressive term in (a) is straightforwardly drawn from the addressive set. The referential variants depend upon the person of the anchor that the kin relation is built upon, as indicated by a genitive pronoun (§4.1.2). A first person anchor builds upon the the addressive term and employs a first person genitive pronoun (combining with e.g., to 'my'). A third person anchor builds upon the third person referential term (e.g., *masu* 'his/her mother'), although the genitive pronoun (*wobu* 'his/her') is often dropped for a third person anchor where the referent is contextually retrievable. The second person anchored form is built from either the addressive or referential term. Further work is needed to determine what conditions the choice, however. Note also, that where the addressive term is used, it is usually a truncated form (e.g., *mi* instead of *miyo*), if available.\(^{15}\)

(4.14) addressive and referential variants for M

\[(a)\]  \(mi(yo)\) ‘mother’ (addressive)  
\[(b)\]  \(mi(yo)\) to ‘my mother’ (referential)  
\[(c)\]  *masu/mi abu* ‘your mother’ (referential)  
\[(d)\]  *masu (wobu)* ‘his mother’ (referential)

Consistent use of Momu kin terms in Mori village appears to be in decline (§1.1.3). The most consistently used terms are those relating to nuclear

---

\(^{14}\)P = Parent, C = Child, M = Mother, F = Father, Z = Sister, B = Brother, D = Daughter, S = Son, W = Wife, H = Husband, y = younger, e = elder, f = female ego, m = male ego

\(^{15}\)Referential bases as described here vary from those described by Baron (1986). In his notes he describes a second person anchored form as being built from a (truncated) addressive term, but not from the third person referential form. So, while the addressive term for F (in my own orthography) is *ayow* and the third person anchored referential term is *bafu*, the second person anchored form is *ag abu* ‘your father’ rather than *pa/bafu abu* as I have observed. Also differing from Baron’s notes, the truncated forms appear more acceptable in the area where I worked.
family members (i.e., mother, father and children) while kin terms outside those bounds were often difficult to elicit consistently. In elicitation there was occasional variation in terminology. Many speakers in Mori now use Tok Pisin kin terms in daily life, but for reasons of space I do not expand upon that here. I tentatively put forward the terms below, and have amended my own data to include richer detail provided by Baron (1986). Baron’s notes sometimes confirm my own findings, but also include a rich set of extensions.

4.6.1 Kin nouns

The terms discussed here are mostly address terms, of which a subset can be used referentially, in combination with a first or second person genitive pronoun.

The addressive kin terms discussed here are divided into ascending and descending groups, referring to generations above and below ego. Horizontal terms relate referents in the same generation as ego. Excluding references to parents, children and siblings, the terms discussed here are usually elicited.

Both ascending and descending kin terms (terms applying to generations above and below ego) are given in Table 4.6. The terms *awo* (female addressee) and *apwu* (male addressee) are used to address grandparents (ego +2) or grandchildren (ego -2). An additional term *fise* is used to address grandchildren alone.\(^{16}\) Great-grandparents and great-grandchildren are addressed as *mam* without gender differentiation.

<table>
<thead>
<tr>
<th>Ascending</th>
<th>Descending</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>mam</em></td>
<td>PPP</td>
</tr>
<tr>
<td><em>awo</em></td>
<td>MM, FM</td>
</tr>
<tr>
<td><em>apwu</em></td>
<td>MF, FF</td>
</tr>
<tr>
<td><em>mi(yo)</em></td>
<td>M, MZ, FBW, MBW</td>
</tr>
<tr>
<td><em>pa/ayo</em></td>
<td>F, FB, MZH</td>
</tr>
<tr>
<td><em>at</em></td>
<td>FZ</td>
</tr>
<tr>
<td><em>nene</em></td>
<td>MB, FZH</td>
</tr>
<tr>
<td><em>baso</em></td>
<td></td>
</tr>
<tr>
<td><em>mu</em></td>
<td>female</td>
</tr>
<tr>
<td><em>fise</em></td>
<td>CC</td>
</tr>
</tbody>
</table>

Table 4.6: Ascending and descending addressive kin terms

\(^{16}\)Baron (1986) notes that the term *apwu* is more commonly used instead of *fise*, and I also found this to be the case. *Fise fanebo* is a plural form.
Children extend parental address terms to the same-sex siblings of their parents, but address their parents’ opposite sex siblings, or parents’ siblings’ partners as either *at* (female) or *nene* (male). Children are in turn addressed as either *baso* (male, but sometimes younger female) or *mu* (female) by those they call parents, or *nene* otherwise.17

Baron (1986) has described further extensions (some incompatible with the system I describe above), that I have not observed. These are given in Table 4.7. Extended meanings are underlined, while absent meanings are struck out.

<table>
<thead>
<tr>
<th>Ascending</th>
<th>Descending</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>awo</em></td>
<td><em>CD</em></td>
</tr>
<tr>
<td><em>apwu</em></td>
<td><em>CS, CD</em></td>
</tr>
<tr>
<td><em>miyow</em></td>
<td><em>M, MZ, FBW, MBW, FZ, WM, HM</em></td>
</tr>
<tr>
<td><em>ayow</em></td>
<td><em>F, FB, MZH, FyB, HFyB, WF, HF</em></td>
</tr>
<tr>
<td><em>fise</em></td>
<td><em>CC</em></td>
</tr>
</tbody>
</table>

Table 4.7: Ascending and descending addressive kin terms per Baron (1986)

The extensions indicate a more nuanced understanding of addressives than I was able to elicit or directly observe.18 The two extensions are age relative skewing (FF = FeB and F = FyB) and in-law parents as parents (M = WM, HM and F = WF, HF). Male sibling skewing aligns with the common pattern (which I also observed) of half-siblings being separated by a reasonably large age gap when a man remarries after his wife dies.19

Baron (1986) notes that *apwu* appeared to be in the process of extending to grandchildren, replacing *fise*. In Mori, this extension appears to have developed as two gendered terms *apwu* and *awo*.

Horizontal kin terms are given in Table 4.8. Opposite and same sex terms

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17In addition to being an address term for kin relations, *baso* and *mu* can also be used for non-relational or improper kin referents (Dahl and Koptjevskaja-Tamm, 2001). That is, the term can apply generically, external to any consideration of kin, both referentially and as an addressive. *Baso* is used to address or refer to any unmarried male, especially from an older, married male. *Mu* is commonly used to refer to just about any post-pubescent female. It is commonly used as an address term for female children or for a wife. Note that it is also the base for the referential term *mufo* ‘(his) wife’ (§4.6.2).

18Many extensions listed in Table 4.7 collapse what are separate terms in referential uses into single addressive categories. For instance, *ayow* as an addressive covers *bafo* ‘F,’ *koko(-fu)* ‘WF, HF’, *at(-fu)* ‘FyB’ and *wey(-fu)* ‘HFyB’ as third person anchored referentials.

19It is not uncommon for women to die in childbirth, or for an older husband to predecease a wife. Marrying again is reasonably common in both cases.
exist for elder siblings. However, such uses appear to be in decline. In Mori, I found *bamo* was frequently given as ‘sister’ and *ape* as ‘brother’, and relative age was not considered relevant.\(^{20}\) The terms *menyo* and *sif* are rare, but in questioning, *menyo* referred to a sibling by the same parent(s), and *sif* was the younger counterpart to the elder same sex sibling term *ape*.

<table>
<thead>
<tr>
<th>Term</th>
<th>Opposite Sex:</th>
<th>Same Sex:</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>bamo</em></td>
<td>(fe)B, (me)Z, MZC</td>
<td>(me)B, (fe)Z, MZC, (FeBC), (mFeBS), (fFeBD)</td>
</tr>
<tr>
<td><em>ape</em></td>
<td></td>
<td>yB, yZ</td>
</tr>
<tr>
<td><em>sif</em></td>
<td>B, Z</td>
<td></td>
</tr>
<tr>
<td><em>menyo</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>nene</em></td>
<td>MBC, FZC</td>
<td></td>
</tr>
<tr>
<td><em>wefa</em></td>
<td>first born sibling</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.8: Horizontal kin terms

I was never able to consistently elicit birth order kin terms, but at least *wefa* ‘first born sibling’ was consistent. Baron (1983a) records an equivalent term as *wima* (or *uima*).

The referents of horizontal kin terms appear to be singular in number. A compounding construction exists to refer to plural siblings. The terms *bamo* and *menyo* compound with *fanebo* ‘children’ to produce a plural sense. I am uncertain how productive this construction is. See §4.6.2 for combinations with possessed kin nouns.

The term *ape* ‘elder same sex sibling’ was frequently used amongst young men as a convivial address term regardless of kin relations. This improper use is most likely a calque from Tok Pisin.\(^{21}\) Regardless of its origins, *ape* should also be considered an improper kin noun.

\(^{20}\) Remnants of the importance of the elder/younger sibling distinctions are revealed in the further distinctions noted by Baron (1986). There appears to be some kind of skewing around a male’s elder and younger brother. In Baron’s notes, one’s father’s younger brother is not equivalent to one’s father, as I have recorded it, but rather is equivalent to one’s father’s sister (FZ). And the same sex children of one’s father’s elder brother are considered one’s elder siblings, but one’s father’s elder brother is considered equivalent to one’s grandfather. The data as I have given them does not reflect Baron on these points, but rather what I recorded myself.

\(^{21}\) It seemed every trip I made to Mori I would have to catch up on convivial address terms. The Momu expression often mirrored the structure of popular Tok Pisin slang. For instance, initially it was just Momu *ape* // *tp brata* ‘brother’ on one trip, and Momu *ape to* // *tp boi bilo mi* ‘my man/bro’ on another. Trying to keep up with rapidly evolving playful slang was one of the delightful aspects of working in this region of PNG.
Table 4.9 lists the in-law terms that I am aware of. All are taboo relations in Mori village. One is not allowed to refer to these people by name. I have not myself encountered the bracketed term koko ‘Spouse’s father’, which comes from Baron (1986). The terms for children’s spouses were elicited. I never encountered the natural use of these terms. Wai, refers to any in-law, although it is more commonly used in the possessed form waifu discussed below (§4.6.2). Many oblique strategies exist for referring to in-laws—especially when directly addressing them—and this may be why I rarely encountered the term.22

<table>
<thead>
<tr>
<th>(koko)</th>
<th>WF, HF</th>
<th>wai</th>
<th>SW, DH, WeB, WeZ, (HFyB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>fit</td>
<td>SW</td>
<td>menan</td>
<td>DH</td>
</tr>
</tbody>
</table>

Table 4.9: In-law kin terms

Improper kin nouns are terms that have a basic non-kin, and usually non-referential use that extends to a denoting a kin relation (Dahl and Koptjevskaja-Tamm, 2001). Improper kin nouns are given in Table 4.10. These terms do not necessarily imply relations in the same way that referential terms do. The term fanebo is commonly used in a variety of compounds in the second position to explicitly indicate plurality (§14.1.2.5).

| yime     | ‘man/men’ and ‘husband’ |
| mu       | ‘woman/women’ ‘wife’    |
| menebu   | ‘boy(s)’ and ‘son(s)’   |
| munebo   | ‘girl(s)’ and ‘daughter(s)’ |
| fanebo   | ‘children’              |
| baso     | ‘child(ren)/unmarried men’ and ‘son(s)’ |
| nyi      | ‘ancestor(s)’           |
| tit      | ‘ancestor(s)’           |

Table 4.10: Improper kin nouns

Finally, amte ‘my child’ appears to be a specialised term only available for referring to the speaker’s own child. It is not, to my knowledge, used as an address term.

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22Taboos around naming in-laws appear to have been brought into Mori via intermarriage with people from the coast, where it is common. Nicknames based on some (usually demeaning) feature in the addressee are a popular strategy. Using these nicknames is considered an avoidance of taboo. For a period, Christian names (separate to people’s actual names) were considered taboo-avoiding. However, this is no longer the case in Mori village.

135
4.6.2 Possessed kin nouns

The possessed kin nouns are a set of third person referential kin terms. For the most part, a transparent relationship can be seen between the corresponding forms amongst the kin nouns described above, with the addition of a suffix -fu (or -su). A list of all known forms is given in Table 4.11.

<table>
<thead>
<tr>
<th>Term</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>apfu</td>
<td>‘his/her elder same-sex sibling (cf. ape ‘eSib (same sex)’)</td>
</tr>
<tr>
<td>sifu</td>
<td>‘his/her younger sibling’ (cf. sif ‘ySib (same sex)’)</td>
</tr>
<tr>
<td>wayfu</td>
<td>‘his/her in-law’</td>
</tr>
<tr>
<td>(kokofu)</td>
<td>‘his/her spouse’s father’</td>
</tr>
<tr>
<td>masu</td>
<td>‘his/her mother’ (cf. mi M)</td>
</tr>
<tr>
<td>bafu</td>
<td>‘his/her father’ (cf. pa F)</td>
</tr>
<tr>
<td>yefu</td>
<td>‘her husband, his/her grandfather/grandson’</td>
</tr>
<tr>
<td>mufo</td>
<td>‘his wife’ (cf. mu ‘woman’)</td>
</tr>
<tr>
<td>nenfu</td>
<td>‘his/her mother’s brother’ (cf. nene ‘MB’)</td>
</tr>
<tr>
<td>atfu</td>
<td>‘his/her father’s sister’ (cf. at ‘FZ’)</td>
</tr>
<tr>
<td>mamfu</td>
<td>‘his/her great grand-children/parents (cf. mam ‘PPP, CCC’)</td>
</tr>
<tr>
<td>afu</td>
<td>‘his/her grandmother/granddaughter’ (cf. awo ‘PM, CD’)</td>
</tr>
<tr>
<td>fisu</td>
<td>‘his/her grandchild’ (cf. fise ‘CC’)</td>
</tr>
</tbody>
</table>

Table 4.11: Possessed kin nouns

Unlike the kin nouns defined in the previous section, these terms can combine with improper kin nouns, or proper nouns to indicate a possessive relationship (§14.1.2.4, §14.1.2.5). These forms can also be postmodified by a genitive. In the absence of compounding, the use of these forms in isolation is understood to be calculated via a topically active referent as the deictic anchor. In narratives with a core set of topically active referents, the use of these terms can lead to interesting shifts of perspective.23

These forms alone cannot be used generically to refer to a plurality of unanchored referents, but a special construction exists in combination with fanebo ‘children’ to do just this. For instance, masu fanebo ‘young mothers/women’, fisu fanebo ‘grandchildren’, mamfu fanebo ‘great-grandchildren’, waifu fanebo ‘in-laws (i.e., one’s children’s partner’s siblings)’ or sifu fanebo ‘younger siblings’ are the specific combinations that I am aware of. It appears that it only applies to the same or lower generations.

This -fu also shows up in a form with the reciprocal-emphatic ak (§10.2.2.1).

23Many texts collected for this project revolve around the pairs encoded in these possessed terms. When structuring text around, say, a mother, she can be referred to as mu ‘woman/wife’, mufo ‘his wife’ or masu ‘his/her (i.e., the child’s) mother’. 136
Akfu ‘reciprocation/reciprocally’ is an adverb used in multi-clausal reciprocal constructions (§10.2.2.3), including the expression of non-reciprocation.

(4.16) Akfu=ne momu.
    reciprocation=FOC not
‘There was no reciprocation.’

The possessed kin nouns compound with another possessed kin noun, or other kin term to refer to a specific dyad (Evans, 2006). These are not just any combination of referents, but rather usually denote important paired kin relations of various kinds (e.g., via marriage, marriage exchange, or nurture). Part of the system appears to be falling out of use with changes in marriage practice and with the general loss of kin terms. The specific combinations that I am aware of are given in Table 4.12.

<table>
<thead>
<tr>
<th>Combination</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>muf-yefu</td>
<td>‘husband and wife’</td>
</tr>
<tr>
<td>fa-bafu (=b)</td>
<td>‘father and son’</td>
</tr>
<tr>
<td>masu-menob</td>
<td>‘mother and daughter’</td>
</tr>
<tr>
<td>yefu-fisu (=b)</td>
<td>‘grandfather and grandchild’</td>
</tr>
<tr>
<td>sifu-apfu</td>
<td>‘two same-sex siblings’</td>
</tr>
<tr>
<td>menyobwamo (=b)</td>
<td>‘two opposite-sex siblings’</td>
</tr>
</tbody>
</table>

Table 4.12: Kin dyads

The elements within a dyad have a fixed ordering. They all represent asymmetric relations such that the term that anchors one referent to the other cannot equally apply in the opposite direction. All bar one include at least one possessed kin noun. The possessor of the possessed kin noun is the referent of the compounded counterpart. Combinations of two possessed kin nouns are reciprocal in their possessor relationships. Some forms are optionally comitative-marked. Only masumenob ‘mother and daughter’ shows a degree of reduction. The second part of the compound is mun-ebo ‘girl/daughter’. Menyobwamo(b) ‘two opposite-sex siblings’ is the only compound without a possessed kin noun. In this case, the compounded kin nouns do not have possessed kin noun counterparts.

Pairs denote special relationships, but some of these relationships are shifting. For instance, sister marriage exchange is less commonly practiced these days, and so the importance of the brother-sister pair denoted by menyobwamo(b) is possibly in decline. This pairing does not just refer to a brother and sister, but rather a man and the sister for whom he will (or did) exchange his wife with his wife’s brother.
All forms are additive compounds (Wälchli, 2005), but some compounds narrow the meaning of one part. For instance, *sifu* is a younger sibling, but in *sifuapfu* ‘two same-sex siblings’ this is constrained same-sex-sibling pairs. *Fa* refers to child, but the combination *fabafu* refers to a son and his father.

### 4.7 Marriage exchange marking *-fu*

Common to almost all possessed kin nouns (§4.6.2) is the suffix *-fu* ‘marriage exchange.’ In some cases, the relationship between a regular kin noun and one inflected with *-fu* is transparent, while in others, a separable synchronic root is not evident. For instance, *mufo* ‘his wife’ is a marked form of *mu* ‘woman’, but *yefu* ‘her husband’ has no counterpart.25

*-Fu* is minimally productive elsewhere in the language. It can occur on proper nouns to indicate the woman who is an exchanged bride (§11.2.3). There is a general prohibition on parents referring to their child’s partner, but a reference to a (future or actual) daughter-in-law calculated via their own daughter is permissible.

By inflecting the name of one’s daughter with *-fu* one can refer to one’s son’s wife. For instance, (4.17a) is an equational construction (§11.2) expressing that the referent of *Sabet-fu* is equivalent to the referent of *Yustina* in this specific context. (b) is the term that brother-in-laws formed via marriage exchange use for each other. (c) is a term that sister-in-laws via marriage exchange use for each other. (d) is a novel construction to talk about a pair of good friends, and is not related to marriage.26

\[(4.17) \quad \text{(a)} \quad \textit{Sabet-fu} \quad \text{Yustina.} \quad \text{Sabet-MARR.EXCH} \quad \text{Yustina} \quad \text{‘Sabet’s exchanged marriage counterpart is Yustina.’} \quad 2008.470\]

\[
\text{(b)} \quad \textit{yime-fu}  \\
\quad \text{man-MARR.EXCH}  \\
\quad \text{‘brother-in-law via marriage exchange’}  \\
\quad 2008.471
\]

\[
\text{(c)} \quad \textit{famo-fu}  \\
\quad \text{other-side-MARR.EXCH}  \\
\quad \text{‘my marriage exchange counterpart (of woman)’}  \\
\quad 2008.471
\]

25 At best, *yefu* may be a fusion of *yime* ‘man’ and *-fu*, but note that *yimefu* has a different meaning (4.17b).

26 Note that (4.17d) is the only instance of a non-kin relation coded by *-fu.*
4.8 Phrasal markers

Momu is a language with a variety of enclitics that are marked on the right edge of the noun phrase. In Momu, noun phrases are head-initial, and so this marking occurs on the final dependent, or head, in the absence of dependents. Many of the markers discussed here operate on multiple levels, including outside the NP. An overview of this variation is given below (§4.8.1), before proceeding to the individual markers.

4.8.1 Case markers

Following Dench and Evans (1988), this section will group phrasal or case markers based on the function or functions that they perform.

Adnominal cases relate a marked NP to another. In Momu, the genitive (§4.8.5), proprietive (§4.8.6) and habitative (§4.8.7) markers function adnominally.

Relational cases relate an NP to a clause. In Momu, these are the oblique (§4.8.2), comitative (§4.8.3.1) and directional (§4.8.4) cases.

Adnominal NPs occur after the NP they modify, and so may bear the relational case of the overall NP. This means that to a limited degree, these cases “stack”. A single adnominal case can combine with a relational case, in that order.

In addition to these markers, there is a contrastive focus marker (§4.8.9), which I take to operate outside the basic clause. The focus marker can combine on the outer edge of an adnominal case.27

There is also a restrictive marker (§4.8.8), which while not functioning relationally, sits in complementary distribution with the other relational case markers. The restrictive and relational cases cannot cooccur, but the restrictive can occur after an adnominal case. The restrictive can occur also after the (relational) directional case.

---

27See also the irregular pronominal form *wotine* (§4.1.5) ‘s/he for his part’. This otherwise fused form appears to contain the third singular personal pronoun *wo*, the directional *−ti* and the focus marker *−ne*. While not synchronically possible, if this analysis is correct then this is a case of a relational case combining with the focus marker.
In addition to these functions, the oblique (§16.2), comitative (§15.3), restrictive (§15.6, §16.2) and focus (§15.5) markers all function as subordinators of various kinds.

### 4.8.2 Oblique =m

Any or all object and oblique arguments can be marked by the oblique. The marking indicates that the NP functions as a non-subject argument. Oblique-marking may be required, optional, or impossible according to the situation. A combination of word order, oblique-marking and predicate type is used to define both objects (§8.2.2) and obliques (§8.2.3). Adjuncts cannot be marked oblique. The oblique can also mark sentential complements to a variety of complement-taking predicates (§16).

A secondary function of the oblique by way of its optionality is as a marker of new information. Non-subject arguments in a clause that are clearly active in the discourse are often expressed by zero anaphora. Referents whose role in the clause is understood from context may be expressed by an NP, unmarked for the oblique, as a case of topical reactivation (Lambrecht, 1996). Referents new to the discourse or unrecoverable from context, or those for whom the speaker deems to be of an unclear role must be marked oblique.

So, for instance, both the question word and the answer that fills the same slot in a question-answer pair in (4.18) are necessarily marked with the oblique. In the question and answer, oblique-marking is required. The constituent question form is, by definition, a request for an unknown referent. The response is a new referent (or role for that referent) to the hearer. Admittedly, this could also be driven by dialogic parallelism that creates the expectation that the response form should structurally mirror the question (Evans, 2012).

\[(4.18)\]

```
Q: Kontena eru, boku=m wu-ta?
    container that what=OBL INAN:be.at[3SGS]-STVZR
    ‘Where is that container.’
```

28 Amongst the modal adverbs (§9.6) are two forms where a presumed oblique marker is fused into the form of the adverb.
A: \textit{Fiky=\textit{m} \textit{y-o-wo}.}

\hspace{1cm} \text{house=OBL} \hspace{1cm} \text{D-[IMP]INAN:be.at-3SGS:NZR}

\hspace{1cm} ‘It is in/at the house.’

Left-dislocated (topicalised) non-subject argument NPs cannot be marked oblique. The full and pragmatically unmarked form of (4.19) is \textit{te wom erum yeyen} ‘I spoke to him of that.’ In the example, \textit{eru} is left-dislocated and cannot be oblique-marked (and object \textit{wom} ‘him/her’ is expressed by zero anaphora).

(4.19) \textit{Eru, te yey-en.}

\hspace{1cm} \text{that 1SG say.to-3SGO:VTR[1|3SGS]}

\hspace{1cm} ‘It was of that, I spoke to him.’

The oblique in Momu can also function as a complementiser (§16.2).

(4.20) \textit{Kwa eru yimas pu-mu=\textit{m} onfa.}

\hspace{1cm} \text{hair that quickly emerge-VOL.FUT=OBL[COMP] NEG.MOD}

\hspace{1cm} ‘The feathers cannot grow quickly.’

\textit{4.8.2.1 Oblique-marking in the area}

The oblique is cognate with a marker \textit{=m} in Baibai (4.21), which Baron (1983b, pp15–16) glosses as functioning as an (a) object, (b) location, (c) direction (goal) and (d) instrument marker. In Momu, an atypical instrument is marked by the comitative \textit{=b} (§4.8.3), while a typical instrument is marked by either the comitative or the oblique (but not both).

(4.21) \textit{Baibai language, from Baron (1983b, pp15–16) with orthographic modifications}

(a) \textit{Mbora-m nitue.}

\hspace{1cm} \text{pig-O shot:1SGS}

\hspace{1cm} ‘I shot a pig.’ (marking object)

(b) \textit{W0 fora-m kakwawen.}

\hspace{1cm} \text{3SG house-LOC be.there}

\hspace{1cm} ‘He is in the house.’ (marking location)

(c) \textit{W0 fora-m pokowe.}

\hspace{1cm} \text{3SG house-DIR goes}

\hspace{1cm} ‘He goes to the house.’ (marking goal)
Pena-m patekayakoe.
knife-INS (went?):cut
‘He cut with a knife.’ (marking instrument)

The neighbouring Warisic languages Amanab (Minch, 1992), Waris (Brown, 1990) and Imonda (Seiler, 1985) all have oblique-like markers with the exact same form. Amanab has a dative case marker -m used to mark recipient or undergoer roles. Waris has a case marker -m ‘goal’ that has a broad distribution. It marks experiencers, goals, themes, recipients, (animate) patients. Amanab has a marker -m ‘dative’ which marks undergoers and recipients. Imonda has a case marker -m ‘goal’ used to mark “objects”, goals, locations and purposes.

Outside of the Warisic family, but still within the Border Stock-level grouping, Pagi also has a marker -m which covers a similar range of meanings29 (Gerstner-Link, 2015).

One way in which the use of these markers differs in these languages is the treatment of patients or undergoers in intransitive clauses. In Warisic languages they are marked with the oblique, while in Momu they are not.30

4.8.3 Comitative =b

The term comitative is used here to give a label to a combination of comitative/associative (§4.8.3.1), instrumental (§4.8.3.2) and temporal (§4.8.3.3) functions in the one form. These functions are distributed across subject, oblique and adjunct positions respectively.

4.8.3.1 Comitative and associative uses

(4.22) gives examples of the comitative or associative uses of the comitative marker. In (a) it functions adnominally to add referents to the set denoted by the head (§14.2.2). In (b), the comitative marked form is an associative plural (Moravcsik, 2003). In (c), what I take to be a coordinative use of associative plurals is demonstrated.

(4.22)

29Specifically, the marker -m in Pagi applies to goal and patientive participants in a clause.
30There is a minor exception to the use of oblique-marking on grammatical subjects for attributive clauses with a copula. See §8.2.1 for more.
(a) $Mu \ eru, \ yime \ eru=b \ transis \ fofo$

woman that man that=COM trousers long

$sinin-fi, \ otota \ y-a-fi-u$

slide many-3DU $many$ sit D-[IMPF] ANIM:there be-3DU$S$-NZR

‘That woman, with that man, they are standing wearing long trousers.’

(b) $Oke, \ masu=b \ n-a-fi-fi-u.$

okay mother:SG:POSS=COM PX-IMPF-fly-3DU$S$-NZR

‘Okay, his mother and other(s) (i.e., his father) are flying.’

(c) $Mu=b \ yime=b \ otota-fi-u=ne, \ ...$

woman=COM man=COM many sit-3DU$S$-NZR=FOC

‘A man and a woman, the two sit down and ...’

The comitative and associative functions are restricted to (within) the NP constituting the subject.

4.8.3.2 Instrumental use

The comitative functions referentially to mark instrumental obliques.

(4.23)

(a) $Eru \ ere, \ reza=b \ usyi-a.$

that thus razor=COM cut one:3PLS-EMPH

‘And so, they cut him with a razor.’

(b) $Anu \ obi=b \ a-kaani-r.$

this clay pot=COM IMPF-cook-1PLS

‘Now we cook with saucepans.’

Instruments are not obligatorily marked with the comitative, and may sometimes instead be marked with the oblique if it can reasonably or typically be inferred as an instrument. Most commonly instruments are introduced separately, and their role in the composite predication inferred (§13.3.3). In this case, comitative-marking is avoided altogether.

4.8.3.3 Temporal use

The comitative is also used for marking temporal adjuncts. This mostly applies to temporal loanwords. Otherwise, the comitative is fused into the
form of many temporal adverbs such as *kab* ‘morning’ and *fenyib* ‘evening’ (§4.5). It is also used as a temporal adverbial clause marker (§15.3).

In (4.24b), the comitative marks a proximal demonstrative *anu* ‘this’ to form the temporal adverb ‘now’ (*anub* in (4.24b)).

(4.24)

(a)  *Te eru yeb pi=koy-nin,*

    1SG that then one.goes=see.many-3PLO:VTR[1|3SGS]

    *sarare*=b.  

    Saturday=COM

    ‘I went and saw them on Saturday.’

(b)  *Yime Yefye eru ere, yeb teb=m*

    man Yefye that thus then 1SG:COM=OBL

    *wa-narin*  

    *anu*=b,   

    *yime Flerwick=m.*

    1SGG-carry.one[1|3SGS] this[now]=COM man Flerwick=OBL

    ‘Yefye then begat me now, me Flerwick.’

4.8.4 Directional =*ti*

The directional =*ti* specifies a vector starting at an established deictic centre extending toward the referent of the NP it marks. As such it can refer to an approximate goal (4.25a) or a path (b). In (b) the path is a road which stretches between Mori village (where the utterance was made) and Mafoka village. In (c) the direction is towards the head of the main river but this clause describes the orientation of an object (in this case a match with a red head) being arranged on a piece of cardboard in front of the speaker. The object need not move any closer to the referent of the directional-marked NP.

(4.25) (a)  *Anu=ti ai-mu.*

    *here*=DIR ANIM:be.at[1|3SGS]-VOL.FUT

    ‘It will be over here.’

(b)  *Mafoka=ti kosy eru tetkuta-si.*

    Mafoka=DIR road that clear-3PLS

    ‘They cleared the road to Mafoka.’

(c)  *Teete fyi fuko=ti won-mu=fa?*

    red river head=DIR go.up[1|3SGS]-VOL.FUT=YNQ

    ‘The red one will go up towards the head of the river?’
Some spatial nominals (§4.4) are derived from semantic extensions of body parts, for instance *amku* ‘back/behind’, *asfa* ‘fat covering kidneys / side’ and *fuku* ‘chest/front.’ In combination with the directional clitic these project a vector towards the region specified by the spatial nominal not toward (or from) the body part.

(4.26) (a) *Kefe* wow *amku=ti* *otota*  
    some go.across\3SGS behind=DIR many.sit  
    y-a-sa.  
    D-[IMPF]ANIM:be.at-3PLS:NZR  
    ‘Some are sitting behind some others.’

(b) *Amku=ti* *anta* *ongar-f-mu.*  
    behind=DIR do.like.this look:down-2SGS-VOL.FUT  
    ‘Look down behind you like this.’

The directional =ti commonly combines with headless relativised clauses (§15.2) involving verbs of motion, especially the riverine verbs, as in (4.27b). In (4.27), vector specifying verbs are effectively converted into locative NPs.

(4.27) (a) *Fiona* wow *eru=ti*  
    Fiona go.across\3SGS that[REL]=DIR  
    oton-ye.  
    one.sits[1|3SGS]-EMPH  
    ‘Fiona sat over there.’

(b) *Kow* *an=ti* *bu-f-mu.*  
    come.down\3SGS this[REL]=DIR put.many-2SGS-VOL.FUT  
    ‘Put it coming down river.’ (lit. put it towards where it comes downriver.)

4.8.5 Genitive =(*n*)u

The genitive marks an NP possessor, and additionally indicates the number of the possessor. The singular form is =u and the plural form is =nu.  

Baron (1983b) lists the genitive -u in Baibai as a likely cognate form.31 It is unclear if Baibai has a similar number distinction.

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31 Baron did not list the plural form in Momu either, but if he had, then the similarity of the plural genitive =nu with the genitive in Guriaso (-nu) might have been apparent. In Imonda (Seiler, 1985), Amanab (Minch, 1992) and Waris (Brown, 1990) the form of the genitive is -na. However, I am not for now suggesting that any of these are cognate forms.
4.8.5.1 Possessive use

Genitive NPs with an animate head are possessors. In a possessive construction, the genitive NP modifies a noun, marking it as possessed. (4.28) gives examples of (a) the singular genitive and (b) the plural genitive.

(4.28) (a) Nu fes eru, Jaklin=u ukunos erere. 
‘That’s enough, Jaklin’s story is like that.’

(b) Klen afa=nu, mu eru. 
clan another=pl:gen woman that
‘She’s of another Clan, that woman.’

Genitive NPs function adnominally, forming the genitive construction, but, in parallel to other cases of modifiers standing as the head of an NP (§5.2), genitive NPs can also function as clause level NPs.

In (4.29a) Nori=nu ‘(Those) of Nori village’ is the object of the clause. (b) shows genitive NP functioning as a predicating NP (§11.4.1), with the subject NP given as a right-dislocated after-thought.

(4.29) (a) Oney ofuy, Nori=nu narin. 
Oney elder Nori=pl:gen begat.one
‘The elder of Oney begat (those) of Nori village.’

(b) Klen afa=nu, mu eru. 
clan other=pl:gen woman that
‘(She) is of another clan, that woman.’

4.8.5.2 Order of genitive noun phrase and possessed noun

In a genitive construction, the order of the genitive NP and the possessed noun is not fixed.32 Both orderings are demonstrated in (4.30).

(4.30) (a) Anu mony yime anu=u. 
this talk man this=sg:gen
‘This/here (points at speech bubble) is this man’s speech.’

32Or more precisely, I am unaware of the difference being conveyed by the relative ordering of the genitive NP and possessed noun.
Further work is needed to clarify the relevant elements, but possessor-possessed order appears possible only with a minimal genitive NP—possibly only those headed by a proper noun. Modifying material within the genitive NP makes it more likely that the genitive NP will follow the possessed noun. For instance, a genitive NP containing a relative clause will follow the possessed noun:

(4.31) Te kumasy yime won y-ai-wo
eru=u=m panai.
that[REL]=SG:GEN=OBL get.one[1SG]
‘I got the bow of the man up there.’

4.8.5.3 Purposive use

For inanimate heads, the singular genitive can mark a purposive NP. In (4.32), the genitive marks not a possessor, but rather, the purpose for which the things were bought.

(4.32) Kwu nibu, kwu eru, bokuboku Krismas=u
food 3PL:COM:GEN food that something Christmas=SG:GEN
a-faim-ta-fi.
IMPF-buy-do-3DUS
‘Our food, that food, all the things for Christmas, they had been buying them.’

There is a similar purposive use of the nominaliser =u on clauses to form a purposive adverbial clause (§15.8).

4.8.5.4 ‘Possessive’ nouns

A novel noun can be formed by marking with the singular genitive =u. This construction is used especially in cases involving objects for which there is no Momu lexeme.

(4.33) gives an example of a fully periphrastic construction bekubeku X=u ‘something of / belonging to X’, which may be the origin of the shortened form given below in (4.34) and (4.35).
In the exchange in (4.34), the first speaker is avoiding using the TP *hat* ‘hat’, and instead uses *bofu* = *u* ‘something of/for the head.’ The respondent uses the same form.

(4.34) Q: *Bernard, bofu* = *u boku* = *m wu-ta?*  
   Bernard head = SG:GEN where = OBL INAN:be\(1\)3SGS-STVZR  
   ‘Bernard, where is the hat?’  
   A: *Bofu* = *u yime bofu* = *m y-o-wo.*  
   head = SG:GEN man head = OBL D-[IMPFI]NAN:be-3SGS:NZR  
   ‘There is a hat on a man’s head.’

Some further examples are shown in (4.35).

(4.35) (a) *key* = *u*  
   arm = SG:GEN  
   ‘a watch / arms of a shirt / handle’  

(b) *koy* = *u*  
   eye = SG:GEN  
   ‘glasses’

Although glossed ‘genitive’, in the absence of a possessor, the genitive marks the possessed noun in these constructions. There are very similar constructions involving the characterisation marker =*bu* (§4.8.6) and the habitative marker =*mu* (§4.8.7).

### 4.8.6 Proprietary =*bu*

In his survey of the Kwomtari-baibai languages, Baron (1983b, p13) compares what he calls the characterisation markers, or constructions across the putative family. I will instead be following the more commonly used term proprietary.
The proprietive marker is used to code “with-possession” (Stassen, 2009). A proprietive NP can function as a possessive predicate (§11.5), such that the possessor is coded as a subject. Within NPs, the proprietive marks a dependent as an attribute or possession of the modified head. As a possessive strategy, this flips the function and roles of possessor and possessed in a typical possessive construction (McGregor, 2009). As an attributive strategy, however, this conforms to the typical ordering of an attributive modifier. Consistent with other modifiers standing as nominal heads to a phrase, proprietive NPs can also stand alone to denote a novel referent defined by the proprietive.

(4.36) demonstrates the adnominal use of proprietive NPs. (a) refers to ground with water, (b) ‘the big one’ with a birds nest and (c) a tree with a fork in it.

(4.36) (a) *Oko*  
\[ \text{fyi=bu=m on-af-u-o,} \]
\[ \text{tet-f i-f.} \]
\[ \text{clear-2SGS plant-2SGS} \]
\[ 'If you see a place with water, you clear and plant it.' \]

(b) *Anow*  
\[ \text{syi kumu=bu=m} \]
\[ \text{pye-tuw anu, fisbu anow.} \]
\[ "I came down to the big place with the birds nest, to the main branch of the river Fisbu.' \]

(c) *Nakyenon*  
\[ \text{yemkinu=ti, kwo bukumo=bu=m.} \]
\[ "I lifted up the other half to a tree with a fork in it.' \]

The attributes need not be an inherent part of the head noun. Nor does the head noun need to be inanimate. Proprietive NPs are commonly used with human nouns as shown in (4.37) where a type of person is indicated by their possessions.

(4.37) (a) *yime*  
\[ \text{mu=bu} \]
\[ 'man woman=PROP' \]

---

Despite the label indicating that with-possession might involve a comitative, this is not necessarily the case (Stassen, 2009, p55). That said, the form \(-bu\) does bear some resemblance to the comitative \(-b\) (and the singular genitive \(-u\)).
‘a married man (lit. a man with a woman)’

(b)  
\[
yime \ nuku=bu \\
\text{man} \ \text{rope=PROP}
\]
‘a policeman (lit. a man with a rope)’

As with other modifiers, a proprietive can head an NP.

(4.38) (a)  
\[
kumasy-bu \\
\text{bow/gun-PROP}
\]
‘a policeman (lit. bow/gun-having)’

(b)  
\[
esmwa-bu \\
\text{mosquito-PROP}
\]
‘The time when or place where mosquitoes are numerous (lit. mosquito-having)’

Proprietive NPs form attributive (4.39) or possessive clauses (4.40) when functioning as predicates (§11.5).

(4.39) (a)  
\[
Te \ nu \ \text{mu=bu.} \\
1SG \ \text{already} \ \text{woman=PROP}
\]
‘I already have a woman / I am married’

(b)  
\[
Wabe \ \text{sabu=bu.} \\
\text{palm.sp} \ \text{fur=PROP}
\]
‘Wabe has fur / is furry.’

(4.40) (a)  
\[
Tom \ \text{buk} \ \text{afa=bu.} \\
\text{Tom} \ \text{book} \ \text{one=PROP}
\]
‘Tom has a book.’

(b)  
\[
Simon \ \text{kar} \ \text{memnu=bu.} \\
\text{Simon} \ \text{car} \ \text{old=PROP}
\]
‘Simon has an old car.’

(4.41) contains the data shown in the survey taken by Baron. Interestingly, both examples are not possible in eastern Momu, but recognisable. *Fey* ‘fight’ only occurs as an oblique-marked argument to the verb *tai* ‘do’ to express ‘fight’ as a verb. *Usu* only occurs in a verbalised form *usunu* ‘to copulate’ rather than in the apparent nominal form in (4.41b). Abstract nouns such as these appear to be more common in western Momu than in eastern Momu.

(4.41) *taken from Baron (1983b, p13), with converted orthography*
The closely related language Baibai has a the marker -mbwe, which is clearly cognate (4.42).

(4.42) taken from Baron (1983b, p13), with converted orthography (Baibai language)

(a) yime ye-mbwe
   man anger-PROP
   ‘man given to anger/fighting’

(b) mungu kusu-mbwe
   woman copulation-PROP
   ‘woman who sleeps around’

4.8.7 Habitative =mu

The habitative marker =mu marks the domain in which something (usually lower animates or spirits)\(^{34}\) naturally or habitually occurs or inhabits. Baron (1983b, p14) glossed it as the “habitual location” marker and gave examples of similar morphemes in Baibai and Kwomtari. What Baron (1983b) glosses as habitual location in the Kwomtari data I have updated to “ablative,” in line with glossing standards used by Honsberger et al. (2008). In light of the later work on Kwomtari, it seems unlikely that the source marker -fu is cognate with the habitative marker in Momu.

(4.43) taken from Baron (1983b, p14), with minor modifications of orthography and glossing

(a) bebekuw akwo-mu
   something ground-HBT
   ‘a denizen of the earth’

\(^{34}\)The habitative is different to the “denizen” marker in Oksapmin (Loughnane, 2009, p149) in that it describes the habitual location of non-human entities.
Unfortunately I have failed both through elicitation and text gathering to find many examples of this marker in Momu. The use of the marker may be in decline, or it may simply be a low frequency marker.

The elicited example in (4.44a) shows that a habitative NP can function predicatively (§11.6.2). In (4.44b) we see a habitative NP functioning adnominally. In (d) we can see that =mu is applied to kubu ‘long ago / before.’ This shows that the construction relates not just to physical space, but also to time.

(4.44) (a) *Ie fyi=mu.*
    fish water=HBT
    ‘Fish are of the water’

(b) *Te, mobke fa fyi Ura=mu=m tekopwan.*
    1SG coconut flower river Ura=HBT=OBL cut.many[1][3SGS]
    ‘I cut the young coconut fronds of the river Ura.’

(c) *Ary kafok-ta-ta-m=fa?  ebey wune timu=mu, kuo*
    2PL be.afraid-do-2PLS=YNQ devil stone hole=HBT tree
    timu=mu, fyi=mu a=m. hole=HBT water=HBT here=OBL
    ‘Will you be afraid of the devils in the holes of stones, in tree holes and in the water here?’

(d) *Mas kwo nu memnu*
    must tree already old
    asis~asis-ta-sa, kwo kubu=mu, ANIM:there.be:3PLS~ITER-do-3PLS:NZR tree before=HBT
    ‘Must be lots of trees that are old, trees from long ago.’

Note the contrast between locations as indicated by the directional and habitative markers. The directional is a relational case, apply only to locative obliques. The habitative is an adnominal case and, when functioning adnominally, can apply to core arguments.
4.8.8 **Restrictive =s**

The restrictive marks an NP indicating that the referent or referents of the NP are selected from a broader and contrasting set. For instance, in (4.45a), taken from the opening of creation myth, the main character was the only person in existence. In (b), Jaklin is the only person taken away amongst the group of people being described at this point in the story.

\[(4.45)\] (a) _Kubukubu menyi, mon wob=s_  
long.ago INTENS talk 3SG:COM=RSTR  
_ai_.  
ANIM:there.be[1|3SGS]  
‘long ago, the story is that only he existed.’  
\[\text{flerwick-tumbuna}\]

(b) _Jaklin=s pana-si._  
Jaklin=RSTR get.one-3PLS  
‘They got only Jaklin.’  
\[\text{flerwick-jaklin}\]

The restrictive can also function as an adverbial subordinator (§15.6), and as a complementiser paired to a small subset of the complement-taking predicates (§16.2).

In §9.5.7, I analyse the restrictive marker as a likely participant-modifying adverbial counterpart to the predicate-modifying adverb _yesy_ ‘only, just.’

Restrictive-marking can occur on core arguments but it does not function as a relational case. Despite this, the restrictive occurs in complementary distribution with other relational markers.

4.8.9 **Focus =ne**

The focus marker _=ne_ marks a topically (re)activated participant in the clause. Commonly this is the subject of the clause (4.46a) when the subject of the previous clause(s) is in contrast to the current one. But any participant can be left-dislocated and marked with the focus marker, even an adverb (4.46b). Fronted elements cannot be marked with a relational case.

\[(4.46)\] (a) _Mufo=ne oton ai-eky-en_  
wife:SG:POSS=FOC one.sits IMPF-wait.for-3SGO:VTR[1|3SGS]  
\[\text{yesy}.\]  
only  
‘As for his wife, she just sits waiting for him.’  
\[\text{kasper-kokomo}\]
The role of the focus marker in main clauses is discussed in (§8.2.4). The focus marker is also used with deverbal clauses as a backgrounding adverbial clause (§15.5).

4.9 Derived nouns

In many languages, different nominalisers exist to capture in nominal form the activity expressed by the verbal form, or to capture a participant to the verb in the form of the nominal (Comrie and Thompson, 2007). Momu is a language where there is a single lexical nominaliser -u. This same marker is used as a nominaliser of clauses (§16.5.1).

To form a deverbal noun, the third singular (rounded, §2.5.1.3) form of the verb is combined with the nominalising suffix -u. The nominaliser doesn’t appear to fix upon a particular argument but generally gravitates to patientive roles.

(4.47) shows an intransitive and transitive verb being derived as a noun. In (a) and (b) the same bound root kwas- ‘mark’ can form intransitive and transitive verbs. In (a), the nominalisation of the intransitive form targets the instrument. In (b), the transitive counterpart kwasyeru is ambiguous. It can stand for the instrument ‘pen’ or the result ‘writing.’ The transitive verb kuw ‘eat’ targets the object, nominalising as k(u)wu ‘food.’

(4.47) (a) kwas-ta-u
mark-do\3SGS-NZR
‘pen’

(b) kwasy-er-u
mark-3SGO:VTR-NZR
‘writing/pen’
(c)  
\textit{kw-u}  
consume\'\text{3SG-NZR}  
\textquote{food}

Where verbs alternate for number (§6.6), either form is available for nominalisation.

\begin{equation}
\text{sen-u} \quad / \quad \text{ten-u} \\
\text{one.dies-NZR} \quad \text{many.die-NZR} \\
\textquote{death / deaths}
\end{equation}

The nominaliser has the same form as the singular genitive \textasciitilde\textit{u}. This is not an uncommon pattern amongst the languages of the world (e.g., Sino-Tibetan languages Bickel, 1999), and in the immediate area.\footnote{Kwomtari and Imonda have similar nominalisers or genitive markers: \textit{-lu} and \textit{-l} respectively (Honsberger et al., 2008; Seiler, 1985).} It is worth noting that this genitive can also be used to produce novel nominal forms from nominals (§4.8.5.4).

\begin{equation}
\text{bofu}=u \\
\text{head}=\text{SG:GEN} \\
\textquote{(something) of the head—i.e. a hat}
\end{equation}
Chapter 5

Noun Phrases

In this chapter I establish the structure of noun phrases. The chapter begins with the structure of the basic noun phrase, headed by a noun (§5.1). Beyond the basic NP are phrases with differing heads or differing roles. Momu is a language where modifiers to nominals can additionally function as heads of a phrasal unit (§5.2). Also considered are locative NPs (§5.3), pronouns (§5.4) and numeral sequences (§5.5).

Modification by a relative clause (§15.1) or purposive clause (§15.8) are considered alongside other subordinate structures (§15).

5.1 Basic noun phrase

A basic template for a noun phrase is given in Table 5.1. A noun (§3.2) (or noun compound, §14.1) is optionally modified by combinations of adjectives (§3.3.1, §5.1.1), a numeral sequence (§5.5), a quantifier (§3.3.3), and/or a determiner (§5.1.2).

\[
\text{N (ADJ) (NUM) (QUANT) (DET)}
\]

Table 5.1: Basic NP structure

The phrase structure rules in (5.1) expresses these possibilities. Further phrase structure rules are given elsewhere for other nominal heads (§5.2) and for numeral sequences (§5.5).

\[
(5.1) \ NP \rightarrow N (ADJ)^* (NUM.SEQ) (QUANT) (DET)
\]
Some basic examples of noun phrases are given below. In (5.2), the same noun esyu ‘dog(s)’ is modified by (a) a single adjective, (b) numeral, (c) quantifier and (d) interrogative pronoun.

(5.2) (a) esyu petu
   dog small
   N ADJ
   ‘small dog(s)’

(b) esyu fasni
   dog one
   N NUM
   ‘one dog’

(c) esyu kwobo
   dog many
   N QUANT
   ‘many dogs’

(d) esyu bu
   dog who
   N DET
   ‘which dog(s)’

In (5.3) a noun is modified by (a) a numeral and quantifier and (b) a numeral sequence (§5.5) and a genitive pronoun.

(5.3) (a) wune tyenebem afa
   stone two another
   N NUM QUANT
   ‘another two stones’

(b) wune tyenebem ef to
   stone two and.one 1SG:GEN
   N NUM NUM DET
   ‘My three stones’

In (5.4) a noun is (a) modified by a quantifier, and (b) by a quantifier and demonstrative determiner.

(5.4) (a) kwu kefe
   food some
   N QUANT
   ‘some food’

(b) kwu afa anu
   food other this
   N QUANT DEM
   ‘this other food’

In (5.5) a noun is modified by (a) an adjective and a quantifier, and (b) an adjective and a demonstrative.

(5.5) (a) yime fafo kefe
   man long some
   N ADJ QUANT
   ‘some tall men’

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Alongside the quantifiers, a representative coordinator (§14.2.3) can function as a quantifier. When only one representative coordinator occurs, the sense is that a plurality of the marked object and possibly related members are being referred to.

(5.6) Aiyọ ńya=m týin.
father RCO=OBL begat.many[1]3SGS]
‘He begat the many (fore)fathers (of the village)’

5.1.1 Adjectival modifiers

As noted in phrase structure rule (5.1), multiple adjectives are possible in a basic noun phrase. Although the core class of adjectives is small (§3.3.1), I am not aware of a preferred ordering of adjectives in a noun phrase.

(5.7) (a) wunẹ ńow ńba
stone big flat
‘big flat stone(s)’

(b) tokwibe fọbo motu
snake long black
‘long black snake(s)’

5.1.2 Determiners

The determiners in Momu are a set of referential indicators, drawn from modifying uses of a subset of pronouns. The possible determiners are demonstrative, interrogative and genitive personal pronouns. To the best of my knowledge, these do not combine together. Only a single, optional determiner can modify nominals, marking the outer edge of the noun phrase.

(5.8) **DET** → **DEM** / **INTER** / **GEN**
5.1.3 Demonstrative determiners

The demonstratives code a two-way distinction\(^1\) between *anu* “here”-space established though the discourse, which contrasts with a default *eru* “not here” space (Enfield, 2003). *Eru* is overwhelmingly the most common form.

(5.9) (a) *Baso peru eru won,*
  child small that go.up[1|3SG]
  ‘The small child went up and,’
(b) *Bufo eru nu y-a-bufta-wo eru.*
  thought that just D-IMPF-think-3SG:NZR that[REL]
  ‘That is the thought that he is thinking.’

In addition to this, approximative counterparts are available coding approximations of reference.

(5.10) *teku ereru=m pin-af-u,*
  work that.approx=OBL one.goes-COND:2SG-NZR
  ‘should one go on that kind of work,’

See §3.6.1 for more detail on further lexical forms in a functional class of demonstratives.

5.1.4 Interrogative determiners

The question words (§3.5.3) *beku* ‘what’, *bu* ‘who’, *mena* ‘where’, and *menu* ‘what (approximative)’ can all function as interrogative determiners. The question words *meta* ‘how’ and *meyer* ‘how’ both behave more like verbs (§3.5.3).

(5.11) (a) *kosy mena=ti pi-f-mu=a?*
  road where=DIR one.goes-2SG-VOL.FUT=Q
  ‘Which road will you go along?’
(b) *Nepri-si yeb fiky yeko byoko=m*
  TRANS:one:go-3PLS then [house true what]=OBL
  i-e-si=a?
  pull-3SG:O:VTR-3PLS=Q
  ‘They took him and locked him up in which house?’

\(^1\)The distinction can be thought of as three-way if one includes the absence of a demonstrative as a located entity as presumed to be understood by the hearer.
The interrogative modifiers generally occur as the only modifier in a noun phrase. That is, it is rarely the case that there are other modifying elements in a noun phrase when an interrogative modifier is used.

As an interrogative modifier, *bu* ‘who’ functions as a selective modifier not just for humans, but also for higher animates (typically dogs, pigs and cassowaries).

(5.12) **Nepu bu=a?**
animal who=Q
‘Which animal?’

A genitive-marked *bu* ‘who’ can also modify a head noun.

(5.13) **Anu, baso bu=u=a?**
this child who=SG:GEN=Q
‘Whose child is this?’

Non-subject arguments must be marked with a relational case. While oblique-marking is optional in other circumstances, an interrogative modifier requires it.\(^2\) When used for locative obliques, *mena* ‘where’ or *boku* ‘what’ can alternatively be marked with the directional =*ti*.

(5.14) (a) **Fekob mena=m pi-mu=a?**
place where=OBL one.goes[1[3SGS]-VOL.FUT=Q
‘Which village shall I go to now?’

(b) **pwe=oto=y-a-buf-ta-wo**
[one.]comes=one.sits=D-IMPF-thought-do-3SGS:NZR yet 1SG kosy mena=ti pi-mu=a?
path where=DIR one.goes[1[3SGS]-VOL.FUT=Q
‘He’s come and sat, and is thinking “oh, which road will I take now?”’

All interrogative determiners can stand alone, functioning as interrogative pronouns (§5.4.4).

---
\(^2\)The oblique secondarily marks the NP as new information (§4.8.2).
5.1.5 Genitive determiners

Genitive pronouns (§4.1.2) and genitive-comitative pronouns (§4.1.3) can modify a head noun, marking it as possessed.

(5.15) gives examples of genitive pronouns modifying nouns. In (a) it is an improper kin noun, in (b) an abstract noun, in (c) a body part and in (d) a location. Although some possessive constructions are restricted to certain nominal word classes, genitive pronouns can modify all nominals (§5.6).

(5.15) (a) *Yime anu baso wobu e=m*  
man this child 3SG:COM:GEN there=OBL  
hold[1|3SGS]-VOL.FUT  
'This man will hold his child there.'

(b) *Mony to peteku yeko eru.*  
talk 1SG:GEN small true that  
'My story is a short one.'

(c) *Mey abu puw-ta-u ere, nepu ku*  
teeth 2SG:COM:GEN blunt-INCH-NZR like.that meat dry  
that  
'Your teeth would go blunt with that dried meat!'  

(d) *Fekob tabu pi-mu ere.*  
village 1SG:COM:GEN one.goes[1|3SGS]-VOL.FUT like.that  
'I will go to my village.'

A genitive pronoun in the determiner position can be preceded by other modifiers. A numeral precedes the genitive pronoun in (5.16a), and in (b) it is preceded by an adjective. In (c) it is preceded by a representative coordinator (§14.2.3), here functioning like a quantifier.

(5.16) (a) *Mu tyenebem wobu=s e=m?*  
woman two 3SG:COM:GEN=RSTR or  
'(This is) his two women, perhaps?'

(b) *fiky anow wobu=m*  
house big 3SG:COM:GEN=OBL  

to=ai-wo=b, butu kosy  
one.sits=ANIM:there.be-3SGS:NZR=COM[ADV] ladder road  
e=m, there=OBL  
'while he sits in his big house, on the ladder there.'
5.2 Modifier-nominal headed phrases

Momu is a language where nominal modifiers can head a noun phrase. The order of elements is mostly the same as that defined in the basic noun phrase template (§5.1) but the further to the right that the modifier occurs in the template, the fewer the modifying possibilities. Phrase structure rules expressing modifier-nominal headed NPs are given in (5.17). Note in particular that in noun-headed phrases the order of numerals and quantifiers is strict, but for NPs headed by numerals or quantifiers, each can modify the other.

\[
\begin{align*}
(5.17) \ & NP \rightarrow ADJ (NUM) (QUANT) (DET) \\
& NP \rightarrow NUM (QUANT) (DET) \\
& NP \rightarrow QUANT (NUM) (DET)
\end{align*}
\]

Given their role in restricting reference (Andrews, 2007, p207), a relative clause cannot be embedded in this modifier-nominal NP type. A “headless” relative clause can itself stand alone as an NP, however (§15.1.1).

Some examples of modifier-nominal headed NPs are given below in (5.18) through (5.20). In all these examples, the relevant NP is in bold.

In (5.18) there are examples of NPs headed by an adjective. In (a) the adjective stands alone,\(^3\) in (b) it is modified by a demonstrative, and in (c) it is modified by a quantifier.

\[
\begin{align*}
(5.18) \ & (a) \ & Purpur \ te \ nu \ otan \ okomaino \ afki \\
& \ & \text{stick} \ 1SG \ \text{just} \ \text{put.one[1|3SGS]} \ \text{short} \ \text{aside} \\
& \ & \text{N} \ \text{PRO} \ \text{PART} \ \text{VTR} \ \text{ADJ} \ \text{SPAT.NOM} \\
& \ & e=m. \ \text{there}=\text{OBL} \ \text{DEM} \\
& \ & \text{‘I just put the stick next to the short one there.’}
\end{align*}
\]

\(^3\)Note that a locative adnominal follows the noun phrase in (5.18a).
(b) Anow eru now-wow ere.
big that come.across\3SGS-go.across\3SGS like.that
ADJ DEM VIN MAN.DEM
‘The big one, she (took) inside.’

(c) Okomaino afa ere now
short other like.that come.across\3SGS
ADJ QUANT DEM.MAN VIN
pi=an=ti pi=mu.
GO.FUT=here=DIR one.goes[1\3SGS]=VOL.FUT
PART=DEM VIN
‘The other short one will go coming across here.’

(5.19) gives examples of NP headed by a numeral. In (a) the numeral stands alone, and in (b) it is modified by a demonstrative.

(5.19) (a) Faskaney niny otonon-f-mu.
one above put.one-2SGS-VOL.FUT
NUM SPAT.PP VTR
‘You should put one on top’

(b) Tyenebem eru kow an=ti
two that come.down\3SGS here=DIR
NUM DEM VIN DEM
pi-mu.
one.goes-VOL.FUT VIN
‘Those two should go coming down here.’

(5.20) gives examples of a quantifier heading an NP. In (a) the quantifier stands alone, in (b) it is modified by a numeral and demonstrative, and in (c) it is modified by a demonstrative.

(5.20) (a) Kefe inuya-si
some laugh-3PLS
QUANT VIN
‘Some laughed.’

(b) Afa faskaney eru niny oto-f-mu
another one that above put.one-2SGS-VOL.FUT
QUANT NUM DEM SPAT.PP VTR
‘Put the other one on top.’

(c) Afa eru yipru-mu.
other.one that jump\3SGS-VOL.FUT
QUANT DEM VTR
‘That other one will jump’
5.3 Locative phrases

Locative phrases can function as locative obliques (§5.3.1), or function ad-nominally (§5.3.2). For locational adverbials see §15.2.

5.3.1 Clause level locative obliques

The role of a locative phrase as a locative oblique is signalled by a combination of lexical class, marking, word order and predicate type. Here I am primarily concerned with lexical types and marking, while in §8.2.3 I establish grammatical obliques.

Locative phrases can be either marked with the oblique (§4.8.2) for either a goal, as in *okum* ‘to the bush’ in (5.21a), or a path, as in *Nesnakm* ‘along Nesnak’ in (b), or marked by the directional, as in *mamoti* ‘to/from the other side’ in (b). Marking may be via a spatial postposition (§3.5.1) as in (c) and (d).

(a) Mi *oku=m* pin ere.
    mother bush=OBL one.goes[1|3SGS] like.that
    ‘The mother went to the bush.’

(b) *Mamo=ti* ney, *yeb* pwen
    other.side=DIR come.across[1SGS] then [one.]comes
    *Nisnak=m* fesi=ti.
    Nisnak=OBL again=come.down[1SGS]
    ‘I came across from the other side, then came, came again
downriver, along the river Nisnak.’

(c) *Te* *yeb* won, *kwo* niny.
    1SG then go.up[1|3SGS] tree above
    ‘I went up onto the tree.’

(d) *Masu* fiky tin ai.
    mother:SG:POSS house inside ANIM:there.be[1|3SGS]
    ‘(The child’s) mother was inside the house.’

(e) *Mafoka=ti* kosy eru tetkuta-si, tetkuta-nepri-si.
    Mafoka=DIR road that clear-3PLS clear-EXT-3PLS
    ‘They cleared the road through to Mafoka.’

The relational cases and spatial postpositions are in complementary distribution.

The most obvious of lexical classes are spatial nominals (§4.4), place names (§4.2), and other location-referring terms. These tend to be marked
oblique, while terms that are less obviously spatial may employ further marking.

As noted in §4.4, spatial nominals are not a particularly cohesive class of lexemes. Some can be oblique-marked, while others require directional-marking (e.g., *amkuti* ‘behind’).

(5.22) (a) *Makwu=m pi-ta.*,  
    far=OBL one.goes-STVZR\3SGS
    ‘He goes far away.’  
  
    (b) *Amku=ti anta on-f-mu.*,  
    back=DIR do.like.this look-2SGS-VOL.FUT
    ‘Look behind you.’

The postposition *niny* can stand alone as a locative phrase. The postposition *tin* ‘inside of’ occurs with a cognate complement *tinu* ‘hole’ to make *tinu tin* ‘inside’ (Blake, 2007, pp38–39).

(5.23) (a) *Kamyi eru niny y-owo eru.*  
    cloud that above D-[IMP][INAN:be.at:3SGS:NZR] that
    ‘That cloud is up there / above.’
  
    (b) *Fiona, tinu tin oto-f-mu=fa?*  
    Fiona inside inside one.sits-2SGS-VOL.FUT=YNQ
    ‘Fiona, will you sit inside (the car)’?

The postposition *niny* can stand alone as a locative phrase. The postposition *tin* ‘inside of’ occurs with a cognate complement *tinu* ‘hole’ to make *tinu tin* ‘inside’ (Blake, 2007, pp38–39).

Spatial nominals and spatial postpositions can be modified by the intensifier adverb *menyi*.

(5.24) (a) *Fiiki=m onfa, makwu menyi.*  
    close=OBL NEG.MOD far INTENS
    ‘It’s not close, it’s really far away.’
  
    (b) *Fiiki menyi anu ane-a nu.*  
    close INTENS this like.this-EMPH already
    ‘It’s really close now.’

5.3.2 Adnominal locative phrases

The clause level locative NPs described above also function adnominally. These are limited to modification of locative obliques. Restricting the reference of a subject or object argument by giving locational detail is usually established in a separate clause, via a relative clause (§15.1), or via an adnominal habitative NP (§4.8.7).
All of the clause level possibilities given above are available. Frequently, there is more than one locative adnominal. Oblique-marking (if not elided) still remains marked on the overall phrase (indicating that there is a single argument), but the above mentioned restrictions on oblique-marking remain. For instance, spatial postpositions cannot be directly oblique-marked. However they can be postmodified by an oblique-marked adnominal (locative) demonstrative. Thus, there is a preferential ordering of locative adnominals such that demonstratives occur last.

In (5.25), a reduced locative demonstrative a occurs in a larger phrasal unit which also includes (a) the postposition niny ‘above’ and (b) directional-marking. The demonstrative is then the host of oblique-marking.\(^4\)

\[
(5.25) \begin{align*}
(a) & \quad Wune \, niny \, a=m \, pwenin. \\
& \quad \text{stone \, above \, here=OBL \, [one.]stands[1][3SGS]} \\
& \quad \text{‘He stood atop the stone (here).’} \\
& \text{(b) \quad Keje \, kemy \, an=ti} \\
& \quad \text{some \, come.downriver:2PLS \, here=DIR} \\
& \quad \text{ina-m-mu-ya!} \quad fyi \quad \text{Mosu=ti \, a=m.} \\
& \quad \text{many.go-2PLS-VOL.FUT-EMPH \, water \, Mosu=DIR \, here=OBL} \\
& \quad \text{‘Okay, some of you come downriverwards and go there, towards the river Mosu here.’}
\end{align*}
\]

It is often ambiguous whether a phrase-final demonstrative is functioning as a determiner or locative adnominal, as in (5.26a), unless both occur, as in (b), in which case both functions are represented. The short form is nearly always interchangeable with the full form, but when a demonstrative occurs twice within an NP, the full form always precedes the short form (i.e., \textit{anu am} or \textit{eru em}).

\[
(5.26) \begin{align*}
(a) & \quad Mo \, yime \, eru \, bu=a? \\
& \quad \text{yet \, man \, that/there \, who=Q} \\
& \quad \text{‘Who is that man / the man there?’} \\
& \text{(b) \quad Ne \, ukwa-nepru-mu, \quad kwo \, tinu \, anu} \\
& \quad \text{and \, find:.one:VTR-EXT\,3SGS-VOL.FUT \, tree \, hole \, this} \\
& \quad \text{a=m.} \\
& \quad \text{here=OBL} \\
& \quad \text{‘He will find it in this tree hole here.’}
\end{align*}
\]

\(^4\)It may be that in some cases the reduced demonstrative is functioning as a ‘filler’ so that elements that cannot be oblique-marked can have an alternate host for oblique-marking.
Spatial nominals (§4.4) such as maky ‘middle’ (5.27a, b), afki ‘beside’ (b, d), or skub ‘area’ (c) commonly function as locative adnominals.

(5.27) (a) Na-pwe=anu tokwai maky a=m
trans>one-come=here grass middle here=obl
n-a-kuwe.
pX-impf-consume:3SGS:NZR

‘(The dog) carried (the fish) here and is eating in the middle of the grass here.’

(b) Maky okomaino afki otonor-f-mu.
middle small beside put.one.down-2SGS-VOL:FUT
‘Put it in the middle beside the short one.’

(c) Key fe=ofefw-ar-a, yefko ofo skub
hand intens=fold-one:vtr-emph mouth bone area
niy-mu.
shoot.one[1SGS]-VOL:FUT
‘I clench my fist and will shoot it at the jaw area.’

(d) Yeb pufkun ney,
then get.up come.across[1SGS]
pwenin-u=ne, oko niny, fiky
[one.]stands[1|3SGS]-NZR=FOC ground above house
fenwai-u=ne, mobke afki kosy e=m.
leave[1SGS]-NZR=FOC coconut beside road there=obl
‘I got up and came outside and stood on the ground, having left the house, (I stood) beside the coconuts on the road there.’

5.4 Pronouns

Pronouns generally stand alone occupying the place of a basic NP. However, there are a handful of modifiers available to them. The basic template is given in Table 5.2. Interrogative pronouns (§5.4.4) and demonstrative pronouns (§5.4.5) are considered at the end of this section.

(RE) PRO (NUM/PN/N.gen)
Reciprocal-emphatic Pronoun Numeral / Proper Noun / Generic Noun

Table 5.2: Pronominally headed NP

Phrase structure rules are given in (5.28).
In the sections below, I examine the various modifiers that can occur with pronouns.

### 5.4.1 Pronouns with numeral modifiers

The pronoun and numeral combination is restricted to agreement in number. Plural pronouns can be restricted to dual when modified by the numeral *(tye)*nebem ‘two’ (5.29a). Singular pronouns can be modified by the numeral *fasni/**faskanei* ‘one’ to give a sense similar to the restrictive enclitic =s, to indicate the exclusion of others, or that the referent is acting alone.

\[(5.29)\]
\[
\begin{align*}
\text{(a)} & \quad \text{ary nebem} \\
& \quad 2\text{PL} \text{ two} \\
& \quad \text{‘You two’}
\end{align*}
\]
\[
\begin{align*}
\text{(b)} & \quad \text{te fasni} \\
& \quad 1\text{SG} \text{ one} \\
& \quad \text{‘just me / I alone’}
\end{align*}
\]

### 5.4.2 Inclusory constructions

A combination of pronoun with nominal is restricted to plural referents and plural personal pronouns. Comitative and regular pronouns can both head these minimal phrasal types. The construction, a form of inclusory construction (Singer, 2006, pp189–193), serves to add further specificity to the referents of a plural pronoun. Note that these are not additive so as to indicate the union of the referents. Rather, a member or members of the larger set denoted by the pronoun are identified by the nominal, or *vice versa*.

There are two forms involving proper nouns, shown in (5.30). In (5.30a), the combination marks the referents as members of a set. In (5.30b), the combination adds a named referent to the set. The construction (5.30b) cannot use a singular pronoun. *Yerebu Slupi* can refer to two or more individuals, including Slupi. In (5.30c) a generic noun functions much like the proper noun in (5.30a): the combinations marks the referents as a member of a set, constraining possible referents.

\[(5.30)\]
\[
\begin{align*}
\text{(a)} & \quad \text{yerebu PNG} \\
& \quad 1\text{PL}:\text{COM}:\text{GEN} \text { PNG}
\end{align*}
\]
‘we of Papua New Guinea’

(b) yerebu Slupi
1PL:COM:GEN Slupi
‘we including Slupi’

(c) yery yime
1PL men
‘we men’

Genitive pronouns cannot head inclusory constructions in Momu. Although
the possessive forms yerebu ‘first plural comitative (possessive)’ and arebu
‘second plural comitative (possessive)’ fill part of the paradigm for comitative
pronouns, these forms cannot be used in a possessive fashion as part of an
inclusory construction. Instead, the form must be marked (plural) genitive.

(5.31) kwu yerebu Slupi=nu
food 1PL:COM:GEN Slupi=PL:GEN
‘Our (including Slupi) food’

Inclusory constructions include combinations formed with possessive-marking,
but must still be marked as plural genitive. In the use of a the genitive pro-
noun in (a) no further marking is needed, but in (b) arebu susan ‘you and
Susan’ is marked with the plural genitive.

(5.32) (a) wune arebu
stone 2PL:COM:GEN
‘your stone(s)’

(b) Wune arebu Susan=nu, fyi afki
stone 2PL:COM:GEN Susan=PL:GEN water beside
y-o-wo.
d-[IMP][INAN:be.at-3SGS:NZR]
‘The stone of you and Susan is beside the water.’

(5.32) (c) Fiky arebu Wanai=b=nu emsu-ya.
house 2PL:COM:GEN One.eye=COM=PL:GEN good-EMPH
‘The house of you and One-eye is good’

5.4.3 Reciprocal-emphatic pronouns

My understanding of the various functions of reciprocal-emphatic pronouns
(§4.1.4) is limited at this stage of analysis. They certainly have a role in
reciprocal constructions (§10.2.2), but also a broader emphatic application.\(^5\)

The reciprocal-emphatic particle \(ak\) is identical to the second singular reciprocal emphatic pronoun. The particle has a broader distribution that is more adverbial-like. In an adjacent position to pronouns, it can be difficult to determine if it is a pronominal form functioning as a modifier to the pronoun, or the particle form functioning as an adverbial. This problem is avoided however by considering non-second singular pronoun combinations.

In (5.33) the reciprocal-emphatic form pre-modifies a pronoun. In these cases, the form gives a sense of an action being performed in response to a similar one.

\[(5.33)\]
\[(a)\] Yeyen \(a\)-makno-sen. \(Wok\)
\[\text{say.to:3SGO[1|3SGS]} \text{ IMPF-block[1|3SGS]-COMPL} \text{ 3SG:RE} \]
\[\text{wo sisy yeb pi=ayer-sen.} \text{ 3SG also then GO.FUT=like.that:VTR-COMPL} \]
\[\text{‘He told him to block her. He too would do so then.’} \text{kaspar-kokomo} \]
\[\text{\(b\)}\] \(Ak\) \(ay\) pana na-pwen. \(Wok\)
\[\text{2SG:RE 2SG get.one\text{-3SGS} TRANS>one-come[1|3SGS]} \]
\[\text{‘Bring it yourself!’ (response to being asked to fetch something)} \text{2008.140} \]

The pre-modified pronoun can also be comitative. A comitative pronoun is a necessary component of a reflexive construction (§10.2.3). The addition of a reciprocal-emphatic pronoun is presumed to add some kind of loosely reciprocal sense to the action as well. It is unclear, however, whether the reciprocal-emphatic form fills the subject position, or whether it pre-modifies the comitative pronoun. Occurrences like the example below are quite rare, and further work is necessary to understand it.

\[(5.34)\] \(Nik\) nib=m tino=ya. \(Wok\)
\[\text{3PL:RE 3PL:COM=OBL give.many:3PLIO:3SGS=EMPH} \]
\[\text{‘They gave amongst themselves.’} \text{2008.141} \]

These forms can also be used in unfulfilled events (i.e., events, or the absence of events, counter to expectations of others). However, I have only found this in elicitation. More commonly this is expressed using a different adverbial form \(akfu\) (§10.2.2.2, §10.2.2.3).

\(^5\)Unlike in some languages, these “reciprocal-emphatic” pronouns do not apply in reflexive constructions.
I alone saw it.’ (Nobody else saw it.)

‘You bring it.’ (I ask one person to bring s.t. but they don’t hear me so I ask another.)

‘He too is there, holding it.’

‘The two also put the food (there).’

In (5.37), ak is functioning adverbially outside the NP. In (a), ak is not pre-modifying the pronoun. The sense conveyed in these examples is of an action taken in reaction to a prior action by another.

‘I say in response, “Must be another woman?”’

‘And these, in turn, go here like this.’ (sorting pictures)

5.4.4 Interrogative pronouns

In §5.1.4 we see that some question words (§3.5.3) can function as interrogative determiners. The same question words can function as interrogative pronouns. Unlike other pronouns, these pronouns cannot be modified, but do commonly require relational-case marking—either the oblique marker
or the directional marker =ti in the case of location based question words—unless they are subjects.

In (5.38), the question words (a) boku ‘what’, (b) bu ‘who’, and (c) mena ‘where’ all function straightforwardly as interrogative pronouns. Locatives can be marked with the oblique or directional case.

(5.38) (a) *Jaket boku=m tyiti-si wu-ta?
   jacket what=OBL hang-3PLS INAN:be.at[3SGS]-STVZR
   ‘The jacket is hung up on what?’

   (b) *Bu fiky=m ai-ta?
       who house=OBL ANIM:be.at[1|3SGS]-STVZR
       ‘Who is at the house?’

   (c) *Esyu mena=m ai-ta?
       dog where=OBL ANIM:be.at[1|3SGS]-STVZR
       ‘Where is the dog?’

   (d) *Bernard, oko bofu eru boku=ti wu-ta?
       Bernard mountain that what=DIR INAN:be.at[3SGS]-STVZR
       ‘Bernard, where is the mountain? (lit. in what direction)’

Equation is expressed by juxtaposed noun phrases (§11.2). (5.39) gives examples of predicative uses of the interrogative pronouns (§11.2). Predicate NPs are not marked by the oblique.

(5.39) (a) *Anu bieku=a?
     this what=Q
     ‘What is this?’

   (b) *Nepu anu bu=a?
       animal this who=Q
       ‘What type of animal is this?’

   (c) *Fiky yeko mena?
       house true where
       ‘Where is the real house?’

Note that in (5.39b), bu ‘who’ can apply to higher animates such as pigs, dogs and cassowaries.

5.4.5 Demonstrative pronouns

In §5.3 we saw that demonstratives standing alone can function as locative adverbs, or as demonstrative pronouns, as shown in (5.40). No modifying elements are possible on a demonstrative pronoun.
5.5 Numerals and numeral sequences

The numbers one and two are expressed by the lexemes fasni/faskaney ‘one’ and (tye)nebem ‘two.’ Some speakers express ‘three’ as (tye)nebem ef ‘two and another.’ As a modifier to a nominal, this is the extent of ordinary uses of numeral sequences. As ascending counting forms, there are extended uses, however.\(^6\)

 Occasionally speakers use gestures to hands and/or feet to indicate numbers roughly around 5, 10, 15 and 20. These larger numbers are often approximations.

 The lexemes fasni/faskaney ‘one’ and (tye)nebem ‘two’ have different distributions, and do not constitute a word class on their own (§3.3.2). Fasni/faskaney ‘one’ always stands separate to the expression of numeral sequences. (Tye)nebem ‘two’ combines with itself, or with ef ‘and another’\(^7\) to produce larger numbers. Some basic phrase structure rules are given in (5.41).

\[(5.40)\] (a) Anu \(k\text{wu}=-fa?\)  
this food=YNQ  
DEM N=PART  
‘Is this food?’

(b) Anu=m \(a\text{-kiy}\) momu=a.  
this=OBL IMPF-consume\[1SGS\] not=EMPH  
DEM VIN PART=PART  
‘I don’t eat this.’

A numeral sequence may be made up of either the single lexemes fasni/faskaney ‘one’ or (tye)nebem ‘two’, or the lexeme (tye)nebem followed by any number of the lexeme ef ‘and another’, or a complex sequence repeating by factors of two or three.

Sequences representing the possible ways of expressing numbers up to 6 are given in Table 5.3. Speakers used one of four strategies for expressing

\(^6\)Ascending counting uses of numerals is quite a different task to numeral use in NPs. The task can be self-directed, as a memory or calculation aid. It is usually the end result of such a process that one might want to communicate to someone else.

\(^7\)ef is possibly originally derived from af\(a\) ‘(an)other.’
numbers higher than 2: (1) binary partitioning, (2) ternary partitioning, (3) incremental counting increasing by one, or (4) being unwilling to represent numbers above two or three, or using approximate terms such as *kwobo* ‘many’, key ‘hand’ (‘about 5 or 10’), or *ebsi* ‘leg/foot’ (‘about 10, 15 or 20’).

<table>
<thead>
<tr>
<th></th>
<th>(1) binary</th>
<th>(2) ternary</th>
<th>(3) incremental</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘one’</td>
<td><em>fasni/faskaney</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘two’</td>
<td><em>(tyc)nebem</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘three’</td>
<td><em>(tye)nebem ef</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘four’</td>
<td>2 + 2</td>
<td>3 + <em>ef</em></td>
<td>2 + <em>ef ef</em></td>
</tr>
<tr>
<td>‘five’</td>
<td>2 + 2 + <em>ef</em></td>
<td>3 + 2</td>
<td>2 + <em>ef ef ef</em></td>
</tr>
<tr>
<td>‘six’</td>
<td>2 + 2 + 2</td>
<td>3 + 3</td>
<td>2 + <em>ef ef ef ef</em></td>
</tr>
</tbody>
</table>

Table 5.3: Ascending counting strategies, numbers 1 to 6

Through verbal and non-verbal tests designed to measure aspects of numeracy, I witnessed a handful of older speakers (amongst 30 test subjects) who could utilise methods (1) or (2) to perform basic addition and subtraction tasks for quantities up to 10. Almost all younger speakers were unable to use Momu numerals for addition and subtraction tasks. All strategies lead to decreasing accuracy with higher order counts (up to 10), but strategy (3) more so than (1) or (2). The ability to count backwards in Momu or Tok Pisin was usually predictive of a degree of numeracy in the tasks. The tasks were designed to identify counts of objects (and manipulation of their number) with verbal and non-verbal prompts and responses.

In his field notes, Laycock (n.d.[d], p249) records numbers up to four (*nebem afa nebem* ‘two and another two’) and *kwobo* ‘many’ for speakers from Mumuru village (and other undisclosed locations) versus numbers of up to two (*nebem*) for a speaker from Mori village before getting responses in Tok Pisin (Laycock, n.d.[d], p191). Given the heterogeneity of responses,

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8With 10 subjects, I ran tests similar to those described in Frank et al. (2008). The tests were nonverbal matching tasks, verbally directed “nuts in a can” tasks, ascending and descending elicitation/translation tasks (verbally and nonverbally prompted), and verbal and nonverbal assessment of numbers under addition and subtraction conditions.

9By “numeracy” I mean here not the ability to identify and name quantity, but rather addition and subtraction.

10Note that Momu does not have a question word for querying quantities. For verbal requests for number I used the *tp haumas(pela)* ‘how many.’

11This is assumed to be a sample size of two across the two villages listed (Mori and Mumuru), but it is possible that elicitation was undertaken with a group. I recorded a greater degree of variability in both Mori and Mumuru.
the number system for Momu is perhaps best described as being unstable. Many novel constructions emerged in testing, but users of the binary and ternary partitioning strategies were most successful in performing numeracy tasks. A binary system would be areally consistent with the languages to the north while a ternary system is unattested. However, in straightforward ascending elicitation, a binary system was fairly consistently given. Only when testing numeracy did the great variety of systems emerge. If similar tests beyond ascending elicitation were performed across the area, similar heterogeneity might emerge in other languages reported to have only binary systems.

5.5.1 Binary and body part systems in the area

Laycock makes a useful distinction between “number” systems and “tally” systems (Laycock, 1975b, p219). Number systems have terms that qualify nouns, while tally systems do not. A prompt for a specific quantity would ordinarily be responded to with a numeral from a number system, but not a term from a tally system. Fedden (2012) argues that in the Trans New Guinea (TNG) languages to the south of Momu the influence of Tok Pisin has all but wiped out the body part tally systems in the area. In Mian in particular, all that remains is a binary number system.

I have found no evidence of a tally system existing in Momu, but tally systems are reasonably common in the area to the south of Momu, in the form of body part counting systems. The closely related language Baibai has a body-part counting system (Laycock, 1975b, n.d.[b], p2090), and a binary system (Baron, 1983b, p9). The neighbouring language Kwomtari (Honsberger et al., 2008, p63) and south of it, Biaka (Hamlin and Hamlin, 2011) both have body-part counting systems. All these languages are immediately to the south of Momu. To the south-west Amanab has both a body-part counting system and a binary system (Minch, 1992, pp127-128). South-east of Kwomtari are Yale (Campbell and Campbell, 1987, pp13-14) and Namia (Feldpausch and Feldpausch, 1992, pp28-29). Both have base-5 number systems but no body-part system.

Otherwise, many languages of the area are described as having a binary counting system. To the east, the neighbouring One language (Donohue,
2008b, p424), to the west Imonda (Seiler, 1985, p50) and Waris (Brown, 1990, p21), to the north-west I’saka (Donohue and San Roque, 2004) and Kilmeri (Gerstner-Link, 2015), and to the north-east Barupu (Corris, 2008, pp115-116) all have binary counting systems.

Fedden (2012) observes that body part systems are lost with the parallel introduction of a base-10 system in Tok Pisin, and a currency in base-10. Accordingly, the existence of a band of languages close to the coast in the north without body-part tally systems, and a band of languages to the south with body-part tally systems would be consistent with the spread of Tok Pisin in the area. On the other hand, Fedden argues that these tally systems are a feature of Trans New Guinea (TNG) languages that has spread to the non-TNG languages described above via contact. Laycock (1975b) argues that number and tally systems are not a good match for genetic affiliation, given their propensity to spread with contact. It could be that the southern band of languages described above exemplify the fullest extent to which tally systems spread via contact from the south.

Interestingly while the related Baibai language and putatively related Kwomtari and Naî/Biaka languages (§1.1.1) all have body part counting systems, Momu does not. Momu appears to be the northern-most limit of the spread of these systems from TNG languages in the south.

Counting bananas  There is a separate counting system for counting the tiers or hands of a bunch of banana fruit. The largest tier at the top is mu (possibly related to mu ‘woman’), the next tier is mu afki (afki ‘next’), the next is maky (‘middle’), then maky afki, and finally, the otherwise semantically opaque nebya for the smallest tier of bananas.

5.6 An overview of possession in noun phrases

Multiple markers and constructions relating to possession are introduced in the previous chapter and in this one, and further strategies in the form of compounds are given in §14.1.2. In this section I compare possession strategies that are coded in the form of an NP. I consider the locus of marking, the order of possessor and possessed components, animacy, and alienability. Predicative possession is considered in §11.4 and lack of possession in §11.10.
The possible strategies for possession include genitive NPs (§4.8.5.1), genitive pronouns (§4.1.2) and possessed kin compounds (§14.1.2.5). There are additionally possessive-attributive strategies which code possession-like relationships including proprietive NPs (§4.8.6), body part (or house) possessive compounds (§14.1.2.4) and whole-part compounds (§14.1.2.2).

The relative order of possessor and possessed elements, the host of marking, and the intended referent of the construction are all plotted in Tables 5.4, 5.5, and 5.6.

First, considering the order of possessed and possessor elements, there is a basic split between possessed-possessor and possessor-possessed strategies, shown in Table 5.4. This split is represented on both sides by genitive NPs in that either order is available (§4.8.5.2).

<table>
<thead>
<tr>
<th>PSD-PSR</th>
<th>genitive pronoun (§4.1.2)</th>
<th>fiky to</th>
<th>‘my house’</th>
</tr>
</thead>
<tbody>
<tr>
<td>genitive NP (§4.8.5.1)</td>
<td>fiky Tom=u</td>
<td>‘Tom’s house’</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PSR-PSD</th>
<th>genitive NP</th>
<th>Tom=u fiky</th>
<th>‘Tom’s house’</th>
</tr>
</thead>
<tbody>
<tr>
<td>proprietive (§4.8.6)</td>
<td>Tom mu=bu</td>
<td>‘wife-having Tom’</td>
<td></td>
</tr>
<tr>
<td>possessed kin compounds (§14.1.2.5)</td>
<td>Tom mafa</td>
<td>‘Tom’s wife’</td>
<td></td>
</tr>
<tr>
<td>possessive compounds (§14.1.2.4)</td>
<td>Tom baso</td>
<td>‘Tom’s child’</td>
<td></td>
</tr>
<tr>
<td>whole-part compounds (§14.1.2.2)</td>
<td>fiky aibe</td>
<td>‘roof of a house’</td>
<td></td>
</tr>
</tbody>
</table>

Table 5.4: The relative order of possessed and possessor elements across construction types

Marking occurs either on the possessor or possessed nominal, or the NP and separately on either the dependent or head, shown in Table 5.5. Genitive, possessive and proprietive strategies are all present in Momu. Possessive and whole-part compounds are unmarked.

<table>
<thead>
<tr>
<th>possessive construction</th>
<th>Host</th>
<th>Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>genitive pronoun</td>
<td>PSR</td>
<td>Dep</td>
</tr>
<tr>
<td>genitive NP</td>
<td>PSR</td>
<td>Dep</td>
</tr>
<tr>
<td>proprietive</td>
<td>PSD</td>
<td>Dep</td>
</tr>
<tr>
<td>possessed kin compounds</td>
<td>PSD</td>
<td>Head</td>
</tr>
</tbody>
</table>

Table 5.5: Locus of marking

Possession constructions are further differentiated by the animacy of both possessor and possessed elements (shown in Table 5.6), and the nature of
the possessive relationship with respect to alienability. Genitives and proprietarys are unrestricted with respect to these features. The compounding strategies are limited to the expression of inalienable possession.

<table>
<thead>
<tr>
<th>possessive construction</th>
<th>PSR</th>
<th>PSD</th>
</tr>
</thead>
<tbody>
<tr>
<td>genitive pronoun</td>
<td>anim./inan.</td>
<td>anim./inan.</td>
</tr>
<tr>
<td>genitive NP</td>
<td>anim./inan.</td>
<td>anim./inan.</td>
</tr>
<tr>
<td>proprietary</td>
<td>anim./inan.</td>
<td>anim./inan.</td>
</tr>
<tr>
<td>possessed kin compounds</td>
<td>anim.</td>
<td>anim.</td>
</tr>
<tr>
<td>possessive compounds</td>
<td>anim.</td>
<td>inan.</td>
</tr>
<tr>
<td>whole-part compounds</td>
<td>inan.</td>
<td>inan.</td>
</tr>
</tbody>
</table>

Table 5.6: Semantic constraints on components of possessive construction

The inalienable compounds represent a cline between animate and inanimate relations. Possessed kin compounds, unsurprisingly, are limited to human relations. Whole-part and possessive relations are essentially only differentiated from the other compounds by the inanimacy of the whole. Possessive compounds are limited to animate wholes and their inanimate body parts or their homes. Whole-part compounds relate inanimate entities to their composite parts.

Inalienability drives some syntactic differences in Momu. The compounds are the least marked of all strategies, and express the most obvious of possessive relationships, and so they are the most amenable to the possessor occurring separately to the possessed element, while still being understood as standing in a possessive relationship. Thus, marginal external possession (§10.2.1) in Momu is limited to inalienable relations.
Chapter 6

Verbs

Complex morphology in Momu exists mainly in verbs. In this chapter, I give a structural template for verbs (§6.1) and look at cross-indexation (cross-reference) (§6.2). I then look at a variety of verb-forming suffixes (§6.3). In §6.4 I demonstrate regular and irregular transitive paradigms with respect to argument indexing. Derivational uses abound in Momu morphology and are noted throughout. In §6.5 I look at two types of derivational morphology that produce verbs that select for (verbal) number. This introduction to verbal number is then expanded upon in the closing section of this chapter (§6.6).

Where possible, I examine this morphology from a diachronic perspective. For subject marking, I compare the morphology with the related language Baibai (§6.2.1.1). For object marking, I explore a hypothesis that this arose from verb serialisation (§6.2.1.1). The verb-forming suffixes (§6.3.5) and transitivising prefixes (§C.3) are likely to have originated from serial verb constructions.

This chapter does not cover all the morphology applicable to verbs. In separate chapters I examine aspect (§7) and modality (§12). Some derivational morphology relating to verbal number is considered in detail in §6.6.

6.1 Structural template for verbs

Figure 6.1 sketches an idealised basic template for a verb, to introduce all of the elements discussed in this chapter. However, the combinatorics are more complex than implied by the template. There are both free and bound
roots in Momu. Bound verb roots require a verb-forming suffix that may form an intransitive (§6.3.1) or transitive (§6.3.3.1) verb. I will refer to the set of free roots and verbs produced with a (bound) root and verb-forming suffix as verb stems.

\[(\text{OBJ.IDX})(\text{V.NUM}) \text{ROOT (OBJ.IDX)VERB.SFX}_{\text{stem}} \text{ SUB.IDX}\]

Figure 6.1: Verb template

Subject cross-indexation is included on all clause-final verbs, although the range of distinctions expressed may be constrained. Object cross-indexation is either marked by sets of verb-forming suffixes (§6.2.2.1, §6.3.3.1), or by sets of prefixes (§6.2.2.2), or by both. Depending on the verb, the range of distinctions expressed may be constrained for object cross-indexation.

Some stems are arranged in pairs such that each selects for an argument of a contrasting number value. This pattern is commonly referred to as verbal number (§6.6). Mono-morphemic forms selecting for number are scarce in Momu. The majority are instead formed by derivational morphology (§6.6.2.3, §6.5). Transitive stems can be derived from an intransitive stem via a pair of transitivising prefixes. The prefix determines what number the transitivised form selects for (§6.5.2). There are also pairs of transitive verb-forming suffixes which form verbs that select for the number of an argument (§6.3.3.2). Intransitive verb pairs that select for subject on the basis of number are also usually derived. Plural intransitive verbs are derived via a prefix (§6.5.1) on the unmarked singular form.

6.2 Cross-indexation

Hasepalmath (2013) has proposed a well-ordered set of terminologies to describe bound person forms. He is motivated by the lack of precision in traditional labels such as “agreement”, which carry with them analytical assumptions that I too wish to avoid. Haspelmath makes a three-way distinction by combining variation of bound person markers (“indexes”) and optional, absent or obligatory co-referential nominals (“conominals”). Indexes in combination with optional conominals are “cross-indexes”; indexes with obligatory conominals are “gramm-indexes”; and indexes without conominals are “pro-indexes”. The most common type cross-linguistically are cross-indexes.
In Haspelmath’s terms, Momu is a language with subject and object cross-indexation of conominals. Within the framework, the term “cross-index” implies that conominals are optional. A simplified version of Momu cross-indexes is given in Table 6.1, to plot the necessary distinctions. Object cross-indexation in this table is abstractly represented, as the full form of the verb-forming suffixes are not shown ($\S6.2.2.1$, $\S6.3.3.1$).

<table>
<thead>
<tr>
<th>Subject</th>
<th>Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>SG 1 $\emptyset$</td>
<td>SG 1 (w)a</td>
</tr>
<tr>
<td>SG 2 -f</td>
<td>SG 2 wa</td>
</tr>
<tr>
<td>SG 3 [+round]</td>
<td>SG 3 (y)e</td>
</tr>
<tr>
<td>DU 1 -rai</td>
<td></td>
</tr>
<tr>
<td>DU 2 -mi</td>
<td></td>
</tr>
<tr>
<td>DU 3 -fi</td>
<td></td>
</tr>
<tr>
<td>PL 1 -r/t</td>
<td>NonSG 1 ma</td>
</tr>
<tr>
<td>PL 2 -m</td>
<td>NonSG 2 ma</td>
</tr>
<tr>
<td>PL 3 -si</td>
<td>NonSG 3 nin</td>
</tr>
</tbody>
</table>

Table 6.1: Subject and simplified Object index sets

Subject cross-indexes ($\S6.2.1$) make finer distinctions in number than object cross-indexes ($\S6.2.2.1$). Subjects are cross-indexed for singular, dual and plural number. Objects distinguish singular and plural number. Comparing Momu with Baibai ($\S1.1.1$, $\S\text{D.1}$), dual distinctions appear to be a recent innovation not present in Baibai.

Distinctions in person between subject and object cross-indexes are uneven as well. Subject cross-indexes distinguish first, second and third person across all number values. Object cross-indexes distinguish local and third person.

I use “local person” as a shorthand for the combination of grammatical first and second person in a single form.\(^2\)

A secondary system of object cross-indexation is available in the form of

\(^1\)Naturally there are cases where the conominal is not “optional”. Haspelmath (2013) anticipates this in his paper. In Momu, conominal interrogative pronouns are a necessary part of forming constituent questions ($\S10.3.2$), and conominal comitative pronouns are a necessary part of reflexive constructions ($\S10.2.3$).

\(^2\)The distinction is problematic but well recognised in the literature, albeit with differing labels. For instance Silverstein (1976) breaks down the difference with a binary feature $+/-$ participant. Dahl (2000) differentiates egophoric and allocophoric reference (or later non-allophoric and allophoric (Dahl, 2008)). Haspelmath (2013) (building upon Dahl (2000)) differentiates locophoric reference from allophoric. I follow Aissen (1999b, inter alia) in giving the combination of first and second persons the label “local person”.

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object prefixes (§6.2.2.2). These do not make the same set of distinctions as object cross-indexing verb-forming suffixes. Object prefixes distinguish only local person. Third person objects are not marked. One could consider the absence of marking as marking a third person object via a null prefix, but I do not take this approach. Rather I treat the prefixing system as something less than full object cross-indexation (§6.2.2.2).

Nominal number is rarely marked on nominals in Momu. Broadly speaking only forms intended for referring to humans encode number in their form or include variant forms that do. For instance, personal pronouns (§4.1), various kin terms (§4.6), and proper nouns of singular reference (§4.2) all encode number to some degree. Other nominal forms do not however. In these cases, number is sometimes marked via modification with a quantifier or numeral sequence. The number of the possessor is coded in the form of the genitive marker (4.8.5). Conominals are cross-indexed as subject or object and nominal number is encoded in the form of the cross-index on the verb. As such, verbs primarily bear nominal number in Momu.

### 6.2.1 Subject cross-Indexation

Subject cross-indexation in Momu distinguishes three numbers and three persons, making a total of 9 distinctions. The full range of subject marking is given in Table 6.2.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Singular ø</td>
<td>-f</td>
<td>[+round] (or ø)</td>
</tr>
<tr>
<td>Dual</td>
<td>-rai</td>
<td>-mi</td>
<td>-fi</td>
</tr>
<tr>
<td>Plural</td>
<td>-r/-t</td>
<td>-m</td>
<td>-si</td>
</tr>
</tbody>
</table>

Table 6.2: Subject suffixes

First person singular subjects are unmarked, or if one prefers, are marked by a null suffix. Third person singular subjects are marked by a morphophonemic operation that rounds the final vowel or glide segment or segments of the stems (§2.5.1.3). Consonant-final stems have no suitable candidate for rounding and are therefore unmarked. For these stems first and third singular person subject forms are syncretised. Stems ending in VV diphthongs (oi, ui or ai) drop the final vowel in all but the first singular form (§2.5.1.2).

Subject marking triggers many morphophonemic operations which res-
ult in a higher level of phonological integration into the stem (§2.5.1). In particular, complex codas at the stem boundary are common due to subject marking. Morphophonemic operations simplify these complex codas through deletion, or by moving glides out of codas.

A separate form of the second person singular (-af) and plural (-am) are used in realis progressives (§7.4), and to form subjunctives (§15.7.1).

6.2.1.1 A diachronic aside on subject markers

The subject agreement system of Baibai (§1.1.1) bears a strong resemblance to Momu’s subject cross-indexes. The two systems are shown side by side in Table 6.3, using data from Baron (1983) and Laycock (n.d.[b]). The source data is given in §D.1. Comparable items are in bold.

<table>
<thead>
<tr>
<th>Momu</th>
<th>Baibai</th>
</tr>
</thead>
<tbody>
<tr>
<td>SG</td>
<td>ø</td>
</tr>
<tr>
<td>2</td>
<td>-f</td>
</tr>
<tr>
<td>3</td>
<td>[+round] -k</td>
</tr>
<tr>
<td>DL</td>
<td>-rai</td>
</tr>
<tr>
<td>2</td>
<td>-mi</td>
</tr>
<tr>
<td>3</td>
<td>-fi</td>
</tr>
<tr>
<td>PL</td>
<td>-r/t/rt ø / n?</td>
</tr>
<tr>
<td>2</td>
<td>-m</td>
</tr>
<tr>
<td>3</td>
<td>-si</td>
</tr>
</tbody>
</table>

Table 6.3: Momu and Baibai subject agreement

**Dual distinctions** Baron marks the dual distinction in Baibai with a question mark in his survey while Laycock’s notes do not record a dual distinction. In the absence of data to the contrary, I assume for now that Baibai has no dual number category.

The putatively related Kwomtari and Biaka languages (§1.1.1) do not have explicit inflectional dual distinctions for all three persons (Hamlin, 1998; Honsberger et al., 2008). Nor do the forms used to mark subject agreement bear resemblance to the Momu subject agreement suffixes. Kwomtari uses a local person plural subject marker with a local singular pronoun to achieve a dual sense (and may use an accompanying lexeme with the pronoun to mark it as dual). Dual number marking is possible in Imonda and other Warisic languages via a verb prefix (Seiler, 1985), but these are exclusive
of person indexes. Rather, the system looks more like the verbal number system of Momu (§6.6). Nai has a first person dual distinction bound up in portmanteau modal marking (Hamlin, 1998).

Coastal languages of the region such as Barupu (Corris, 2008) or Puare (Donohue, 2008a) more commonly make a dual distinction within subject index sets. As Momu sits between the coastal languages and the remaining members of the Kwomtari-Baibai family, it is reasonable to hypothesise that the dual distinction arose from contact with these or similar coastal languages.

Common to all dual markers in Momu is a final i. The initial r of the first dual -rai matches the first plural -r, and the initial m of the second dual -mi matches the second plural -m. The third dual -fi appears less clear, but possibly -si already being the third plural may have pressured the only remaining single segment marker, the second singular -f, to be chosen for constructing a third dual -fi.

Given the occasional marking or expression of a dual in local person contexts in other languages in the family, it may be possible that a dual distinction existed in an earlier state in either first person, or local person marking before a third person dual was later innovated upon contact with coastal languages.

The origin of the rounding process  K in Baibai appears to have been consistently elided in Momu (§C.1), and this may help to explain the origin of the rounding process marking the third singular in Momu. This would likely be via a two-step process of sonorisation (k > w) and then elision which leaves behind a trace in the form of rounding.

If a labial consonant or glide were the proto-form for the reflexes k in Baibai and ø in Momu, this may also help to explain the rounding of vowels. Unfortunately, the data for Baibai are too scarce to draw a firm conclusion about this.

First person distinctions  The data on first person agreement in Baibai is also too scarce to draw conclusions about whether or how it is marked in that language. There appears to be a possible denasalisation of a stem-final n in the Baibai data, or possibly a separate segment t for the first person singular and plural. If the first person were marked in Baibai by t, then this
would correspond neatly with the first plural marker -r/t in Momu.

Baron (1983b) hypothesises that the first person marker may have been n. While this is not necessarily clear from the data he provides, there are possible stem-final n segments that would work with Baron’s tentative analysis. See D.1 for the data showing this.

6.2.2 Object cross-indexation

Object cross-indexation is not straightforwardly achieved by an inflectional affix in Momu. It is incorporated into the form of some transitive verb-forming suffixes (§6.3.1), or partially marked by object prefixes (6.2.2.2), or by both. As such, the consideration of object cross-indexation is split between the discussion of indexes here, and of verb-forming suffixes in §6.3.

Object cross-indexation most likely arose from serial verbs. In §6.3.5 I lay out an argument for the likely path of development of both the prefixing and suffixing forms.

6.2.2.1 Object cross-indexes

Verbs of the class of “high” transitive verbs (§3.1.2.1) are formed with object cross-indexing verb-forming suffixes. There are two sets, varying mostly in their final segment which I use to differentiate them. I refer to these as the r-set and n-set.3 The full range of forms is shown in Table 6.4.4

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singular</td>
<td>-ar/-an</td>
<td>-war/-wan</td>
<td>-er/-en</td>
</tr>
<tr>
<td>Non-Singular</td>
<td>-mar/-man</td>
<td>-ninta(i)/-nin</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.4: Object cross-indexing verb-forming suffixes

Some examples are given in (6.1).

3I have not found a conditioning factor for the use of the r- and n-sets. They are not used contrastively with the same root and do not appear to be phonologically, morphologically or semantically motivated. At any rate, the contrast in form cannot have a high functional load, as the distinction is often lost in ordinary use due to optional stem-final consonant deletion in the context of suffixing material (§2.5.3). In other words, only the unmarked stem (perfective, first or third person singular subject form) reliably indicates whether the verb is of the n-set or r-set.

4Note that the third plural -ninta(i) is within the r-set and -nin within the n-set.
“High” transitive verbs consistently have consonant-final stems. Without a vowel or glide candidate for rounding, first and third person singular subject marking is syncretic (§6.2.1) as can be seen in (a). These consonant-final stems are additionally subject to optional stem-final consonant deletion (§2.5.3) as can be seen in (b) through (d).

First and second person singular object distinctions are regularly collapsed by younger speakers into a single local distinction, making the distinction local versus third person across the paradigm. For instance, some speakers use **yeywan** ‘say to you/me’ for both first and second person singular objects, while older, more conservative speakers use **yeyan** ‘say to me’ and **yeywan** ‘say to you’ (6.2).

The trend toward distinguishing just local singular person may have been triggered by the general loss of phonemic contrasts around glides (§2.6.2), but also by analogical extension from the plural to the singular. Consider (6.3) where the verb root has a final w segment. In isolation, the first person singular object form could be parsed as a second singular form (pup-war) especially if the object prefix is dropped, as appears increasingly common
amongst younger speakers. The surface form of (b) varies from older to younger speakers, with the distinction between first and second singular objects being in decline.

(6.3) (a) \textit{apupwar}
    \begin{itemize}
      \item 1SGO-punch-1SGO:VTR
      \item ‘punch me’
    \end{itemize}

(b) \textit{wapupwuar/wapupwar}
    \begin{itemize}
      \item 2SGO-punch-2SGO:VTR
      \item ‘punch you’
    \end{itemize}

(c) \textit{pupwer}
    \begin{itemize}
      \item punch-3SGO:VTR
      \item ‘punch him/her’
    \end{itemize}

When the root-final glide is a \textit{y} the glide rounds for the first singular, as shown in (6.4a). Older and younger speakers differ in their differentiation of first and second singular object, with younger speakers merging \textit{kafokwar} to mark both.

(6.4) (a) \textit{kafokwar}
    \begin{itemize}
      \item afraid.of-1SGO:VTR
      \item ‘afraid of me’
    \end{itemize}

(b) \textit{kafokwar/kafokwar}
    \begin{itemize}
      \item afraid.of-2SGO:VTR
      \item ‘afraid of you’
    \end{itemize}

(c) \textit{kafokyer}
    \begin{itemize}
      \item afraid.of-3SGO:VTR
      \item ‘afraid of him/her’
    \end{itemize}

Baron (1983a) briefly mentions the same rounding in Western Fas. The data\textsuperscript{5} are given in (6.5). Note that the \textit{yw} sequence in (6.5b) surfaces as a

\textsuperscript{5}Baron gives the underlying form of \textit{sisy} as \textit{sisj}. I analyse this devoiced vowel as an allophone of a phonemic glide (§2.1.3). Note that the root \textit{sisy} ‘send’ means ‘scrape’ in Eastern Momu.
raised back vowel. The same occurs with the *ww* sequence in (6.3b), which surfaces as *wapupawar*.

(6.5) Adapted from Baron (1983a)

(a) *sisyen*

sisy-en
send-3SGO:VTR[1|3SGS]
‘I send him’

(b) *sisuwan*

sisy-wan
send-1[2SGO:VTR[1|3SGS]
‘I send you’

I treat the newer local distinction as the norm throughout this thesis. Most of the data I collected reflects this. Where data points do make the distinction, I will gloss first and second singular objects as separate. It is important to realise, however, that while *local* is given as a universally applicable gloss for the morphemes, in the context of subject marking first and second person distinctions emerge in certain combinations (§6.4).

6.2.2.2 Object prefixes

The object prefixes are shown in Table 6.5. Verb-forming suffixes (§6.2.2.1, §6.3.3.1) distinguish third person singular and plural objects. For object prefixes, third person objects are not overtly marked, but rather distinguished by the absence of marking. In the absence of overt marking, number for third person objects is not distinguished. Like the object cross-indexing verb-forming suffixes, however, object prefixes do also appear to be tending towards collapsing first and second singular person distinctions into a single local person. It is far more common for speakers to use just the one form *wa*- to distinguish either first or second person singular objects.\(^6\)

---

\(^6\)Loss of a first–second distinction is likely motivated by a mirroring of the loss of the distinction in the verb-forming suffixes, or may have arisen due to homonymy between the first singular form *a*- and one of the allomorphs of the imperfective prefix *a*-.
Singular (w)a- wa- [unmarked]
Non-Singular ma- [unmarked]

Table 6.5: Object prefixes

Object prefixes occur on transitive verbs with compatible forms and semantics (i.e., those that can select for a human object). Prefixes apply optionally (and redundantly) on verbs that already include object cross-indexation via verb-forming suffixes. Where the remaining transitive verbs select for a human object, prefixing is obligatory.

“High” transitive verbs (§3.1.2.1) are formed by object cross-indexing verb-forming suffixes. Object prefixes are optional but common on these verbs. The only case where prefixation is not allowed is on glide-initial verbs (e.g., yey-wan ‘say to you/me’ but not wa-yey-wan).

(6.6) demonstrates redundant marking of objects via prefixing on a high-transitive verb.

(6.6) (a) (wa-)pup-wan
     (1|2sGO-|)punch-1|2sGO:vtr
     ‘punch me/you (sg.)’

(b) (ma-)pup-man
     (1|2plO-|)punch-1|2plO:vtr
     ‘punch us/you (pl.)’

The prefixes add no “new” information to the formed verb. Within their typology of multiple exponence, Caballero and Harris (2012) classify this as a “fully superfluous” type. This is a type of multiple exponence where the same features are marked redundantly by both morphemes.

This form of multiple exponence of object marking in Momu constitutes what Corbett (2015) calls an “affixal inconsistency” both within lexemes and across lexemes. Within the lexeme this double exponence is irregular in that morphology marking object agreement can occur twice. Within the paradigm, the means of expression is uneven as well, given that prefixing only doubly marks first and second person objects, but not third. Across lexemes, the marking is irregular in that it is possible for some forms but not for others (due to phonological constraints), but also, as we shall see, it
becomes the only means of marking objects on verbs that do not otherwise mark objects.

The use of the prefixes with low-transitive verbs is of a completely different nature. These verbs do not otherwise cross-index objects at all, or at least do not employ verb-forming suffixes that incorporate object cross-indexation. While contexts in which object prefixes are used with these verbs are relatively rare, when they do occur they are obligatory.

(6.7) shows the application of object prefixes to verb pairs coding verbal number. In (6.7a), the verb pair *narin/tin* ‘carry/birth one/many’ are marked with object prefixes. In this form, both nominal and verbal number (§6.6) is marked in the same form. I do not interpret this as a form of double exponence but rather as a mix of selectional features and inflection. In the absence of a prefix in (b), nominal number is not marked.

(6.7) (a) *wa-narin* / *ma-tyin*

1|2SGO-carry.one 1|2PLO-carry.many

‘carry / give birth to me/you (sg.) / carry us/you (pl.)’

(b) *narin* / *tyin*

carry.one  carry.many

‘carry/birth one/many’

Compare the above to the verb *fenoi* ‘leave (it)’ in (6.8). The same distinctions are made in (6.8a), where the verb is clearly transitive. In the absence of a prefix in (6.8b), both the valence of the verb and the number of the object is indeterminate (or rather is resolved only by the inclusion of an overt conominal).

(6.8) (a) *wa-fenoi* / *ma-fenoi*

1|2SGO-leave 1|2PLO-leave

‘leave me/you (sg.) / leave us/you (pl.)’

(b) *fenoi*

leave

‘leave (it/them)’

A similar meaning to (6.8a) is expressed by the prefixed form of *ketya* ‘let go of / release’. Only when a prefix is added does the meaning shift to *wa-/ma-ketya* ‘leave me/you / us/you (pl.).’

---

7The shift in meaning for *ketya* ‘let go of / release’ may be a calque from *tp lusim* ‘leave it / let go of it’. I am not aware of *ketya* being used for a third person (human) object in the same way, however.
I have just one example of a prefix being applied to an intransitive verb. The verb *su* ‘it (fire) burns’ usually takes *kwo* ‘fire’ as its subject. With an object prefix the meaning shifts.\(^8\)

\[(6.9)\]  
\[\text{Kwo te wa-su.}\]  
\[\text{fire 1SG 1\|2SGO-burn\|3SGS}\]  
\[\text{‘The fire burnt me.’}\]

The use of the prefix with these kinds of low-transitive verbs is not particularly productive. My attempts to prefix restricted verbs by creating a hypothetical situation or a metaphorical extension where the undergoer is local were frequently rejected. It was considered ungrammatical to prefix *kiy* ‘eat’ for instance. However, the production of neologisms or calques from Tok Pisin are possible factors in the spread of the prefix to low-transitive verbs, as I will discuss below.

Otherwise, the restriction is mostly side-stepped by using an (inanimate) body part as the target of the activity (e.g., ‘It scratched my skin’ rather than ‘It scratched me’). Or, in some cases, an equivalent may already be lexicalised (e.g., *absi/nebsi* ‘wash one/many’ versus *fwas* ‘bathe’).

Verbs coding verbal number prototypically select for inanimate objects. In some cases, however, a human patient is possible and in these cases a local referent will be obligatorily marked by a prefix. However, unlike other low-transitive verbs, the combination of verbal number and the absence of object prefixing makes third person number recoverable (despite, strictly speaking, not being cross-indexed).\(^9\)

### 6.3 Verb-forming suffixes

In this section I consider the intransitive verb-forming suffixes *-tai* (§6.3.1), and the diachronically hypothesised formative *-ni* (§6.3.2). For transitive verbs I consider object cross-indexing forms (§6.3.3.1), verbal number forms (§6.3.3.2), and transitive forms making no further distinctions (§6.3.3.3, §6.3.4). Along the way, I provide a hypothesis about the development of object marking from serial verbs (§6.3.5).

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\(^8\)More work is needed to fully understand (6.9). It is not clear that the verb can be used transitively without an object prefix.

\(^9\)Third person (nominal) number is often recoverable because verbal number in Momu is strongly of the ‘participant number’ type (Corbett, 2000). See §6.6 for more on this.
6.3.1 Intransitive verb-forming suffix -ta(i)

The intransitive verb-forming suffix -ta(i) is identical in form to the verb tai ‘do’.

The same form is used in many aspectual constructions expressing an imperfective sense (§7.5.3, §7.6, §7.4.3). In these grammaticalised cases the form is not the host of subject inflection.

-Tai functions both as verb-forming suffix to bound roots and as a derivational suffix to a variety of free root forms. In some cases the form of the root determines the word class of the verb formed.

(6.10) shows some basic examples of intransitive verbs formed with -ta(i). Kafok- in (a) is a bound root that combines with -ta(i) ‘do’ or with transitive verb-forming suffixes (§6.3.3.1). In (b) and (c), the relationships between the nominal forms bufo ‘thought’ and ofu ‘beads’ and their verbalised counterparts are clearer. Tai is very clearly used to verbalise nouns.

\[(6.10) \quad (a) \quad kafoktai \quad \text{be.afraid[1SGS]} \quad \text{‘I am afraid’} \]
\[(b) \quad bufo \quad > \quad bufta \quad \text{thought} \quad \text{think[3SGS]} \quad \text{‘thought > s/he thinks’} \]
\[(c) \quad ofu \quad > \quad ofta-si \quad \text{beads} \quad \text{be.decorate-3PLS} \quad \text{‘beads > they are decorated’} \]

Unlike the transitive verb-forming suffixes (§6.3.3.1) that combine with many bound roots and some free roots, the intransitive suffix can be seen as a mostly derivational suffix applicable to free roots. As such it appears relatively productive in verbalisation of nominals.

The suffix derives an intransitive verb from members of a broad range of word classes such as nouns, adjectives, numerals, demonstrative adverbs, and quantifiers.

\[^{10}\text{Admittedly, grammaticalised aspectual uses of -ta do sometimes host subject inflection. The variability appears to be driven in part by whether a verb root distinguishes first from third person singular subjects. It may be that -ta fills that gap in order to maximise identity.} \]
\[^{11}\text{I have noticed in existing Western Momu data that the bound form kafok- is a noun kafoku ‘fear.’ It is unclear whether the noun preceded the bound form or not. I never encountered the nominal form in my own work. Kafok- was always a bound root used to form intransitive and transitive verbs.} \]
The verbalised form of adjectives is a special case. The underlying form of the base of adjectives is unclear. It may be rounded or unrounded. But, in the verbalised form the adjective root is unrounded. These forms constitute the class of Inchoative verbs (§3.1.1.2). Inchoative verbs are fixed upon the third singular form of the verb.

(6.12) (a) anow > aney-ta
big big-INCH
‘big > be(come) big’

(b) fafo > fafe-ta
long long-INCH
‘long > be(come) long’

(c) emsu > emsi-ta
good good-INCH
‘good > be(come) good’

To form a reciprocal construction (§10.2.2) tai occurs in a periphrastic construction expressing an iterative sense. The third singular object form of either (a) a high-transitive (§6.2.2.1) or (b) an unaltered low-transitive are taken as a base, and combined with tai.

(6.13) (a) key i-en > key ak
hand pull-3SGO:VTR hand RE
i-e=ta-rai
pull-3SGO:VTR=do-3DUS
‘pull a hand > shake (each others) hands’

(b) nebsi > ak nebsi=ta-si
grasp.one RE grasp.one=do-3PLS
‘hold one > they held each other’

The same form -tai is used to incorporate intransitive verbal loanwords.
6.3.2 Intransitive verb-forming suffix -ni

Though not a productive suffix, a recurring form -ni/-nu can be identified in many intransitive forms in Momu.

In some cases, an extractible bound root may feature in a transitive counterpart. For instance, the verbs in (6.15) all have transitive counterparts, some of which are object cross-indexing and some of which code verbal number in pairs.

(6.15) (a) \(yenu\) / \(yey-en\)
   say\(\:\text{3SGS}\) say.to-\(\text{3SGO:VTR}\)
   ‘s/he says / to say to him/her’

   (b) \(afnu\) / \(afwan\)
   be.overturned\(\:\text{3SGS}\) turn.over.\(\text{one:VTR}\)
   ‘it is overturned / to turn one over’

   (c) \(tapuunu\) / \(tapupwan\)
   be.finished finish.\(\text{one:VTR}\)
   ‘it is finished / to finish one’

In other cases it shows up on a large number of intransitive verbs which have no transitive counterpart, or for which the form serves as the base to derive a transitive counterpart (e.g., \(sukni\) ‘be sick’ > \(na-sukni\) ‘cause pain’).

\begin{tabular}{lll}
\text{kaani} & ‘to cook’ \\
\text{efiyeni} & ‘to not want’ \\
\text{bini/nabini} & ‘one/many ford a river’ \\
(6.16) \text{peeni/napeeni} & ‘one/many arrive’ \\
\text{sukni} & ‘be sick’ \\
\text{sani} & ‘to sweep’ \\
\text{pyini/napyini} & ‘one/many run’
\end{tabular}

Some of these forms are restricted to third person singular subjects, in which case only the rounded form nu occurs. These are what I call stative -nu verbs (§3.1.1.3)
Several -nu forms listed here include a long vowel in a monosyllabic root of the form CV. I do not have enough evidence at this stage to confirm it, but I hypothesise that the length of the vowel is due to the preservation of compulsory lengthening of open monosyllables (§2.4.1) when these roots were previously free forms.

6.3.3 Transitive verb-forming suffixes

Transitive verb-forming suffixes fall into three different sets depending on the distinctions made: (1) object cross-indexing verb-forming suffixes (§6.2.2.1, §6.3.3.1) form high-transitive verbs (§3.1.2.1), (2) verb-forming suffixes form pairs distinguishing only verbal number (§6.3.3.2), and (3) suffixes forming only a single transitive verb, distinguishing neither verbal number, nor cross-indexing an object (§6.3.3.3).

6.3.3.1 Object cross-indexing verb-forming suffixes

The forms and categories of the suffixes are discussed in detail in §6.2.2.1. Here I limit discussion to the types of roots used with the suffixes. The roots of most verbs formed using verb-forming suffixes are bound. Many have intransitive counterparts formed either by -tai (§6.3.1) or -nu (§6.3.2).

Examples of transitive verbs formed with object cross-indexing verb-forming suffixes are given below.12 All involve bound roots. Some have intransitive forms as shown in the second column, except for nafofki ‘carry on shoulders’ which is a transitive verb without object marking or coding of verbal number.

12In (6.18), kamey-ta/kamefe-ta has a corresponding predicate nominal form kemefe ‘understand’ (§11.8). The third singular object form of mornsen ‘talk to him/her’ is in a heterosemous relationship with the intransitive verb mornsen ‘talk’. The first is a reanalysis of the second while the second is one of many nominal incorporations or verb compounds with the verb sen ‘die’. In this case, the incorporated nominal is mony ‘talk/speech/words’.
In (6.19a) the noun *amku* ‘back’ is verbalised as *amkw-er* ‘ignore’ (cf. TP *givim beksait* ‘ignore’). In (b) the low-transitive or intransitive *uy* ‘sing (a song)’ is combined with a verb-forming suffix to produce the high-transitive form *uwen* ‘call out to’ (cf. TP *singsing* ‘sing/song’ and TP *singautim* ‘call out to’, and English *sing out to*).

(6.19) (a)  
| *amku* | *amkw-er*  
| ‘back’ | ‘ignore-3SGO:VTR’  
| ‘back > ignore him/her’  

(b)  
| *uy* | *uwen*  
| ‘sing’ | ‘call.out-3SGO:VTR’  
| ‘sing (a song) > call out to him/her’  

Novel formations where a free root from a different word class is derived as an object cross-indexing verb are quite rare. Further morphophonological processes can be irregular in these formations.

### 6.3.3.2 Verbal number encoding verb-forming suffixes

Drawing upon a subset of the object cross-indexing verb-forming suffixes, verb-forming suffixes are also a strategy for forming verbal number pairs (§3.1.2.2). Only upon consideration of the whole paradigm can one be certain which form one has encountered. Compare the verbs *titan/titnin* ‘tie one/many’ and *yeyan* ‘say to’ in (6.20). The verb-forming suffix *-an/-ar/-er* forms the first singular object form of *yeyan* ‘say to me’ and the singular form of *titan* ‘tie one’.\(^{13}\)

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\(^{13}\)As further evidence that this is verbal number rather than defective object marking, the meaning of the verb was extended to mean “to handcuff”. In this case it became acceptable to use this verb to refer to first or second person referents. Instead of exchanging the verb-forming suffixes to do this, speakers instead used object prefixes without altering the verb-forming suffix: *wa-titan* ‘handcuff me/you’ and *ma-titnin* ‘handcuff us/you’ rather than *titwan* and *titman* respectively.
Accordingly, the suffixes are glossed to reflect that these verbs code verbal number rather than nominal number in the form of an object marker.

(6.21) (a) \( fufw-an \) / \( fuf-nin \)

\[ \text{blow.on-.one:VTR} \quad \text{blow.on-.many:VTR} \]

‘blow on one / blow on many’

(b) \( afw-an \) / \( af-nin \)

\[ \text{turn.over-.one:VTR} \quad \text{turn.over-.many:VTR} \]

‘turn one over / turn many over’

(c) \( bufw-ar \) / \( buf-nin \)

\[ \text{think.of-.one:VTR} \quad \text{think.of-.many:VTR} \]

‘think of (one) / think of (many)’

(d) \( erey-en \) / \( ere-nin \)

\[ \text{say/like.that-.one:VTR} \quad \text{say/like.that-.many:VTR} \]

‘say/think it / say/think them’

6.3.3.3 Plain transitive verb-forming suffixes

Some transitive verbs are formed with the third singular object form -en/-er. The source of roots for verbs produced by this method includes free roots from other word classes and forms for which an independent root may not be recoverable.

In (a) the adjective \( uyu \) ‘heavy’ corresponds with \( uyen \) ‘be hard/difficult to’.\(^{14}\) In (b) the demonstrative manner adverb \( ere \) ‘like that’ (§9.3.2) corresponds with \( ereyer \) ‘do in that way’. In (c) the noun \( abu \) ‘name’ corresponds with \( abyen \) ‘name someone’.

(6.22) (a) \( uyu \) > \( uy-en \)

\[ \text{heavy} \quad \text{hard.to-VTR} \]

‘heavy > be hard to’

\(^{14}\) \( uyen \) ‘be hard to do’ is a complement-taking predicate. See §16.1.6.2 on page 541 for an example.
In some cases bound roots are recoverable where an intransitive counterpart exists: *ikak-ar* ‘do well’ (v.t), *ikak-ta* ‘do well’ (v.i.), *kwasy-er* ‘write/mark’ (v.t.) and *kwas-ta* ‘write/mark’ (v.i.),

There are also numerous transitive verbs with segments on the right edge that ultimately may relate to verb-forming suffixes. However, in the absence of further evidence, I consider these mono-morphemic forms, since they lack a plural counterpart.

<table>
<thead>
<tr>
<th>Verb</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>napeyén</td>
<td>‘attach’</td>
</tr>
<tr>
<td>napwan</td>
<td>‘snap’</td>
</tr>
<tr>
<td>nasisyen</td>
<td>‘pour out’</td>
</tr>
<tr>
<td>owar</td>
<td>‘name’</td>
</tr>
<tr>
<td>sasan</td>
<td>‘shake violently’</td>
</tr>
<tr>
<td>saspar</td>
<td>‘fix up’</td>
</tr>
<tr>
<td>tapwan</td>
<td>‘cut across’</td>
</tr>
</tbody>
</table>

### 6.3.4 Borrowed verbs

Intransitive verbs borrowed into Momu are formed using the -ta intransitive verb-forming suffix (§6.3.1). Examples are given below.

(6.24) (a) *finis-ta*

> finish-do\3SGS

‘it is finished’

(b) *win-ta*

> win-do\3SGS

‘s/he won’

(c) *kamaf-ta*

> arise-do\3SGS

‘it arose’

Transitive verbs borrowed into Momu are formed using a suffix -ar. This is identical in form to the first person singular object verb-forming suffix, but
like the plain transitive forms (§6.3.3.3), borrowed verbs distinguish neither verbal number nor object marking via verb-forming suffixes. Object prefixes apply where the semantics are compatible with a human referent.

Examples of transitive borrowings are given below. The suffix is simply added to the borrowed transitive verb.

(6.25) (a) \(kamafim-ar\)
create-do.to
‘create it/them’
(b) \(salim-ar\)
sell-do.to
‘sell it/them’
(c) \(askim-ar\)
ask-do.to
‘ask him/her/them’

Note that the intransitive and transitive counterparts of the TP \(kamap\) ‘arise’ and \(kamapim\) ‘create’ are matched with the intransitive and transitive verb-forming suffixes respectively as \(kamafta\) (6.24c) and \(kamafimar\) (6.25a).\(^{15}\)

This is not always the case. In (6.26a), TP \(askim\) ‘to ask’ is only transitive, and so the same form is used with either the intransitive or transitive verb-forming suffix. In (6.26b) TP \(raitim\) ‘write (something)’ is also only transitive.

(6.26) (a) \(Eru\ fesis pwe=askim-ta \text{ 'ary=a, nepu} to=m \text{ — nesuwo=m} \text{ }\)
that again come=ask-do\‘3SGS 2PL=Q meat
\(1SG:GEN=OBL\) slide:go.up=OBL[COMP]
\(wu-ta=fa?\)’
STANCE-IMPF=YNYQ
‘He came and asked “You all? My meat—could it be that you hid it?”’
(b) \(Buk=m y-a-raitim-ta-wo, \text{ yime anu.}\)
book=OBL D-IMPF-write-do-3SGS:NZR man this
‘He’s writing in a book, this man.’

6.3.5 Diachronic aside on object cross-indexation

In this section, I will review the evidence for object marking in Momu in the form of object prefixes and the transitive verb-forming suffixes to be derived

\(^{15}\)See §2.6.1 for details on the transformation of TP /p/ to \(f\) in Momu.
Almost all high-transitive verbs are formed by verb-forming suffixes that include object cross-indexation. One notable exception is the verb as ‘show to’.\(^{16}\) This verb uses prefixes to show all object person and number distinctions. However, the form of the object prefixes differ from the regular object prefixes (§6.2.2.2) in that third person singular and plural objects are cross-indexed. In this section, I argue that this verb (or rather some earlier form) is the likely genesis of object cross-indexing in Momu via a grammaticalisation pathway that started with verb serialisation.\(^{17}\)

Synchronically, this verb can serialise as the second verb in a trivalent serial verb construction. In this construction, the (usually inanimate) theme-object is introduced by a ‘get’, ‘bring’ or ‘take’ verb (§13.3.3), and the experiencer-object is introduced by as ‘show’, as in (6.27). This ordering is compatible with the grammaticalisation of this verb as a verb-forming suffix.\(^{18}\) A synchronic patterning involving as ‘show’ as an initial verb is not currently attested.

\[(6.27)\]  
\[\text{Man } pana=nis.\]  
\[\text{bag get.one=show:3PLO[1|3SGS]}\]  
\[\text{‘She showed the bag to them.’}\]

There is a second related verbal number pair nafas/tyefas ‘show/reveal one/many’. While as ‘show to’ takes a recipient object, this second verb takes a theme object whose number is indicated by alternations in form. This second verb clearly shows the na-/tye- transitivising prefixes (§6.6.2.2, §6.6.2.3, §6.5.2) fused into its form. Excluding the transitivising prefixes, *fas is not a standalone verb, but it is possible that as is a common root to both ‘show’ verbs.

Table 6.6 compares the third person singular subject forms of the ‘show to’ paradigm with the object prefixes (§6.2.2.2). Table 6.7 compares these same forms for ‘show to’ with the the object cross-indexing verb-forming suffixes (§6.3.3.1). There is a striking similarity between was ‘show to me/you’

---

\(^{16}\) The recipient is the cross-referenced object for as ‘show to’. The theme is oblique.

\(^{17}\) Grammaticalisation via verb serialisation is extremely common in the area. See, for instance, the interesting case of classifiers developing from serial verbs in the nearby Imonda language (Seiler, 1985).

\(^{18}\) Nominal incorporation applies here as well. The bound root combined with this verb-forming suffix is also occasionally nominal in origin. For instance, for on/koyin ‘see one/many’, koy ‘eye’ is clearly the nominal origin of the plural form.
and *mas* ‘show to us/you’ and the corresponding object prefixes in Table 6.6. Similarly, compare those same forms to the corresponding verb-forming suffixes, and *nis* ‘show to them’ to the plural third person forms of the transitive verb-forming suffixes in Table 6.7.

<table>
<thead>
<tr>
<th>Object</th>
<th>'show to'</th>
<th>object prefixes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>was</td>
<td>wa-</td>
</tr>
<tr>
<td>2</td>
<td>mas</td>
<td>ma-</td>
</tr>
<tr>
<td>3</td>
<td>as</td>
<td>(unmarked)</td>
</tr>
</tbody>
</table>

Table 6.6: ‘s/he shows to’ paradigm and the object prefixes

<table>
<thead>
<tr>
<th>Object</th>
<th>Sg.</th>
<th>Pl.</th>
<th>Sg.</th>
<th>Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(w)a-</td>
<td>-man</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>wa-</td>
<td>-mar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>-en</td>
<td>-nin</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-er</td>
<td>-nina</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6.7: ‘s/he shows to’ paradigm and the transitive verb-forming suffixes

There are some problems that must be overcome before linking *as* ‘show to’ to the object prefixes, not the least of which is that I am at present unaware of any other languages grammaticalising ‘show’ as a means of object marking. The source of the final segment or segments in the verb-forming suffixes need to be motivated, and the loss of the final *s* for both the prefixes and suffixes also needs to be motivated.

The deletion of *s* for the prefixing forms is easiest to motivate. There is elsewhere some synchronic evidence of stem-final consonant deletion in the context of tight serialisation (§2.5.3). Motivating the final consonant (*n* or *r*) in the verb-forming suffixes is more difficult. As the source of the object marking prefixes or as verb-forming suffixes, the loss of the final *s* must be motivated. Instead, I appeal to more general processes applying to compounding. The final segment may have been lost for the prefixing forms through compounding with other verbs. *Ar* is a synchronic full verb ‘do to’. This is the likely source of the *r-set*. As noted in §6.3.3.3, several verbs have *an* as their stem-final segments. From this, I assume that there was once a verb *an*. Compounding with these verbs possibly produced the verb-forming suffixes.

Finally, most difficult to motivate, is the overt marking of third person
for both singular and plural number in the verb-forming suffixes but the lack of overt marking for the third person in the prefixing forms. This hypothesis requires motivating a serialisation pattern that has applied to local persons (i.e., first and second persons) but not to third persons.

First, it must be noted that object prefixing applies variably to different classes of verbs. Verbs formed via an object cross-indexing verb-forming suffix optionally (and redundantly) use object prefixing. Otherwise, the prefixes are obligatory for transitive verbs but determined on a lexical basis.

These verbs all encode verbal number, which coincidentally aligns in Momu with the preferential selection of an inanimate object—a preference that would not require local person distinctions. Many of the verbs that take an obligatory object prefix appear to have undergone a shift in semantics from that which previously did not allow animate or human (and, therefore, local) objects, to a sense that allows human referents.

The grammaticalisation pathway for the object prefixes that I propose is therefore as follows:

1. A verbal form that selects inanimate objects expands to include human objects

2. In order to introduce local objects, as ‘show’ was used in serialisation as V1 with these verbs. Third person objects were acceptable, however, and remained unmarked

3. Over time, the form reduced, with compounding reducing the form by removing the final consonant

4. In recognising paradigmatic parallelism of the prefixes, the prefixes came to apply optionally to verbs formed by a separate but parallel development of verb-forming suffixes

### 6.4 Transitive paradigms

Having established the various forms of argument indexation (§6.2) and the various ways in which verbs are formed (§6.3), this section briefly exemplifies what patterns of syncretism look like in full transitive paradigms, beginning with typical paradigms for high- and low-transitive verbs (§6.4.1, §6.4.2).
In §6.4.3 I examine several irregular transitive paradigms. These deviate in the way that objects are marked, and verbs are formed. The paradigms for on/koynin ‘see one/many’ (§6.4.3.3) and naakni/tyekni ‘be accompanied by one/many’ (§6.4.3.4) in particular contains features of both high- and low-transitive verbs.

6.4.1 High-transitive paradigm

High-transitive verbs are those verbs formed by object cross-indexing verb-forming suffixes (§3.1.2, §6.3.3.1). There are two sets, the n-set and the r-set, differentiated mostly by their final segment. A prototypical paradigm for each set is given in Table 6.8. The forms given are those spoken by conservative speakers, who differentiate first and second singular objects. Not indicated is optional stem-final consonant deletion (§2.5.3). Also not indicated is optional object prefixation (§6.2.2.2).

Syncretic cells are indicated by alternating shades of grey. Note that for the r-set, the first singular subject is differentiated from the third person singular subject for third plural objects.
Table 6.8: Full paradigms for *ekyen* ‘help’ and *kafokyer* ‘be afraid of’

<table>
<thead>
<tr>
<th></th>
<th>1SGO (-an)</th>
<th>2SGO (-wan)</th>
<th>3SGO (-en)</th>
<th>1PLO (-man)</th>
<th>2PLO (-man)</th>
<th>3PLO (-nin)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SGS (-o)</td>
<td>ek-wan</td>
<td>ek-en</td>
<td></td>
<td>ek-man</td>
<td>ek-man</td>
<td>ek-nin</td>
</tr>
<tr>
<td>2SGS (-f)</td>
<td>eky-an-f</td>
<td>eky-en-f</td>
<td>ek-man-f</td>
<td>ek-man-f</td>
<td>ek-nin-f</td>
<td></td>
</tr>
<tr>
<td>3SGS (-o)</td>
<td>eky-an</td>
<td>eky-en</td>
<td>ek-man</td>
<td>ek-man</td>
<td>ek-nin</td>
<td></td>
</tr>
<tr>
<td>1DUS (-rai)</td>
<td>ek-wan-rai</td>
<td>eky-en-mi</td>
<td>ek-man-mi</td>
<td>ek-man-mi</td>
<td>ek-nin-mi</td>
<td></td>
</tr>
<tr>
<td>2DUS (-mi)</td>
<td>eky-an-mi</td>
<td>eky-en-mi</td>
<td>ek-man-mi</td>
<td>ek-nin-mi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3DUS (-fi)</td>
<td>eky-an-fi</td>
<td>eky-en-fi</td>
<td>ek-man-fi</td>
<td>ek-nin-fi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1PLS (-t)</td>
<td>ek-wan-t</td>
<td>eky-en-t</td>
<td>ek-man-t</td>
<td>ek-nin-t</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2PLS (-m)</td>
<td>eky-an-m</td>
<td>eky-en-m</td>
<td>ek-man-m</td>
<td>ek-nin-m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3PLS (-si)</td>
<td>eky-an-si</td>
<td>ek-wan-si</td>
<td>eky-en-si</td>
<td>ek-man-si</td>
<td>ek-nin-si</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1SGO (-ar)</th>
<th>2SGO (-war)</th>
<th>3SGO (-er)</th>
<th>1PLO (-mar)</th>
<th>2PLO (-mar)</th>
<th>3PLO (-ninta(i))</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SGS (-o)</td>
<td>kafok-war</td>
<td>kafokyer-er</td>
<td>kafok-mar</td>
<td>kafok-mar</td>
<td>kafok-ninta</td>
<td>kafok-nintai</td>
</tr>
<tr>
<td>2SGS (-f)</td>
<td>kafokyer-ar-f</td>
<td>kafokyer-er</td>
<td>kafok-mar-f</td>
<td>kafok-mar-f</td>
<td>kafok-ninta-f</td>
<td></td>
</tr>
<tr>
<td>3SGS (-o)</td>
<td>kafokyer-ar</td>
<td>kafok-war</td>
<td>kafokyer-er</td>
<td>kafok-mar</td>
<td>kafok-mar</td>
<td>kafok-nintai</td>
</tr>
<tr>
<td>1DUS (-rai)</td>
<td>kafok-war-rai</td>
<td>kafokyer-er</td>
<td>kafok-mar</td>
<td>kafok-mar</td>
<td>kafok-nintai</td>
<td>kafok-ninta-rai</td>
</tr>
<tr>
<td>2DUS (-mi)</td>
<td>kafokyer-ar-mi</td>
<td>kafokyer-er-mi</td>
<td>kafok-mar-mi</td>
<td>kafok-mar-mi</td>
<td>kafok-ninta-mi</td>
<td></td>
</tr>
<tr>
<td>3DUS (-fi)</td>
<td>kafokyer-ar-fi</td>
<td>kafok-war-fi</td>
<td>kafokyer-er-fi</td>
<td>kafok-mar-fi</td>
<td>kafok-mar-fi</td>
<td>kafok-ninta-fi</td>
</tr>
<tr>
<td>1PLS (-t)</td>
<td>kafok-war-t</td>
<td>kafokyer-er-t</td>
<td>kafok-mar-fi</td>
<td>kafok-mar-fi</td>
<td>kafok-ninta-t</td>
<td></td>
</tr>
<tr>
<td>2PLS (-m)</td>
<td>kafokyer-ar-m</td>
<td>kafokyer-er-m</td>
<td>kafok-mar-m</td>
<td>kafok-mar-m</td>
<td>kafok-ninta-m</td>
<td></td>
</tr>
<tr>
<td>3PLS (-si)</td>
<td>kafokyer-ar-si</td>
<td>kafok-war-si</td>
<td>kafokyer-er-si</td>
<td>kafok-mar-si</td>
<td>kafok-mar-si</td>
<td>kafok-ninta-si</td>
</tr>
</tbody>
</table>
6.4.2 Low-transitive paradigms

Low-transitive paradigms are the subset of transitive verbs that remain once high-transitive verbs are removed (§3.1.2.2). This is a mixed class that includes mono-morphemic verbs, verbs formed with verb-forming suffixes that do not cross-index objects, and verbs with stem alternations that pattern for verbal number (which may also be derived or mono-morphemic).

A minority of low-transitive verbs allow object prefixation (§6.2.2.2). Most commonly these are polysemous extensions of verbs that do not otherwise select for human objects. The object prefixes shown here are the more conservative form where first and second singular objects are differentiated.

Glide- or vowel-final stems occur amongst low-transitive verbs, and these differentiate first from third person singular subjects via rounding (§2.5.1.3).

Here I exemplify three different patterns of syncretism amongst low-transitive verbs. Paradigms for the verb pair nepri/tyepri ‘take one/many away’ and fenoi ‘leave’ are given in Table 6.9. The paradigm for salimar ‘send’ (from tp salim ‘raise (of child)’) is given in Table 6.10. This demonstrates a verb with a consonant-final stem which does not differentiate first from third person singular subjects.

The paradigm\footnote{I defer the question of whether one considers these separate verbs (perhaps under a single lemma) or stem alternations in a single paradigm to §6.6.} for the verb pair nepri/tyepri ‘take one/many away’ contains the fewest number of syncretisms of all transitive paradigms, despite lacking object cross-indexation for third person objects. First and second person objects are only syncretic for third person subjects.

The main difference between nepri/tyepri ‘take one/many away’ and fenoi ‘leave’ is verbal number. The lack of verbal number for fenoi means that number is not distinguished for third person objects for each combination of subject value.

The verb paradigm for salimar ‘send’ in Table 6.10 has a consonant-final stem and so does not differentiate first from third person singular subject. The only difference between the patterns of syncretism in the paradigm for fenoi ‘leave’ and salimar ‘send’ is that combinations of first or third person singular subjects acting upon third singular or plural objects are all coded by the one form salimar.
### Table 6.9: Full paradigms for nepri/tyepri ‘take one/many away’ and fenoi ‘leave’

<table>
<thead>
<tr>
<th>nepri ‘carry one’</th>
<th>tyepri ‘carry many’</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1SGO (a-)</strong></td>
<td>wa-nepri</td>
</tr>
<tr>
<td><strong>2SGO (wa-)</strong></td>
<td>nepri</td>
</tr>
<tr>
<td><strong>3SGO (ø-)</strong></td>
<td>ma-tyepri</td>
</tr>
<tr>
<td><strong>1PLO (ma-)</strong></td>
<td>tyepri</td>
</tr>
<tr>
<td><strong>2PLO (ma-)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>3PLO (ø-)</strong></td>
<td></td>
</tr>
</tbody>
</table>

| 1SGS (ø-) | wa-nepri | nepri |
| 2SGS (ø-) | ma-tyepri | tyepri |
| 3SGS([+round]) | ma-tyepri | tyepri |

| 1DUS (-rai) | wa-nepri-rai | nepri-rai |
| 2DUS (-mi) | ma-tyepri-mi | tyepri-mi |
| 3DUS (-fi) | ma-tyepri-fi | tyepri-fi |

| 1PLS (-t) | wa-nepri-t | nepri-t |
| 2PLS (-m) | ma-tyepri-m | tyepri-m |
| 3PLS (-si) | ma-tyepri-si | tyepri-si |

<table>
<thead>
<tr>
<th>‘leave’</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1SGO (a-)</strong></td>
</tr>
<tr>
<td><strong>2SGO (wa-)</strong></td>
</tr>
<tr>
<td><strong>3SGO (ø-)</strong></td>
</tr>
<tr>
<td><strong>1PLO (ma-)</strong></td>
</tr>
<tr>
<td><strong>2PLO (ma-)</strong></td>
</tr>
<tr>
<td><strong>3PLO (ø-)</strong></td>
</tr>
</tbody>
</table>

| 1SGS (ø-) | wa-fenoi | fenoi |
| 2SGS (ø-) | ma-fenoi | fenoi |
| 3SGS([+round]) | ma-fenoi |

| 1DUS (-rai) | wa-fenoi-rai | fenoi-rai |
| 2DUS (-mi) | ma-fenoi-mi | fenoi-mi |
| 3DUS (-fi) | ma-fenoi-fi | fenoi-fi |

| 1PLS (-t) | wa-fenoi-t | fenoi-t |
| 2PLS (-m) | ma-fenoi-m | fenoi-m |
| 3PLS (-si) | ma-fenoi-si | fenoi-si |

<table>
<thead>
<tr>
<th>‘leave’</th>
<th>‘leave’</th>
<th>‘leave’</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1SGO (a-)</strong></td>
<td>wa-fenoi</td>
<td>fenoi</td>
</tr>
<tr>
<td><strong>2SGO (wa-)</strong></td>
<td>fenoi</td>
<td></td>
</tr>
<tr>
<td><strong>3SGO (ø-)</strong></td>
<td>ma-fenoi</td>
<td>fenoi</td>
</tr>
<tr>
<td><strong>1PLO (ma-)</strong></td>
<td>fenoi</td>
<td></td>
</tr>
<tr>
<td><strong>2PLO (ma-)</strong></td>
<td>fenoi</td>
<td></td>
</tr>
<tr>
<td><strong>3PLO (ø-)</strong></td>
<td>fenoi</td>
<td></td>
</tr>
<tr>
<td><strong>1SGS (ø-)</strong></td>
<td>wa-nepri</td>
<td>fenoi</td>
</tr>
<tr>
<td><strong>2SGS (ø-)</strong></td>
<td>ma-fenoi</td>
<td>fenoi</td>
</tr>
<tr>
<td>**3SGS([+round])</td>
<td>ma-fenoi</td>
<td></td>
</tr>
<tr>
<td>**1DUS (-rai)</td>
<td>wa-nepri-rai</td>
<td>fenoi-rai</td>
</tr>
<tr>
<td>**2DUS (-mi)</td>
<td>ma-fenoi-mi</td>
<td>fenoi-mi</td>
</tr>
<tr>
<td>**3DUS (-fi)</td>
<td>ma-fenoi-fi</td>
<td>fenoi-fi</td>
</tr>
<tr>
<td>**1PLS (-t)</td>
<td>wa-nepri-t</td>
<td>fenoi-t</td>
</tr>
<tr>
<td>**2PLS (-m)</td>
<td>ma-fenoi-m</td>
<td>fenoi-m</td>
</tr>
<tr>
<td>**3PLS (-si)</td>
<td>ma-fenoi-si</td>
<td>fenoi-si</td>
</tr>
<tr>
<td></td>
<td>1SGO (a-)</td>
<td>2SGO (wa-)</td>
</tr>
<tr>
<td>-------</td>
<td>-----------</td>
<td>------------</td>
</tr>
<tr>
<td>1SGS (-ø)</td>
<td>wa-salim-ar</td>
<td>salim-ar</td>
</tr>
<tr>
<td>2SGS (-f)</td>
<td>a-salim-ar-f</td>
<td>salim-ar-f</td>
</tr>
<tr>
<td>3SGS(-ø)</td>
<td>a-salim-ar</td>
<td>wa-salim-ar</td>
</tr>
<tr>
<td>1DUS (-rai)</td>
<td>wa-salim-ar-rai</td>
<td>salim-ar-rai</td>
</tr>
<tr>
<td>2DUS (-mi)</td>
<td>a-salim-ar-mi</td>
<td>salim-ar-mi</td>
</tr>
<tr>
<td>3DUS (-fi)</td>
<td>a-salim-ar-fi</td>
<td>wa-salim-ar-fi</td>
</tr>
<tr>
<td>1PLS (-t)</td>
<td>wa-salim-ar-r</td>
<td>salim-ar-r</td>
</tr>
<tr>
<td>2PLS (-m)</td>
<td>a-salim-ar-m</td>
<td>salim-ar-m</td>
</tr>
<tr>
<td>3PLS (-si)</td>
<td>a-salim-ar-si</td>
<td>wa-salim-ar-si</td>
</tr>
</tbody>
</table>
6.4.3 Irregular Paradigms

In the previous subsection, I examined the major patterns of syncretism within transitive paradigms. In this sub-section we will look at several different irregular patterns with respect to syncretism, affixal inconsistency,\textsuperscript{20} alternation and suppletion. Many of the verbs examined here have at least the remnants of verbal number. Some show lexical splits of various kinds (Corbett, 2015). Syncretism here is described in terms of further divergences from the expected syncretic patterns described for more typical high-transitive (§6.4.1) and low-transitive paradigms (§6.4.2).

6.4.3.1 ‘give’ paradigms

Throughout the section on object cross-indexation (§6.2.2), I discussed the development of a local/third singular person person distinction. However, the distinction between first and second singular objects is consistently preserved in the ditransitive verb pair no/tu ‘give one/many’. The full paradigms\textsuperscript{21} for ‘give’ is given in Table 6.11. These paradigms could be considered irregular but since they are the only trivalent verbs of their kind, I simply consider them unique.

\textsuperscript{20}Affixal inconsistency is a term taken from Corbett (2015) to refer the regularity with which an inflectional affix patterns both within and across paradigms. For instance, if a given inflectional category is ordinarily expressed by a single suffix then deviations from this pattern would be affixal inconsistency. This might sometimes include prefixing instead of suffixing across the full paradigm, or in some cases using multiple affixes instead of one.

\textsuperscript{21}I defer the question of paradigmaticity of verbal number pairs to §6.6. In this thesis, I treat such verbal pairs as separate paradigms, but at the very least the reader may prefer to consider these a single lemma for now.
To the extent that phonemic material cross-indexing objects can be extracted from the paradigm, remnants of the verb-forming suffixes, or object

<table>
<thead>
<tr>
<th></th>
<th>1sgIO (ra)</th>
<th>2sgIO (oa)</th>
<th>3sgIO (o)</th>
<th>1plIO (-man)</th>
<th>2plIO (-man)</th>
<th>3plIO (ni-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sgS (-ø)</td>
<td>noai</td>
<td>nui</td>
<td></td>
<td>neman</td>
<td></td>
<td>niniu</td>
</tr>
<tr>
<td>2sgS (-f)</td>
<td>nera-f</td>
<td>no-f</td>
<td>ne -ma-f</td>
<td></td>
<td>neman</td>
<td>nino-f</td>
</tr>
<tr>
<td>3sgS([-round])</td>
<td>nera</td>
<td>noa</td>
<td>no</td>
<td>neman</td>
<td>ne -ma-f</td>
<td>nino</td>
</tr>
<tr>
<td>1duS (-rai)</td>
<td>noa-rai</td>
<td>no-rai</td>
<td></td>
<td>nema-rai</td>
<td></td>
<td>nino-rai</td>
</tr>
<tr>
<td>2duS (-mi)</td>
<td>nera-mi</td>
<td>no-mi</td>
<td>nema-mi</td>
<td></td>
<td>nino-mi</td>
<td></td>
</tr>
<tr>
<td>3duS (-fi)</td>
<td>nera-fi</td>
<td>noa-fi</td>
<td>no-fi</td>
<td>nema-fi</td>
<td></td>
<td>nino-fi</td>
</tr>
<tr>
<td>1plS (-t)</td>
<td>noa-t</td>
<td>no-t</td>
<td></td>
<td>nema-t</td>
<td></td>
<td>nino-t</td>
</tr>
<tr>
<td>2plS (-m)</td>
<td>nera-m</td>
<td>no-m</td>
<td>nema-m</td>
<td></td>
<td>nino-m</td>
<td></td>
</tr>
<tr>
<td>3plS (-si)</td>
<td>nera-si</td>
<td>noa-si</td>
<td>no-si</td>
<td>nema-si</td>
<td></td>
<td>nino-si</td>
</tr>
</tbody>
</table>

Table 6.11: Full paradigms for 'give one/many'

<table>
<thead>
<tr>
<th></th>
<th>1sgIO (ra)</th>
<th>2sgIO (ua)</th>
<th>3sgIO (u)</th>
<th>1plIO (-man)</th>
<th>2plIO (-man)</th>
<th>3plIO (ti-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sgS (-ø)</td>
<td>tuai</td>
<td>tu</td>
<td></td>
<td>ti -man</td>
<td></td>
<td>ti -nu</td>
</tr>
<tr>
<td>2sgS (-f)</td>
<td>tira-f</td>
<td>tu-f</td>
<td>tima-f</td>
<td></td>
<td></td>
<td>ti -no-f</td>
</tr>
<tr>
<td>3sgS([-round])</td>
<td>tira</td>
<td>tua</td>
<td>tu</td>
<td>ti -man</td>
<td></td>
<td>ti -no-f</td>
</tr>
<tr>
<td>1duS (-rai)</td>
<td>tua-rai</td>
<td>tu-rai</td>
<td>ti -ma-ri</td>
<td></td>
<td>ti -ra-ri</td>
<td>ti -no-ri</td>
</tr>
<tr>
<td>2duS (-mi)</td>
<td>tira-mi</td>
<td>tu-mi</td>
<td>ti -ma-mi</td>
<td></td>
<td>ti -no-mi</td>
<td></td>
</tr>
<tr>
<td>3duS (-fi)</td>
<td>tira-fi</td>
<td>tua-fi</td>
<td>tu-fi</td>
<td>ti -ma-fi</td>
<td></td>
<td>ti -no-fi</td>
</tr>
<tr>
<td>1plS (-t)</td>
<td>tua-t</td>
<td>tu-t</td>
<td>ti -ma-t</td>
<td></td>
<td>ti -no-t</td>
<td></td>
</tr>
<tr>
<td>2plS (-m)</td>
<td>tira-m</td>
<td>tu-m</td>
<td>ti -ma-m</td>
<td></td>
<td>ti -no-m</td>
<td></td>
</tr>
<tr>
<td>3plS (-si)</td>
<td>tira-si</td>
<td>tua-si</td>
<td>tu-si</td>
<td>ti -ma-si</td>
<td></td>
<td>ti -no-si</td>
</tr>
</tbody>
</table>
prefixes can be seen across the paradigm. In particular, the local plural object verb-forming suffix (-man) is shown in bold in Table 6.11. Comparing the third singular and third plural object forms of the singular verb (no ‘give one’) the difference appears to be a prefix \textit{ni-} on the plural form that resembles the third plural object verb-forming suffix -nin. However, the pattern is not the same for the plural verb (tu ‘give many’) where the prefixed portion is instead ti- and the root that this is applied to is the same as the singular verb form nui rather than the plural form tui. The second singular object forms of the verbs noa(i)/tua(i) ‘(I) / s/he gives one/many to you’ also appear to have remnants of the corresponding object prefix/suffix wa-/-wan.

Syncretism within the paradigm is limited to third person subjects acting on first or second person recipients (labelled IO in Table 6.11). The grey cells in Table 6.11 contain the same patterns of syncretism seen in the paradigm for \textit{tyepri} ‘take many away’ in Table 6.9 on page 208. A major difference between the standard high-transitive paradigm and the ‘give’ paradigms, is that first and third person singular subjects are usually distinguished. This distinction is made only when the stem has a final \textit{i} or \textit{y} segment suitable for the rounding process that marks a third person singular subject (§6.2.1, §2.5.1.3)). Only for the local plural object (seemingly formed with -man) does the right edge of the word not contain a segment suitable for indicating a third person subject via rounding, hence the syncretism matches that of a regular high-transitive verb as demonstrated in §6.4.1 in Table 6.8 on page 206.

In his survey of Papuan languages’ coding of \textit{give} verbs, Reesink (2013) does not highlight a pattern of stem alternation for the number of the theme object, but from the data in that paper, it appears that Momu is not alone in coding theme and recipient in this way. For instance, the Eastern Trans-Fly language Gizrza (Bodegraven and Bodegraven, 2005; Reesink, 2013) has both affixal indexing of the recipient and stem alternation for the number of the theme.

Reesink (2013) devotes more space to the discussion of suppletive stems for person (and sometimes number) of the recipient to a ‘give’ verb. This is

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212In some ways, the difference between the initial segments of third plural object forms of the verb pair \textit{nino/tino} ‘give one/many to them’ looks like remnants of the transitivising prefixes \textit{na-/tye-}. The pair are more clearly visible in another irregular paradigm—\textit{naakni/tyekni} ‘accompany one/many’ (Table 6.14 on page 221).
a more common pattern amongst the languages of PNG, and more broadly (Comrie, 2003). Discussion of or even identification of the alternate “suppletive” pattern for the number of the theme is limited by the many ways in which grammar authors do or don’t identify verbal number. For instance, when verbal number is limited to “suppletion”, this misses the possibility that verbal number may be marked by derivational affixes (as it is in Momu) alongside less common stem alternations. At other times verbal number is identified in the literature as a form of absolutive agreement (this usually stands in contrast to otherwise regular accusative patterning within the language).

I suspect that one of the main reasons that verbal number has not been more commonly identified for ‘give’ verbs is that it is not always identified as a case of verbal number or pluractionality. In supplementary materials to his paper, Reesink (2013) records several languages that appear to code verbal number for the ‘give’ verb(s) in several interesting ways: Koiari marks number via affixes on an absolutive basis. Siroi expresses verbal number via stem alternation but marks plural recipients via a suffix. Kamasau has a unique system in that stems alternate on the basis of both number and gender for singular number (or this is achieved via suffixing) (Sanders and Sanders, 1994). This is less likely a system of verbal number since gender is more clearly an inflectional category. Interestingly in other trivalent constructions in Kamasau, this alternation marks the number of the (possibly inanimate) theme, and the recipient is unmarked, but for ‘give’ this pattern is not employed. Reesink (2013) analyses Kiwai as possibly alternating for the number of the recipient, rather than the theme. This is because there is an example where “agreement” doesn’t align. Note though that use of verbal number is ‘optional’ in some languages (Corbett, 2000; Durie, 1986), unlike agreement. Namia has absolutive-patterned marking of number via stem alternates which extends to the ‘give’ verb. These verbs alternate for the number of the recipient as well. Orya has stems alternating for the number of the theme. Seiler (1985) describes the absolutive-patterned marking of dual and plural number on verbs as a form of agreement in Imonda, but it is possibly verbal number as well. The ‘give’ verb (or verb complex including classifiers) in Imonda not only selects for the number of the theme, but also employs classifiers selecting for other properties of the theme. Often languages with verbal number pattern such that they can also regularly select
for other properties as well (Durie, 1986).

### 6.4.3.2 ‘show’ and ‘listen’ paradigms

The transitive verbs as ‘show’ and an(e)bun ‘listen’ include material at the beginning of the verb that differentiates the same person and number values as the verb-forming suffixes. Recall that verbs that fully cross-index objects usually employ verb-forming suffixes. Object prefixes usually only distinguish local objects. Table 6.12 gives paradigms restricted to singular subjects for these irregular verbs. These verbs show exactly the same pattern of syncretism as n-set high-transitive verbs. However, they achieve this with forms that appear to prefix object cross-indexes rather than with verb-forming suffixes. These are “level two affixal inconsistencies” (Corbett, 2015). That is, this is an affixal inconsistency between lexical paradigms in the otherwise regular patterning of object cross-indexation as expressed by verb-forming suffixes (or prefixes for that matter).

---

23The paradigm for an(e)bun ‘listen’ poses an analytical problem that leads me to hesitate on its surface form—hence the parenthesised vowel (e) in the middle of the word. There is a form bun ‘hear (it)’ which functions intransitively, or transitively with a non-human object, that is clearly related to an(e)bun. Exactly how it is related remains unclear. There are two possible analyses. One is that this verb preserves the compound of the verb that is the source of object cross-indexation for both prefixes and verb-forming suffixes (§6.2.2.1, §6.3.3.1). The form of this lexeme would include the following variants: wan, an, man, and nin, and the schwa vowel between these and the root bun would then be epenthetic. The problem with this hypothesis is that nowhere else is it preserved in this way as a prefix. The alternative analysis would be that bun is transitivised with the (singular) prefix na- (§6.5.2). The problem with this is that this prefix usually alternates with a plural form tye- which, in this case, is not applied to the plural object forms. If this analysis is correct, then the transitivised form would have to have been fossilised in this verb paradigm before the presumed later development of the transitivising prefixes na-/tye-.
Table 6.12: Full paradigms for *as* 'show' and *an(e)bun* 'listen to'

<table>
<thead>
<tr>
<th></th>
<th>1sgO (<em>wa</em>)</th>
<th>2sgO (<em>wa</em>)</th>
<th>3sgO (<em>a</em>)</th>
<th>1plo (<em>ma</em>)</th>
<th>2plo (<em>ma</em>)</th>
<th>3plo (<em>ni</em>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sgS (-ø)</td>
<td><em>wa</em></td>
<td><em>wa</em></td>
<td><em>as</em></td>
<td><em>mas</em></td>
<td><em>nis</em></td>
<td></td>
</tr>
<tr>
<td>2sgS (-f)</td>
<td><em>was-f</em></td>
<td><em>as-f</em></td>
<td><em>mas-f</em></td>
<td><em>nis-f</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3sgS (-ø)</td>
<td><em>wa</em></td>
<td><em>wa</em></td>
<td><em>as</em></td>
<td><em>mas</em></td>
<td><em>nis</em></td>
<td></td>
</tr>
<tr>
<td>1duS (-rai)</td>
<td><em>wa</em></td>
<td><em>wa</em></td>
<td><em>as-rai</em></td>
<td><em>mas-rai</em></td>
<td><em>nis-rai</em></td>
<td></td>
</tr>
<tr>
<td>2duS (-mi)</td>
<td><em>wa</em></td>
<td><em>wa</em></td>
<td><em>as-mi</em></td>
<td><em>mas-mi</em></td>
<td><em>nis-mi</em></td>
<td></td>
</tr>
<tr>
<td>3duS (-fi)</td>
<td><em>wa</em></td>
<td><em>wa</em></td>
<td><em>as-fi</em></td>
<td><em>mas-fi</em></td>
<td><em>nis-fi</em></td>
<td></td>
</tr>
<tr>
<td>1pls (-t)</td>
<td><em>wa</em></td>
<td><em>wa</em></td>
<td><em>as-t</em></td>
<td><em>mas-t</em></td>
<td><em>nis-t</em></td>
<td></td>
</tr>
<tr>
<td>2pls (-m)</td>
<td><em>wa</em></td>
<td><em>wa</em></td>
<td><em>as-m</em></td>
<td><em>mas-m</em></td>
<td><em>nis-m</em></td>
<td></td>
</tr>
<tr>
<td>3pls (-si)</td>
<td><em>wa</em></td>
<td><em>wa</em></td>
<td><em>as-si</em></td>
<td><em>mas-si</em></td>
<td><em>nis-si</em></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1sgO (<em>wa</em>)</th>
<th>2sgO (<em>wa</em>)</th>
<th>3sgO (<em>a</em>)</th>
<th>1plo (<em>ma</em>)</th>
<th>2plo (<em>ma</em>)</th>
<th>3plo (<em>ni</em>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sgS (-ø)</td>
<td><em>an(e)bun</em></td>
<td><em>an(e)bun</em></td>
<td><em>an(e)bun</em></td>
<td><em>man(e)bun</em></td>
<td><em>nin(e)bun</em></td>
<td></td>
</tr>
<tr>
<td>2sgS (-f)</td>
<td><em>wan(e)bun-f</em></td>
<td><em>an(e)bun-f</em></td>
<td><em>an(e)bun-f</em></td>
<td><em>man(e)bun-f</em></td>
<td><em>nin(e)bun-f</em></td>
<td></td>
</tr>
<tr>
<td>3sgS (-ø)</td>
<td><em>wan(e)bun</em></td>
<td><em>wan(e)bun</em></td>
<td><em>an(e)bun</em></td>
<td><em>man(e)bun</em></td>
<td><em>nin(e)bun</em></td>
<td></td>
</tr>
<tr>
<td>1duS (-rai)</td>
<td><em>wan(e)bun-rai</em></td>
<td><em>an(e)bun-rai</em></td>
<td><em>man(e)bun-rai</em></td>
<td><em>nin(e)bun-rai</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2duS (-mi)</td>
<td><em>wan(e)bun-mi</em></td>
<td><em>an(e)bun-mi</em></td>
<td><em>man(e)bun-mi</em></td>
<td><em>nin(e)bun-mi</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3duS (-fi)</td>
<td><em>wan(e)bun-fi</em></td>
<td><em>wan(e)bun-fi</em></td>
<td><em>an(e)bun-fi</em></td>
<td><em>man(e)bun-fi</em></td>
<td><em>nin(e)bun-fi</em></td>
<td></td>
</tr>
<tr>
<td>1pls (-t)</td>
<td><em>wan(e)bun-t</em></td>
<td><em>wan(e)bun-t</em></td>
<td><em>man(e)bun-t</em></td>
<td><em>nin(e)bun-t</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2pls (-m)</td>
<td><em>wan(e)bun-m</em></td>
<td><em>wan(e)bun-m</em></td>
<td><em>man(e)bun-m</em></td>
<td><em>nin(e)bun-m</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3pls (-si)</td>
<td><em>wan(e)bun-si</em></td>
<td><em>wan(e)bun-si</em></td>
<td><em>wan(e)bun-si</em></td>
<td><em>man(e)bun-si</em></td>
<td><em>nin(e)bun-si</em></td>
<td></td>
</tr>
</tbody>
</table>
These are the only verbs that clearly show third person object distinctions in which the material distinguishing them occurs at the beginning of the form. As with other object cross-indexation, only local person is distinguished. Interestingly, however, the third person singular object forms correspond to the more conservative object prefix a- ‘first person singular object’ (§6.2.2.1).24

6.4.3.3 ‘see’ paradigm

The verb (aw)on/koynin ‘see/watch/visit one/many’ has both stem alternation and cross-indexation. Because verb-forming suffixes are employed for part of the paradigm, I treat this as a single integrated high-transitive verb paradigm.

The verb is displayed alongside the related counterpart on ‘see/perceive/understand’ in Table 6.13 for comparative purposes. Note that there is some synchronic variation amongst speaker in the third person singular object forms. Speakers sometimes use the third person singular object forms shown in the table, but appear to be shifting towards using the same form as the counterpart on ‘see’ in that portion of the paradigm. That is, this appears to be an instance of invasive suppletion (Corbett, 2007, p13).

24The more conservative form of object prefixes is a- ‘1sgO’, wa- ‘2sgO’, with third person singular unmarked. Compare this with the initial segments on the verbs in Table 6.12: wa ‘1|2sgO’ and a- ‘3sgO’.
Table 6.13: Full paradigm for *on/koynin* ‘see/watch/visit one/may’ and *on* ‘see/perceive/understand’

<table>
<thead>
<tr>
<th></th>
<th>1SGO (wa-)</th>
<th>2SGO (wa-)</th>
<th>3SGO (a-)</th>
<th>1PLO (-man)</th>
<th>2PLO (-man)</th>
<th>3PLO (-nin)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SGS</td>
<td>wa wan</td>
<td>wa wan</td>
<td>awon</td>
<td>koy-man</td>
<td>koy-nin</td>
<td>koy-nin</td>
</tr>
<tr>
<td>2SGS</td>
<td>wa wan-f</td>
<td>awon-f</td>
<td>koy-man-f</td>
<td>koy-nin-f</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3SGS</td>
<td>wa wan</td>
<td>wa wan</td>
<td>awon</td>
<td>koy-man</td>
<td>koy-man</td>
<td>koy-nin</td>
</tr>
<tr>
<td>1DUS</td>
<td>wa wan-rai</td>
<td>awon-rai</td>
<td>koy-man-rai</td>
<td>koy-nin-rai</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2DUS</td>
<td>wa wan-mi</td>
<td>awon-mi</td>
<td>koy-man-mi</td>
<td>koy-nin-mi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3DUS</td>
<td>wa wan-fi</td>
<td>wa wan-fi</td>
<td>awon-fi</td>
<td>koy-man-fi</td>
<td>koy-nin-fi</td>
<td></td>
</tr>
<tr>
<td>1PLS</td>
<td>wa wan-t</td>
<td>awon-t</td>
<td>koy-man-t</td>
<td></td>
<td>koy-nin-t</td>
<td></td>
</tr>
<tr>
<td>2PLS</td>
<td>wa wan-m</td>
<td>awon-m</td>
<td>koy-man-m</td>
<td></td>
<td>koy-nin-m</td>
<td></td>
</tr>
<tr>
<td>3PLS</td>
<td>wa wan-st</td>
<td>wa wan-st</td>
<td>awon-st</td>
<td>koy-man-st</td>
<td>koy-nin-st</td>
<td></td>
</tr>
</tbody>
</table>
Stem alternation and object cross-indexing are also present for the ditransitive verb pair no/tu ‘give one/many’ (§6.4.3.1), but there is a major difference between ‘give’ and ‘see/watch/visit’. For ‘give’, number as indexed by stem alternation and number as encoded by object cross-indexation diverge. The choice of stem selects for or indexes a singular or plural theme-object and the recipient-indirect-object is cross-indexed. For ‘see/watch/visit’ stem alternation and object cross-indexation align on the theme-object.

The means used to achieve object indexation varies depending on the stem. The singular stem employs irregular object prefixes of the kind seen for ‘show’ and ‘listen’ in §6.4.3.2. The plural stem (with the same form as koy ‘eye’) employs plural object cross-indexing verb-forming suffixes (-man ‘plural local object’ and -nin ‘plural third person object’).

As mentioned in the opening of this subsection, there is some variation amongst speakers in the third singular object portion of the paradigm. These values appear to be being overwritten by the intransitive verb on ‘see’, leading to the development of a genuinely suppletive pattern.

I will attempt here to reconstruct the development of such an irregular paradigm. Overall, I propose that this is an example of a verb progressing from a low-transitive verb to a (nearly uniform) high-transitive verb. Intermediary stages include: (1) the development of a plural counterpart, (2) a split in the original broad meaning of the lexeme, (3) the invasion of object indexation, and finally (4) the current synchronic state: a genuine case of suppletion as the original form invades the high-transitive paradigm.

To begin, I propose that there was a single form ony ‘see, perceive, understand (s.t.)’ which covered all the senses of ‘see/watch/visit’ and ‘perceive/understand’. This form later lost its final glide, but a trace of this remains in some compounds. At this earlier stage there was no separate plural form of the verb.

The development of a plural form was the likely next stage. Koynin ‘see many’ is in fact a straightforward verbalisation of koy ‘eye’, and -nin. The verb-forming suffix is synchronically used to form either plural counterparts for some verbal number pairs (§6.3.3.2) or as an third plural object indexing form. Unlike the singular counterpart, the plural counterpart is used in a

---

25Based on compounds that appear to have preserved an earlier form of the verb, the original form of the verb may have include a final vowel ony(i). The final glide (and possibly additional final vowel i) of the hypothesised verb ony is preserved in forms like the lexicalised compound onyipin ‘face towards’ (where pin is synchronically ‘one goes’).
narrower sense to refer to “looking at multiple referents”, while the original form’s meaning now narrows to “see/perceive/understand” and also “see one”.

The next development was the object prefixes (arising from a serial verb construction, §6.3.5). For the singular form on, this then splits the senses of the one verb into two separate forms. Wawan/awon is used for “see (local / third person human referent)” while on(y) is used for “perceive, understand”. The prefix wa- here additionally triggers harmonisation in the subsequent vowel such that on becomes wan in wawan. The third singular a- reflects the same patterning we saw preserved in the ‘show’ and ‘listen’ paradigms above.

I argue in §6.6.5 that verbal number pairs often begin to be reanalysed as high-transitive verbs as object prefixes become acceptable, and suffixing forms invade the paradigm. It is unlikely that verbal number would have developed in the presence of (some) object indexes.

This brings us up to present day usage, where there appears to be some variability in usage. In early paradigm elicitation, the third singular object forms were usually given to me as awon ‘see him/her’. However, I rarely found it used. There are just a couple of real examples of the awon form across my corpus. Instead, the on form is far more frequently used in its place. The form is still used particularly as a complement-taking predicate (§16.1.7, §16.1.8), but it appears to be invading the third singular object cell of the separate transitive paradigm. The development of verbal suppletion appears to be well underway. Incidentally, this suppletion just happens to reflect the patterning of object prefixation that we see on low-transitive verbs (i.e., local objects are marked and third person objects are unmarked).

The emergence of On/koynin ‘see one/many’ as a high-transitive verb is the end point of the process I lay out above. In §6.6.5 I describe other cases of object prefixing gradually converting to a high-transitive paradigm. The logical endpoint is the movement of a low-transitive verb into the class of high-transitive verbs. Naakni/tyekni ‘be accompanied by one/many’ appears to be another partly formed case of conversion to high-transitive verbs.

6.4.3.4 ‘be accompanied by’ paradigms

Like the ‘see’ paradigms, the verb naakni/tyekni ‘accompanied by one/many’ also demonstrates stem alternation. Like on/koynin ‘see’ I treat this as a high-transitive verb, albeit one that is perhaps still partway towards be-
coming a regular object cross-indexing paradigm. Here, the transitivising prefixes na-/tye- (§6.5.2) are fused into the form of the verb. These transitivising prefixes are used elsewhere to derive verbal number pairs from the same stem. The root of the form may be ak ‘reciprocal particle’, verbalised with the intransitiviser -ni (§6.3.2), and then transitivised with na-/tye- (§6.5.2).

Object cross-indexation follows the distinctions made by object prefixes: local persons are marked, while third persons are not. However, the nature of that marking contrasts between plural and singular objects. For the singular portion of the paradigm, local objects are obligatorily marked by a prefix. For the plural paradigm, local objects are optionally marked by a prefix but are always marked by the verb-forming suffix -man ‘first/second plural object’. Between the two paradigms, this is another case of affixal inconsistency (Corbett, 2015). Within the plural paradigm, there is a further split between local and third person object forms. The third person plural forms mirror the patterning of the singular paradigm in that there are no transitive verb-forming suffixes involved.26

26The right edge of the plural stem, formed by -ni has the appearance of the third plural object cross-indexing verb-forming suffix -nin in the right context. Stem-final consonant deletion in the context of (consonant-initial) subject marking (§2.5.3) is not indicated in the paradigm, but when taken into account, all of the third plural object portion of the paradigm bar the combination with a third person singular subject (i.e., tyeknu, marked by rounding) could easily be reanalysed by a speaker as being formed with -nin. By way of example, //tye- ak -nin -f// or //tye- ak -ni -f// both surface as tyeknu ‘you are accompanied by them’, regardless of whether -ni (intransitive) or -nin (3PL:VTR) is used to form the verb.
<table>
<thead>
<tr>
<th>Case</th>
<th>1sgO (wa-)</th>
<th>2sgO (wa-)</th>
<th>3sgO (ø-)</th>
<th>1plO (-man)</th>
<th>2plO (-man)</th>
<th>3plO (ø-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sgS (-ø)</td>
<td>wa-naakni</td>
<td>naakni</td>
<td>(ma-) tyek-man</td>
<td>tyekni</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2sgS (-f)</td>
<td>wa-naakni-f</td>
<td>naakni-f</td>
<td>(ma-) tyek-man-f</td>
<td>tyekni-f</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3sgS ( [+rand])</td>
<td>wa-naaknu</td>
<td>wa-naaknu</td>
<td>naaknu</td>
<td>(ma-) tyek-man</td>
<td>(ma-) tyek-man</td>
<td>tyeknu</td>
</tr>
<tr>
<td>1duS (-rai)</td>
<td>wa-naakni-rai</td>
<td>naakni-rai</td>
<td>(ma-) tyek-man-rai</td>
<td>tyekni-rai</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2duS (-mi)</td>
<td>wa-naakni-mi</td>
<td>naakni-mi</td>
<td>(ma-) tyek-man-mi</td>
<td>tyekni-mi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3duS (-fi)</td>
<td>wa-naakni-fi</td>
<td>wa-naakni-fi</td>
<td>naakni-fi</td>
<td>(ma-) tyek-man-fi</td>
<td>(ma-) tyek-man-fi</td>
<td>tyekni-fi</td>
</tr>
<tr>
<td>1plS (-t)</td>
<td>wa-naakni-t</td>
<td>naakni-t</td>
<td>(ma-) tyek-man-t</td>
<td>tyekni-t</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2plS (-m)</td>
<td>wa-naakni-m</td>
<td>naakni-m</td>
<td>(ma-) tyek-man-m</td>
<td>tyekni-m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3plS (-si)</td>
<td>wa-naakni-si</td>
<td>wa-naakni-si</td>
<td>naakni-si</td>
<td>(ma-) tyek-man-si</td>
<td>(ma-) tyek-man-si</td>
<td>tyekni-si</td>
</tr>
</tbody>
</table>
6.5 Derivational morphology

We now turn to the limited amount of derivational morphology present in Momu. This includes the plural marker on intransitive verbs na- (§6.5.1), and the transitivising prefixes na-/tye- (§6.5.2). At the end of this section I give an account of the development of the polysemy of the na- marker (§C.3).

6.5.1 Plural prefix

The most common way that the plural counterparts to intransitive verbs coding verbal number are formed is the derivational prefix na-. Manner-of-motion verbs are commonly pluralised using this prefix, but there are also other types of intransitive verb which pattern this way. Amongst the motion verbs, the basic motion verb pair pwen/napwen ‘one/many come’ is derived this way, but the intransitive spatial motion verbs (§3.6.2.1) do not pattern for verbal number.

\[(6.28)\] (a) na-bini ‘many cross water’
(b) na-byenetin ‘many jump’
(c) na-fifgin ‘many swim’
(d) na-neken ‘many turn around’
(e) na-pwenin ‘many stand’
(f) na-waktai ‘many go ahead’
(g) na-peeni ‘many arrive’
(h) na-patyai ‘many start off’

6.5.2 Transitivising prefixes

The prefixes na-/tye- take a subset of intransitive predicates and derive pairs of transitive verbs, based on the number of their object. Unlike the verb-forming suffixes, these prefixes take a fully formed verb as input. Where the intransitive counterpart patterns for verbal number, only the singular form is used to derive transitive pairs. The prefixes are not particularly productive, and exhibit a cline from fully segmentable occurrences through to fused forms (§6.6.2.2).

\[27\] The basic motion verbs pin ‘one goes’ and ina ‘many go’ are dissimilar to each other.
The prefixes attach to all members of the spatial motion verbs to produce verbs of caused motion. In (6.29a) *woy* ‘go across’ becomes *na-woy/tyewoy* ‘take one/many across’. The core three postural verbs ‘stand’, ‘sit’ and ‘lie’ (b) can all be transitivised. 28 Outside these groups of verbs, other intransitive verbs rarely transitivise.

(6.29) (a)  *woy* / *na-woy* /
    go.across   TRANS⇒one-go.across
    *tye-woy*
    TRANS⇒many-go.across
    ‘go across / take one across / take many across’

    (b)  *kisen* / *na-kisen* / *tye-kisen*
        be.lie    TRANS⇒one-be.lie   TRANS⇒many-be.lie
        ‘lie / lay one / lay many’

    (c)  *ken* / *na-ken* / *tye-ken*
        be.extinguished    TRANS⇒one-be.extinguished
        TRANS⇒many-be.extinguished
        ‘be extinguished / extinguish one / extinguish many’

There are several cases where the prefixes are distinguishable, but there is no corresponding intransitive form (6.30). These grade into forms where the patterning is recognisable as an initial *n* or *t* segment, but is otherwise clearly fused (6.31).

(6.30) (a)  *na-fken/tye-fken* ‘hide one/many’

(b)  *na-fwas/tye-fwas* ‘reveal one/many’

(c)  *na-kwan/tye-kwan* ‘straighten one/many’

(6.31) (a)  *narin/tyin* ‘carry one/many’

(b)  *niy/taty* ‘shoot one/many’

(c)  *no/tu* ‘give one/many to X’ (note this verb includes object marking)

(d)  *nebsi/tibsi* ‘grasp one/many’

---

28 Not all speakers accepted the transitivised postural verbs. For some speakers, some transitivised forms are more acceptable than others.
Nearby Imonda has a similar and possibly related marker -na (singular) or -n (plural) for indexing a beneficiary (Seiler, 1985, p87–88). This appears to extend beyond the sense of “beneficiary” in some cases, such that it might be considered a general transitiviser. The patterning of this marker runs counter to that in Momu however, as this is a compulsory pattern for human recipients, experiencers or beneficiaries, but optional for non-human patients or themes.

6.6 Verbal Number

Verbal number (Corbett, 2000; Durie, 1986; Frajzyngier, 1985; Mithun, 1988a; Newman, 2012; Veselinova, 2006)\textsuperscript{29} is a pattern where separate verb stems are systematically paired such they each select for a contrasting number of an ‘affected’ argument. This follows an absolutive patterning: intransitive verbs pair such that they code the number of the subject, and transitive verbs pair such that they code the number of the object. In Momu, the ditransitive verbs no/tu ‘give one/many’ pair such that they code the number of the theme argument, while the recipient is cross-indexed in the form of the verb.

Consider the difference between pairs of verbs relating loosely to “harvesting”. Having wandered off to one’s bush garden to collect food, there are two separate activities that one could engage in. The singular act of plucking a fruit, or snapping off sugarcane implies possibly cooking and/or eating it on the spot. In a sense calling this singular act “harvesting” is incorrect. Harvesting is instead a premeditated act that implies gathering together food for a larger purpose. Similarly, clearing a new garden plot implies cutting several trees down and burning them. Cutting down a single tree might be done to use the wood. Travelling alone requires no coordination with others, while travelling together implies coordination and perhaps collective intent. In all these cases the contrast between a single and multiple affected entities goes beyond simply enumerating them. Each verb in a pair has contrasting but related semantics.

“Verbal number” is usually argued to contrast with “nominal number” (Corbett, 2000; Durie, 1986). Nominal number is a property of entities that

\textsuperscript{29}An alternate term for verbal number is pluractional (Newman, 1980). This term is most commonly employed amongst Africanists.
can be expressed on the noun phrase, or on the verb in the form of agreement. Verbal number, on the other hand, is restricted to verbs (Corbett, 2000, Ch 8), and is a property of the semantics of the verb. The meaning expressed by the verb involves a notion either of number of participants, or sub-events (§6.6.1).

Commonly the total number of verbs grouped in pairs that pattern this way in a given language is small. These verbs are often limited to small, semantically themed groups. Mithun (1988a) describes North American languages with just a couple of these types of verbs through to several dozen. When productive morphological means exist to mark verbal number, the total number can be higher. Corbett (2000) gives the example of Hunzib (Berg, 1995, p81), where plural number is marked either by a suffix or infixes on 40% of the verbal lexicon.

Veselinova (2006) includes verbal number in her typological study of supplementation. She records the most common meanings expressed being motion and position (posture), death or injury, stative verbs, and then a mix of other not generally classifiable meanings. In surveying North American languages where the pattern is common, Mithun (1988a) likewise records that there are recurrent patterns in which verbs code verbal number. Common meanings include intransitive postural or motion verbs, or verbs of dying. Transitive verbs include possessive verbs or transitive motion, throwing, or killing. Foley (1986) describes verbal number as a common pattern amongst Papuan languages. Veselinova (2006) regards it as less common across Papuan languages than in other areas, but bases this on a small sample. Certainly, it is not an uncommon pattern amongst many languages of the world (Corbett, 2000; Durie, 1986; Frajzyngier, 1985; Mithun, 1988a; Newman, 2012; Veselinova, 2006).

Verbal number is in fact extremely common in the languages around Momu. It is not clear that verbal number is present in the genetically related language Baibai from the minimal evidence that I have, but it is present in all neighbouring languages for which I have grammars or grammar sketches: Kwomtari (Honsberger et al., 2008), Amanab (Minch, 1992), Imonda (Seiler, 1985), Barupu (Corris, 2008), One (Crowther, n.d., Donohue p.c.), Biaka (Hamlin, 1998), Namia (Feldpausch and Feldpausch, 1992), Waris (Brown, 1990), Pagi and Kilmeri (Gerstner-Link, 2015). I thus regard it as a strong areal feature.
Amongst a spread of other intransitive types, seemingly all manner-of-motion verbs encode verbal number in Momu. Amongst the transitive verbs coding verbal number, verbs relating to the gathering or manipulation of inanimate objects are very common. Table 6.15 lists verbal number pairs found in Momu, loosely arranged around semantic themes.
<table>
<thead>
<tr>
<th>caused location (transitive):</th>
<th>state/position (intransitive):</th>
<th>manipulation (transitive):</th>
</tr>
</thead>
<tbody>
<tr>
<td>abkiy/mobkiy</td>
<td>kafenetyin/tafkenetyin</td>
<td>absi/nebsi</td>
</tr>
<tr>
<td>afwan/afnin</td>
<td>kisen/kunsita</td>
<td>etepwari/etepwenin</td>
</tr>
<tr>
<td>awen/awmin</td>
<td>otan/otokta</td>
<td>fofkar/fofigin</td>
</tr>
<tr>
<td>naketi/tyeketi</td>
<td>(na)pwen</td>
<td>fufwani/fufwenin</td>
</tr>
<tr>
<td>nafken/tyefken</td>
<td>pomu/popota</td>
<td>kripwani/kripwenin</td>
</tr>
<tr>
<td>nemkyen/mekeyen</td>
<td>sen/tten</td>
<td>naflowani/naflowwenin</td>
</tr>
<tr>
<td>onto/onten</td>
<td>motion-related (intransitive):</td>
<td>nafken/tafken</td>
</tr>
<tr>
<td>oton/bun</td>
<td>(na)pwyen</td>
<td>naken/nabken</td>
</tr>
<tr>
<td>otonyo/bunoy</td>
<td>(na)nawynt</td>
<td>motion-related (transitive):</td>
</tr>
<tr>
<td>tiai/tikta</td>
<td>napwen/tafwen</td>
<td>nakwani/tafken</td>
</tr>
<tr>
<td>tiy/tikta</td>
<td>napwen/tafwen</td>
<td>naken/tafken</td>
</tr>
<tr>
<td>motion-oriented (transitive):</td>
<td>napwen/tafwen</td>
<td>naken/tafken</td>
</tr>
<tr>
<td>nakey/tyekey</td>
<td>(na)pwyen</td>
<td>naken/tafken</td>
</tr>
<tr>
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<td>naken/tafken</td>
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<td>(na)nwyen</td>
<td>naken/tafken</td>
</tr>
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<td>(na)nwyen</td>
<td>naken/tafken</td>
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<td>napwen/tyepend</td>
<td>(na)nwyen</td>
<td>naken/tafken</td>
</tr>
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<td>naye/luloy</td>
<td>(na)pwyen</td>
<td>naken/tafken</td>
</tr>
<tr>
<td>nayu/luloy</td>
<td>(na)pwyen</td>
<td>naken/tafken</td>
</tr>
<tr>
<td>nepri/tyepri</td>
<td>(na)pwyen</td>
<td>naken/tafken</td>
</tr>
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<td>neri/tyerni</td>
<td>(na)pwyen</td>
<td>naken/tafken</td>
</tr>
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<td>nonai/tyenua</td>
<td>(na)pwyen</td>
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<td>nowe/tyewok</td>
<td>(na)pwyen</td>
<td>naken/tafken</td>
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<td>naken/tafken</td>
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<td>newor/tuwar</td>
<td>(na)pwyen</td>
<td>naken/tafken</td>
</tr>
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<td>other transitive:</td>
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<td>naken/tafken</td>
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<td>(na)pwyen</td>
<td>naken/tafken</td>
</tr>
<tr>
<td>uwen/uwmin</td>
<td>(na)pwyen</td>
<td>naken/tafken</td>
</tr>
<tr>
<td>etyin/etyinin</td>
<td>(na)pwyen</td>
<td>naken/tafken</td>
</tr>
<tr>
<td>ilyen/itnin</td>
<td>(na)pwyen</td>
<td>naken/tafken</td>
</tr>
<tr>
<td>possession (transitive):</td>
<td>(na)pwyen</td>
<td>naken/tafken</td>
</tr>
<tr>
<td>narin/tyin</td>
<td>(na)pwyen</td>
<td>naken/tafken</td>
</tr>
<tr>
<td>nebsi/tibsi</td>
<td>(na)pwyen</td>
<td>naken/tafken</td>
</tr>
<tr>
<td>pana/pun/poprai</td>
<td>(na)pwyen</td>
<td>naken/tafken</td>
</tr>
</tbody>
</table>

Table 6.15: Attested verbal number pairs in Momu
While initially I assumed that verbal number was reasonably common in Momu, this confusion was driven by the fact that some of the verbs coding verbal number are used quite frequently—especially within serial verb constructions (§13.3.4). However, initial counts were quite low. Presently I have counted about 70 unproblematic verb pairs where I have confirmed that a given form has a plural or singular counterpart, and there are many others where the pattern remains unconfirmed. This question can only be adequately answered with more thorough and broad lexicographic work. In Momu such verbs make up about 30% of verbs recorded so far.\textsuperscript{30} This puts Momu at the more extreme end of the typological space, though behind Hunzib (at 40%) (Berg, 1995).

For the remainder of this chapter I look at the realisation of verbal number in Momu. In §6.6.1 I look more closely at the meaning of verbal number. In §6.6.2 I look at the variable realisation of verbal number in Momu. In §6.6.3 I address some issues relating to the theoretical status of verbal number as found in the languages of the world. In §6.6.4 I look at the rarer instances of event number in Momu, and in §6.6.5 I look at issues concerning the hybrid patterning of object prefixation and verbal number for transitive pairs.

6.6.1 Event and participant number

Corbett (2000) makes a useful distinction within and amongst languages with verbal number of \textit{event} and \textit{participant number}. Although not strictly labelled and identified as such, this distinction is also recognised as important by Durie (1986). It has come to be recognised in many subsequent works as a core characterisation within verbal number (Arka, 2012; Crevels, 2006; Veselinova, 2006, 2007, 2011).

Verbs that primarily encode \textit{event} number are concerned with some no-\textsuperscript{30}I regard this number as an early estimate. Not all verbs encountered have been checked for verbal number counterparts. Conversely a feature of many verbal number pairs is that they occur reasonably frequently (with some highly frequently). Thus, percentages may go up or down with more thorough lexicographic work. In addition to this, there is the matter of how to count them. Excluded from this estimate are any candidates that could reasonably be considered as having defective object marking. The percentage of the lexicon occupied by verbal number pairs is obviously higher, if one counts each pair as separate lexemes. 30% of the verbal inventory would then be about 46%. While I argue here that pairs constitute separate lexemes, I still count percentages on the basis of pairs constituting a single lexeme. Intransitive verbs and transitive verbs are split roughly 40% to 60% within the 30%.
tion of plurality in the structure of the event described by the verb. Languages for which event number is the primary distinction could be argued to be coding verbal aspect (Corbett, 2000). Verbs that primarily encode participant number are concerned with the number of entities involved in the event. Momu verbs that code verbal number are mostly of the second kind.

Momu strongly prefers tracking the number of affected participants. (6.32) gives elicited examples where I attempt to contrast event and participant number. In (6.32a) one participant visiting multiple locations could be considered a plural event. Nevertheless, verbal number encodes the affected participant. In (6.32b) a single strike (one event) kills multiple ants (multiple patients). Again the verb tracks the number of the affected participant(s).

(6.32)  
(a)  
Te  
fi-ky  kwobo=mk  pi-mu.  
1SG  house  many=OBL  one.goes-[1|3SGS]VOL.FUT 
‘I will go to many houses.’ (i.e. visit separate families)  

(b)  
Te  
amseke=m  ofefwar  
1SG  ants=OBL  be.folded  
a-sa=b  key=b  
ANIM:there.be-3PLS:NZR=COM[ADV]  hand=COM  
taty.  
shoot.many[1SGS]  
‘I strike the ants cupped (in one hand) with my hand.’ (killing many in one strike)  

This is not to say that event number is not a possible reading of all verbs coding verbal number in Momu. See §6.6.4 for some examples of verbs and contexts that necessarily trigger a preference for an event number reading.

6.6.2 Variations in form

In Momu, there are three identifiable classes of alternations, as defined by their relative similarity in form. There are fully dissimilar verb pairs (§6.6.2.1), a mixed bag of similar verb pairs for which I find no regular pattern of mutation or morphology (§6.6.2.2), and derived verb pairs (§6.6.2.3).

6.6.2.1 Dissimilar pairs

Dissimilar pairs of alternating verbs are quite rare in Momu. All reasonably dissimilar pairs are given below, but even some of these at least share
common segments.

\[(6.33)\] (a) \( \text{uy} / \text{kwen} \)
\[\text{cut.one} / \text{cut.many} \]
‘cut one / cut many (vertically standing object, e.g., trees)’

(b) \( \text{pin} / \text{ina} \)
\[\text{one.goes} / \text{many.go} \]
‘one goes / many go’

(c) \( \text{tapunai} / \text{esy} \)
\[\text{pick.one} / \text{pick.many} \]
‘pick one / pick many (fruit/vegetables)’

(d) \( \text{oton} / \text{bun} \)
\[\text{put.one} / \text{put.many} \]
‘put/place one / put/place many’

(e) \( \text{niy} / \text{taty} \)
\[\text{shoot.one} / \text{shoot.many} \]
‘shoot one / shoot many’

(f) \( \text{pana} / \text{pun} / \text{poprai} \)
\[\text{get.one} / \text{get.many} / \text{get.many} \]
‘get one / get many / get many’

Such dissimilar pairs have sometimes been referred to as instances of supple-
tion in the literature on verbal number (e.g., Durie, 1986; Veselinova, 2007).
I instead consider these instances of stem alternation \((\S 6.6.3)\).

6.6.2.2 Similar Stems

Many verb pairs resemble each other to varying degrees. These range from
fixed and undecomposable forms that nevertheless share similar segments
through to irregular patterns of verb formation.

At the fixed end, \text{sen/ten} ‘die’ \( (6.34) \) clearly contains two forms where
diachronically it would be reasonable to assume a single prior state that the
two forms were derived from (or that one was derived from the other).\(^{31}\)

\(^{31}\)Indeed some of the forms in the previous section fall under this heading. \text{Pin/ina}
‘one/many go’ share two out of three segments just as \text{sen/ten} ‘one/many die’ does. \text{Niy/taty} ‘shoot one/many’ are more similar when one considers the denasalising effects
of a glide after a nasal \((\S 2.1.3)\), and the likelihood that the underlying form of \text{niy} is \text{ny}
\((\S 2.4.5)\). Then the only difference between the two is the initial ta in the plural form.
A handful of partially similar forms end in -kta. The highly heterosemous ta(i) ‘do/STVZR’ can be used to express iterative aspect (§7.5.3), or form intransitive verbs (§6.3.1). It may have been part of a construction expressing plural number via an iterative sense. While we can account for ta this still leaves k unaccounted for, however.

More transparent, however, are cases where either the transitivising prefixes na-/tye- or plural prefix na- (§6.5.1) is fused into the form of the verb. While there is a resemblance (or direct comparability), the root is not synchronically present as an intransitive verb.

The verbs nepri/tyepri ‘take one/many’ clearly incorporate the transitivising prefixes into their form, but there is no synchronic root pri. Instead, the intransitive counterpart is the dissimilar pair pin/ina ‘one/many go’.

In a similar fashion, the (intransitive) plural marker na- appears to have been fused into absi ‘wash one’ to form the plural nebsi ‘wash many’. But note that despite being transitive it does so using the pattern used for an intransitive pair.
There are a handful of verb alternates where the pattern is apparent but reversed—what appears to be the plural marker, marks the singular.\(^ {32} \)  

(6.38)  
(a) \( \text{namkyen} \) / \( \text{mekyen} \)  
\( \text{insert.one} \) / \( \text{insert.many} \)  
‘insert one / insert many’  
(b) \( \text{narin} \) / \( \text{tin} \)  
\( \text{carry.one} \) / \( \text{carry.many} \)  
‘carry one / carry many’  

The relationship between the postural verbs \( \text{kisen/nakisenta} \) ‘one/many lie down’ at first appears to be derivational, but there is the addition of the suffix \(-\text{ta}\) which is clearly related to the verb \( \text{ta(i)} \) “do”. Both paradigms are given in Table 6.16.

<table>
<thead>
<tr>
<th>Subject marking</th>
<th>1SGS</th>
<th>2SGS (-f)</th>
<th>3SGS [+round]</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘one lies down’</td>
<td>( \text{kisen} )</td>
<td>( \text{kisen-f} )</td>
<td>( \text{kusen} )</td>
</tr>
<tr>
<td>‘many lie down’</td>
<td>( \text{na-kisen-ta-rai} )</td>
<td>( \text{na-kisen-ta-mi} )</td>
<td>( \text{na-kisen-ta-fi} )</td>
</tr>
</tbody>
</table>

Table 6.16: Subject inflection for \( \text{kisen/nakisenta} \) ‘one/many lie down’

The core form is a lexicalised compound of the verbs \( \text{ki} \) ‘sleep’ and \( \text{sen} \) ‘die’. The third person singular subject form \( \text{kusen} \) ‘s/he lies down’ retains a pre-lexicalised distinction in that the first part of the compound contains the subject marking. While the rounding associated with third singular marking usually occurs at the right edge of the stem, here it is instead occurring on \( \text{ki} \) ‘sleep’ (producing \( \text{ku} \)).

In the case of \( \text{nakyenon/tyekninwon} \) ‘lift up one/many’, the forms show remnants of both the transitivising prefixes \( \text{na-/tye-} \) and also transitive verb-forming suffixes (§6.2.2.1, §6.3.3.1).

\(^{32}\)Currently, I can give no explanation for this apparently reversed pattern of derived number marking—it may be coincidental. Note that for (6.38b), although \( t/r \) are synchronically separate phonemes, they are often in free variation, and \( r \) cannot occur word-initially.
Compounding occasionally produces novel lexicalised forms that alternate for number but are similar in form—in so far as they share a common sequence of segments. Synchronically otonoy/bunoy ‘lean one/many’ also means ‘put one/many inside’. The second sense is a directional inflection (§7.5.2.1) of oton/bun ‘put one/many’ with woy ‘come across’. The first sense has arisen as a result of lexicalisation of the compound.

### 6.6.2.3 Derived Alternation

The addition of a prefix na- to a majority of intransitive verbs derives a plural form (§6.5.1). Two prefixes na- and tye- derive transitive forms that are singular and plural respectively (§6.5.2). Where transitive pairs are derived from intransitive verbs that pattern for verbal number, the singular (underived) form is used. In some cases this means that the heterosemous prefixing form na- applies to the same intransitive root to derive either a plural intransitive or a singular transitive (see §C.3 for an explanation of how such a situation arose).

The most common pattern for derivation of verbal pairs in Momu is that a single base is used for deriving a plural intransitive, singular transitive and plural transitive.

The derivational relationships are summarised below:

<table>
<thead>
<tr>
<th>(6.40)</th>
<th>‘one’</th>
<th>‘many’</th>
</tr>
</thead>
<tbody>
<tr>
<td>intransitive</td>
<td>(a) → (b)</td>
<td></td>
</tr>
<tr>
<td>transitive</td>
<td>(c)</td>
<td></td>
</tr>
</tbody>
</table>

For transitive verb pairs, each is derived via a different prefix on an intransitive verb (§6.6.2.3). The prefix na- derives a singular transitive and the prefix tye- derives a plural transitive. There are a few variants, but the dominant pattern is that a single root is used to derive some or all variants.
(6.41) shows the clearest application of derivational processes. The remaining forms derive from a single root—the unmarked singular intransitive root—in this case *pwen* ‘one comes’. Separate processes result in equivalent forms for the singular transitive *napwen* ‘bring one’ and plural intransitive *napwen* ‘many come’. Many motion verbs are pluralised and transitivised in this way.

\[
\begin{array}{c|c}
\text{‘one’} & \text{‘many’} \\
\hline
\text{‘come’} pwen & \downarrow \text{na-pwen} \\
\text{‘bring’} na-pwen & \downarrow \text{tye-pwen}
\end{array}
\]

The application of derivational prefixes is not always fully productive for a given root. Spatial motion verbs (§3.6.2.1) do not show plural alternates, however, but do transitivise (albeit with frequent mutation of both root and prefix):

\[
\begin{array}{c|c}
\text{‘one’} & \text{‘many’} \\
\hline
\text{‘go downriver’} wory & \downarrow \text{no-wory} \\
\text{‘take downriver’} no-wory & \downarrow \text{tu-wery}
\end{array}
\]

In very rare cases, one of the transitivising prefixes may apply, but not the other. I have assumed for instance that variant form of *nebem/tye* *nebem* ‘two’ has fossilised the plural transitivising prefix *tye-*. A clearly derivational use of the transitivising prefix *tye-* occurs in (6.43). *Poonu* ‘be broken’ is used to form the new lexical form *tyepoonu* ‘wake up (i.e., to break open both eyes)’. Note, in particular, the shift in meaning from the underived form. There is also no corresponding singular form *napoonu*.

\[
\begin{array}{c|c}
\text{‘many’} \\
\hline
\text{‘be broken’} poonu & \downarrow \text{tye-poonu}
\end{array}
\]

In (6.44), the intransitive singular and plural forms are similar to each other, but not achieved by a regular process. The singular intransitive *oton* is again used to form both transitive counterparts. In some cases, however, speakers gave the plural transitive as formed with the plural intransitive. I
take this variability to be a sign that the transitivised forms developed after
the intransitive split. The overwhelmingly dominant pattern remains as the
singular intransitive form being used to derive all other variants.

\[
\begin{array}{ccc}
\text{‘one’} & \quad & \text{‘many’} \\
\text{‘sit’} & \quad oton & \rightarrow & \quad otokta \\
\downarrow & \quad \searrow & \quad \downarrow \\
\text{‘seat’} & \quad na-uton & & \quad tye-oton/tye-otokta
\end{array}
\]

Not all apparently derived transitive verbs can be related to an intransitive
form. More often than not, comparing intransitive and transitive counter-
parts does not reveal a common root.

In (6.45), a root common to all forms is recoverable but no longer syn-
chronically evident. Once sporadic kf metathesis is taken into account, a
common root *kefen is apparent.\(^{33}\) Synchronously we cannot describe the
transitive verbs as derived from the intransitive forms. In many ways, this
is to be expected of derived forms, whose meanings tend to drift from their
underived forms (Bybee, 1985).

\[
\begin{array}{ccc}
\text{‘one’} & \quad \rightarrow & \text{‘many’} \\
\text{‘be hidden’} & \quad (a) \quad kefenetin & \quad (b) \quad na-kefenetin \\
\quad (\searrow) & \quad (*kefen) \\
\quad (\nearrow)(\searrow) & \quad (c) \quad nafken & \quad (d) \quad tye/kefen
\end{array}
\]

In (6.46), the highly frequent variants of ‘go/take’ take this a step further.
The intransitive pairs are entirely dissimilar (or derivationally suppletive if
you prefer), and the transitive forms bear little resemblance to either of
the intransitive counterparts. The transitive counterparts show fused trans-
itivising prefixes on a root somewhat different to the singular intransitive
counterpart.\(^{34}\) The transitive singular and plural forms do share a common

\(^{33}\)Metathesis in Momu occurs only for adjacent consonants inclusive of glides (§2.5.1.1).
In the context of the prefix na-, the k and f in //na-kefenetin// are brought together by
the elision of the intermediary vowel, and it is because they become adjacent that they are
candidates for metathesis. Hence I assume this direction for metathesis, not the other way
around. The intransitive pair kefenetin/nafkenetin may have formed from a compound of
*kefen ‘hide’ and netin ‘throw’.

\(^{34}\)The recoverable root common to nepri/tyepri—pri—does bear some resemblance to
the singular intransitive pin. Synchronously, however, it is not a root common to all three
verbs pin ‘one goes’, nepri ‘take one’ and tye/kefen ‘take many’.  

root, however, so we can assume they were derived in the same fashion as the pair in (6.41), i.e., from a common base.

<table>
<thead>
<tr>
<th></th>
<th>'one'</th>
<th></th>
<th>'many'</th>
</tr>
</thead>
<tbody>
<tr>
<td>'go'</td>
<td>(a) pin</td>
<td>(→)</td>
<td>(b) ina</td>
</tr>
<tr>
<td></td>
<td>('pri)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(✓)</td>
<td></td>
<td>(✓)</td>
</tr>
<tr>
<td>'take'</td>
<td>(c) nepri</td>
<td></td>
<td>(d) tye pri</td>
</tr>
</tbody>
</table>

(6.46)

Another strategy for the production of verbal number pairs is the use of the third plural object verb-forming suffix -nin. I treat what is elsewhere an object indexing verb-forming suffix as a plural verb-forming suffix because, in cases where object prefixes are possible, the verb-forming suffix remains singular/plural. For instance, the verb pair tita/n/titnin ‘tie one/many’ can be prefixed with wa-titan ‘handcuff me/you (Sg.)’ or ma/titnin ‘handcuff us/you (PL)’. The plural form preserves the plural verb-forming suffix but is not updated to ma/tit-man as we would expect of regular high-transitive verbs (§6.2.2).

The singular form tends to have a right edge segments an, ar, en, or er. Such final segments in transitive verbs are actually quite common amongst low-transitive verbs that do not pattern for verbal number. The most common is an. Ar is also a transitive verb-forming suffix, clearly related to the synchronic full verb ar ‘do to’ (§6.3.3.3). The forms also correspond to first and third singular object cross-indexing verb-forming suffixes (-an/-ar ‘1sgO:vtr’ and -en/-er ‘3sgO:vtr’). I propose that what is happening here is that verbs that resemble singular object forms are being reanalysed as being singular, and that the third plural object form -nin is being used to create a plural counterpart.35

(6.47) (a) kirpw-an / kirip-nin
   chop-one:vtr   chop-many:vtr
   ‘chop one / chop many’

(b) tapupw-an / tapup-nin
   finish-one:vtr   finish-many:vtr

35 The hypothesis of plural reanalysis becomes problematic where the singular form ends with en/er, which is equivalent in form to third singular object cross-indexing. Instances with the appearance of third singular object and third plural object marking could be reasonably considered defective object marking. As such these were not included in the overall estimate of the proportion of verbal number coding verbs in Momu. They are, however, listed in Table 6.15 on page 227.
Irregularities between the pairs are not uncommon. There is a spectrum of cases, from those where a synchronic root is evident through to those where there are fused roots. For instance, a synchronic root is evident in (c) above, the root of *awen*/*awnin* ‘cover one/many’ is *au* ‘skin/body’. A fused root is evident in the singular form *san* in (d). Some of these fused forms are listed in §6.6.2.2. Derivation is the most common way for verbal number pairs to be formed in Momu, although putting a precise number upon it is difficult given the spectrum of possibilities.

### 6.6.3 “Suppletion” and verbal number

Following Mel’čuk (1994), I take suppletion to describe a relationship between lexical forms that codes a grammatical relationship (here I limit myself to inflectional relations) in a way that is (maximally) irregular in form. I take verbal number to be a pattern not of suppletion, but of alternating stems, and that these stems do not code inflectional categories, following Durie (1986). Durie provides several tests, of which one is suitable for Momu: under circumstances where we expect grammatical number to be constrained, we should see that the choice between members of a verb pair remains free.

Nominalisation (§4.9) is an operation that restricts cross-indexation in Momu: subject marking is excluded,\(^{36}\) and object marking (relevant only for high-transitive verbs) is fixed upon the third singular object form of the verb. Under this restriction, verbal number is still free to alternate between singular and plural forms in Momu, as shown in (6.48a and b). Subject marking is absent in all the forms below. (c) demonstrates a nominalised high-transitive verb. Despite the third singular object, the nominalised form in (c) does not code number, like most nouns in Momu.

---

\(^{36}\)Nominalised forms do not include subject marking. There are deverbal forms that employ the nominaliser -u and do include subject marking, however (§16.5.1.1).
While I do not consider verbal number inflectional, in §6.6.5.2 I discuss instances of transitive verb paradigms that exhibit stem alternation consistent with verbal number, but which have (partially) progressed to high-transitive verbs.

6.6.4 Event number in Momu

The degree to which event or participant number comes to the fore in Momu depends on the particular verb, and the compatibility of an event or participant reading in context. Here I look at two cases: niy/taty ‘shoot one/many’ and narin/tyin ‘carry one/many or give birth to one/many’. ‘Shoot’ is interesting because the multiple shots can come from one or more sources, hitting (or not hitting) one or more targets. ‘Give birth’ is interesting because of the tensions that arise in listing multiple births that were separate events (for instance in giving genealogies).

6.6.4.1 Shooting

Niy/taty ‘shoot one/many’ can (on rare occasions) be primarily concerned with event number rather than participant number. Surveying across actual uses of this verb, participant number is the primary sense.

There is no problem with the logic of a plural subject being used with the singular form. This means that a single shot was fired, while multiple participants were co-present in the shooting activity, or possibly multiple shots were fired, but only one hit the mark. Regardless, when the target is singular, the singular form of the verb is consistently used as in (6.49).

(6.48) (a) \[\begin{array}{ll}
sen-u & / \ ten-u \\
one.dies-NZR & many.die-NZR \\
\text{‘death / death(s)’}
\end{array}\]

(b) \[\begin{array}{ll}
niy-u & / \ tatw-u \\
shoot.one-NZR & shoot.many-NZR \\
\text{‘a shot/arrow/bullet / shots/ arrows/bullets’}
\end{array}\]

(c) \[\begin{array}{ll}
kwas-yer-u \\
mark-3SGO:VTR-NZR \\
\text{‘pen(s)/writing/note(s)’}
\end{array}\]

(6.49) Yeswo key=bu nifyi.
   pig hand=PROP shoot.one:3DU:S

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‘They two shot a domesticated pig.’

In (6.50) a singular subject is marked on a plural verb. In this case, without number marking on the NP fiwo ‘ground kangaroo’ it is nevertheless clear that the speaker is talking about multiple kangaroos—not one being shot many times.

(6.50) fiky et-u=ne mo fiwo
house build-NZR=FOC yet kangaroo.sp
tatu-u=ne,
shoot many\3SGS-NZR=FOC

‘Having built a shelter and having shot many ground kangaroos,’

In fact, the singular verb can be marked as progressive: yainuwo ‘he is shooting it’. This makes it quite clear that this punctative verb encodes primarily participant number over event number.

There are however rare and perhaps figurative uses of the verb that code event number. In (6.51) the plural form taty is used to express multiple shooting actions by the one subject. In this example, the speaker is describing the agitation of a hornbill chick waiting to be fed by its mother.

(6.51) Ayer masaio wobu aniyer
do.like.this beak 3SG:COM:GEN do.like.this
taty
shoot many[1|3SGS]

‘It shot its beak out repeatedly like this.’

The interpretation of this particular use as event number rather than participant number is assisted by the looser handling of participants in serial verb constructions (§13.3.3). The overt NP masaio ‘beak’ is theme-argument to aniyer ‘do like this’, and also an instrument-argument to taty ‘shoot many’. In this construction, a patient NP is absent. The bird has only one beak, and so cannot be plural. Under these circumstances, an event number interpretation is triggered.

6.6.4.2 Giving birth

The use of narin/tyin ‘carry / give birth to one/many’ to express bearing/fathering a child is most likely a recent calque from the polysemous TP karim ‘carry / bear a child’. I argue that it is recent because in many ways, it
gives rise to tensions around *participant* and *event* number that do not occur with the sense of ‘carry’. Carrying one or more objects is straightforward. The more obvious sense is of *participant* number. Giving birth is usually a single event punctuating far longer spans of time, and usually only a single child is born. Considering one’s lifetime though, “fathering” children is more likely to be multiple events with multiple participants.

When speakers gave me genealogical texts (of which I collected several), there was some confusion, revision and variation around the expression of the multiple descendants borne by a single ancestor or ancestral couple. The source of the issue is a conflict between recognising *event* and *participant* number.

Below I show the strategies used to describe multiple births, and to either maintain *participant* number in the context of separate *events* or to create a proper description of the *event* type, while putting aside *participant* number.

(6.52a) is a serial verb construction involving a verbalised form of the numeral (*tye*)‘two’ (§13.2.1.4). It shows an apparent inconsistency between the verbal number expressed by the final verb and the dual number selected by the “pairwise” verb *tyenebemta*. In (b) a reduplicated form of the verb is used to express the multiplicity of (singular) events. (c) and (d) demonstrate coordinative strategies, with clauses coordinated in (c) using the singular form of the verb, and with post-posed coordinated NPs used in (d), where the singular verb is also used.

(6.52) (a) *Tyenebem-ta* narin.
    two-do **begat.one[1|3SGS]**
    ‘He fathered two children.’

(b) *Olsem* na *nyi* eru te
    so and ancestor that **1SG**
    *momsen-na-pwen* **eru**, **yime eru**
    talk-TRANS>one-come[1|3SGS] that[REL] man that
    nari=nari, Yanei, **tyin-e**.
    carry.one=carry.one Yanei **begat.many[1|3SGS]-EMPH**
    ‘And so, the ancestors that I have listed, that man begot them (one at a time), Yanei fathered them.’

(c) *Kiape* **anger:**
    **Kiaro=m narin,**
    Kiaro=OBL **begat.one[1|3SGS]**
    **Mitni narin,**
    **Kenisi narin.**
    Mitni **begat.one[1|3SGS]** Kenisi **begat.one[1|3SGS]**

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‘Ki ape did it like this: (he) fathered Kiaro, Mitni and Kenisi.’

(d) **Orait, Yano narin eru, yime Sumo,**
ookay Yano begat.one[1|3SGS] that[REL] man Sumo
**mu Fenas, yime Trikus.**
woman Fenas man Trikus

‘Okay, the one(s) that Yano father is/were Sumo, Fenas and Trikus.’

The above examples describe specific birth events, with named individuals. To describe generically that one person was the ultimate progenitor of a group of people, utterances like those in (6.53) are used. In (a) the singular form is used.37 In (b) the plural is used describe a specific but unnamed group of individuals. These contrasting examples are drawn from different speakers.

(6.53) (a) **Onemui=m narin. Oney ofuy.**
peopl.of.Oney=OBL begat.one[1|3SGS] Oney elder
**Nori=nu narin.**
Nori=PL:GEN begat.one[1|3SGS]
‘He fathered the people of Onei. The elders of Oney. And he fathered those of Nori.’

(b) **Okey tabu=ti=ne, Morai ere. Yef**
ookay 1SG:COM:GEN=DIR=FOC Morai like.that grandfather
**tabu eru. Aiyo tya=m**
1SG:COM:GEN that father RCO=OBL
**tyin-e. begat.many[1|3SGS]-EMPH**

‘Okay, turning to my own, Morai. He is my grandfather. He fathered my various fathers.’

The extract in (6.54) is from the opening of a text with two speakers talking about the process of childbirth. Here they are not talking about specific births, but generically about birth. The plural form is used with **ta(i) ‘do’**, which is how iterative aspect is coded (§7.6). The iterative codes the plurality of events, the plural verb codes the plurality of referents. In the third sentence, a habitual form **tyitasa** is used. Here plural event and participants align.

37(6.53a) could be considered evidence against verbal number in Momu. The event is necessarily plural, but a singular verb is used. In no other circumstances have I seen a collective compound like **Onemuy ‘people of Oney’** treated formally as singular. It may be that in the speaker’s mind the populating of Oney was a single event.

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(6.54) Monica (M) and Antonia (A) talk about childbirth

A: Monica momse-rai-mu mony yeko eru. Baso=m
Monica talk.of-1DU5-VOL.FUT talk true that child=OBL
tyi=ta-r-u-a. Baso
give.birth.to.many=do-1PLS-NZR-EMPH child

tyi=ta-r-u. Mu
give.birth.to.many=do-1PLS-NZR woman

tyi-ta-sa amse woni
give.birth.to.many-STVZR-3PLS:NZR like.this whatsit
yerebu.
1PL:COM:GEN
‘Monica and I will tell a story about that. About us giving birth to children. About us giving birth to children. The ones that give give birth are us.’

M: Yery mu tyi-ta-t-u.
1PL woman give.birth.to.many-STVZR-1PLS-NZR
‘(About how) we women give birth’

6.6.5 Combining with object prefixes

I have defined transitive verb pairs as forms that prototypically select for inanimate objects. This is secondarily expressed by the frequent non-applicability of object prefixing on these verbs. Amongst transitive verbs that alternate for number, there are some where a human object is possible, and where this is possible, first and second person referents are indexed by an object prefix. In this section I show how these verbs then pattern paradigmatically, comparing them to high-transitive verbs.

6.6.5.1 Object marking on transitive verbal number pairs

Examples of common object prefixing forms are given below. Most commonly this applies to verbs expressing transposition such as the transitivised verbs of motion like napwen/tyePWen ‘bring one/many’ which easily apply to human referents. Object prefixes are quickly rejected however for verbs with clearly incompatible semantics, such as verbs of harvesting, processing, and so on.
In §6.6.3, I argued for treating verbal number pairs as alternating stems constituting separate paradigms. Hence in (6.55) I have placed a line between the singular and plural forms. High-transitive verbs, on the other hand, do not show a split paradigm. Where the referent is first or second person, the object prefixes wa- ‘first or second person singular object’ or ma- ‘first or second person plural object’ apply. Third person human referents are not marked on the verb. The absence of object marking indicates a third person object—human or otherwise.\(^{38}\)

Partial paradigms restricted to singular subjects for the verb pair nap-wen/tye-pwen ‘bring one/many’ are given in (6.56). Syncretism is indicated by alternating shades of grey. Compare this to the partial paradigm for the high-transitive verb ye-yen ‘say to’ in (6.57).

\(^{38}\)Third person objects are unmarked on transitive verb pairs. There is no differential marking of third person objects. Thus, this is not a form of differential object marking (Bossong, 1991).
In combination with verbs coding verbal number, it is possible to infer number and person values equivalent to the distinctions made by object marking on high-transitive verbs (§6.2.2.1). The absence of an object prefix indicates a third person object, and verbal number selects for an object on the basis of number. Once again, however, I must stress that this is an inferred value, as verbal number is not the same as nominal number as realised in the form of object marking. For this reason, I do not gloss these verbs as having third person object agreement. Compare the glossing and translations of the singular transitive verb in (a) to the high-transitive verb in (b) below.

<table>
<thead>
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<th>1sgS</th>
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<tr>
<td>1sgO</td>
<td>yey-wan-f</td>
<td>yey-wan</td>
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<tr>
<td>2sgO</td>
<td>yey-wan</td>
<td>yey-wan</td>
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<tr>
<td>3sgO</td>
<td>yey-en</td>
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<td>1plo</td>
<td>yey-man-f</td>
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<td>3plo</td>
<td>ye-nin</td>
<td>ye-nin-f</td>
<td>ye-nin</td>
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(a) \(\text{wa-na-pwen} / \text{na-pwen}\)

1|2sgO-\text{TRANS}>one-come \quad \text{TRANS}>one-come

‘bring me/you (sg.) / bring one’

(b) \(\text{yey-wan} / \text{yey-en}\)

\(\text{say.to-1|2sgO:VTR} \quad \text{say.to-3sgO:VTR}\)

‘say to me/you (sg.) / say to him/her’

6.6.5.2 From low- to high-transitive

High-transitive verbs prototypically select for human objects, and hence fully cross-index objects. Low-transitive verbs (which include transitive verbal number pairs) on the other hand, typically select for non-human objects. A midpoint between these two positions is the applicability of object prefixing on low-transitive verbs. Few low-transitive verbs accept object prefixes, but in this section I argue that when the meaning of a verbal number pair extends to allow for human referents, this has lead to the reanalysis of some verbs as object indexing via verb-forming suffixes.

I propose the following steps:

1. A transitive verbal number pair exists, and this pair selects for non-human objects
2. The shared meaning of this pair is extended to allow for human objects
3. First and second person objects are marked by object prefixes
4. First and second person object indexing portions of the verb paradigm are reanalysed as object-indexing by verb-forming suffixes
5. The whole of the paradigm is reanalysed as object indexing, the paradigm is unified into a single lexeme, but stem alternation still exists
6. Stem alternation is eliminated, and a full high-transitive paradigm exists

All of these steps are synchronically realised in Momu.

For stage 2 and 3, several verb pairs show a recent extension to allow human objects. In some cases, these are transparent calques from Tok Pisin.

For instance, transposition usually involves holding, and physically moving a (typically inanimate) object from one location to another. When applied to human referents the meaning extends to coercing or enabling a human to move in accompaniment with the subject. With *titan/titnin* ‘tie one/many’ extends to ‘handcuff someone’ (See (6.55a) on page 243). *Pana/pun* ‘get one/many’ extends to ‘coerce someone to accompany’.

Stage 4 involves the gradual integration of prefixes, and can in part depend upon the form of the stem. For most of these object-prefixed forms, the root form does not trigger any morphophonemic variation, but variation does sometimes occur. I take this variation as an indicator of the longevity of the acceptance of object prefixing. For instance, the verb pair *niy/taty* ‘shoot one/many’ show a greater degree of integration of object prefix in both forms. The singular form *niy* [nd˘]‘shoot one’ becomes *wany* [wantj] ‘shoot me/you’ when prefixed.\(^39\) The plural form *taty* ‘shoot many’ becomes *matety* ‘shoot us/you’ when prefixed.

In some cases, prefixation has triggered reanalysis, wherein the right edge of a verb has the appearance of object indexing suffixes. For instance, the verb pair *bufwar/bufnin* ‘think of one/many’ is broadly accepted by speakers, but prefixed forms are variably accepted. The plural form could be mistaken

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\(^39\)I have posited that the root is underlingly *ng* with an epenthetic vowel inserted when necessary (§2.4.5). There are many examples of word forms like *wany* where the final glide/vowel is devoiced. But there are also forms where the final vowel-glide sequence in *niy* is preserved with additional material occurring before it. For instance *nukiy* ‘load / fill up’ shows that final CVG sequences are possible and not underlingly CG.
for drawing upon the third plural object verb-forming suffix, but the singular form cannot. Also, the two forms draw from different suffix sets. The singular draws from the r-set while the plural is drawn from the n-set (§6.2.2.1). Some speakers accept a prefixed form for the singular wa-bufwar ‘think of me/you (doing x)’ and for the plural ma-bufnin ‘think of us/you (pl.) (doing x)’. Some speakers have reanalysed the plural verb using the verb-forming suffix -mar ‘local plural object verb-forming suffix’ to convert mabufnin to (ma)bufmar.41

The combination of object prefixes with verbal number means that, although third person number is not marked grammatically, third person number can be recovered from the absence of object prefixes, and number can be inferred from the choice of stem.

Stage 5 is represented by the verbs naakni/tyekni ‘be accompanied by one/many’ and on/koynin ‘see/visit/watch one/many’. I consider these members of the class of high-transitive verbs, but on/koynin is more obviously so. Full paradigms for these verbs can be found in §6.4.3.4 and §6.4.3.3 respectively. Both show stem alternation corresponding to the number of their object. Naakni/tyekni only partially marks objects, and employs prefixes and verb-forming suffixes across the paradigm. On/koynin is more consistently built around object suffixes. While stem alternation exists for these verbs, I consider them to be integrated paradigms rather than separate paired verbs.

The line between stage 4 and 5 is not always clear, but it appears that at least one cell with a verb-forming suffix is necessary. As noted in §8.1.4, it is not always clear whether verbs like this properly belong in the class of low-transitive verbs or high-transitive verbs.

40 The n-set forms all end with n, while the r-set forms end with r, with the exception that the third plural object form in the r-set is -ninta(i) (§6.2.2.1).

41 Diachronically, I assume that the verb was first formed from the noun bufo ‘thought’ (in turn coming from bofu ‘head’) verbalised with ar ‘do’ (see §6.3.1 for verbs formed this way). This verb bufwar ‘think of’ lacked a verbal number counterpart. Then the plural suffix -nin was introduced and a plural counterpart formed. From there human objects were added via prefixes expressing local objects. The plural form then shifted to use the plural local object verb-forming suffix -mar. The final step is to reanalyse the singular forms using the full set of singular object forming suffixes. This step has not occurred, and the prefix remains the preferred means of marking this.
Chapter 7

Aspect

This chapter is concerned with the category of aspect, mostly as it applies to verbs. I approach the topic here by dividing it into two parts. Sasse (2002) collapses many differing points of view on aspect into two broad groups. “ASPECT 1” groups what is sometimes referred to as “aspect proper”, viewpoint (aspect), perspective point, or simply “the imperfective/perfective distinction”. “ASPECT 2” is the consideration of what has variously been referred to as lexical/situation aspect, aktionsart or actionality. These labels are used within the paper to cut across differing uses of terms like aktionsart, which have been used in both domains. In this thesis, however, I refer to situation and viewpoint, following the model provided by Smith (1997).

Of particular interest in Momu is the coding of deictic distinctions as part of the progressive (§7.4.2.1). In addition to this, Momu has a reasonably large inventory of verbal suffixes (§7.5.2, §7.5.3), all clearly related to full synchronic verbs, showing gradable degrees of grammaticalisation as various derivations of situation aspect. These are somewhat reminiscent of the “vector verbs” of Tamil (Schifman, 1999) in that they are halfway towards being fully grammaticalised aspectual distinctions, and also in that they are focussed on deriving various components of situation aspect.

Momu does not have grammaticalised marking of tense, rather temporal location is indicated by other means, including adverbials1 (§4.5, §15.3) and

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1Momu lacks temporal frequency adverbial forms. For temporal location, only an absolute point in time can be indicated (e.g., “morning” or “evening”, not today, yesterday or tomorrow, §4.5). Spans of time can be related to an event via a comitative temporal adverbial clause (§15.3). For duration, only pace adverbs are available (§9.3.1), but these are sufficient for exposing the durative component of some situation types. Completive temporal adverbials are expressed by subordinate clauses (§15.4). Additional event modifying
other contextual cues. The default reading of most modal inflection is future orientation (§12.1.1), but with sufficient context this is defeasible. Conversely, the default reading in the absence of modal marking is non-future orientation.

7.1 Viewpoint aspect

Momu can be analysed as having a classic viewpoint aspect system, which signal “an opposition between an activity with no boundaries implied... and a delimitative version including the the whole event with its initial and final boundaries” (Sasse, 2002, p206). Here however, following Smith (1997), I define three core viewpoints: the perfective (§7.2), imperfective (§7.3) and progressive (§7.4).

Momu has a highly grammaticalised overt marking of imperfective aspect with a prefixing form ai- clearly related to the synchronic full verb ai ‘be/exist (of animate)’. The perfective is an unmarked category, making the interplay between some ambiguous states somewhat complex. The progressive is a complex, multi-part construction which builds upon the imperfective (§7.4).

7.2 Perfective Viewpoint

Perfective aspect is expressed by the absence of inflectional aspectual marking on clause-final bounded verbs. The distinction is not otherwise marked in glossing throughout the thesis, but where necessary for the argument at hand, I indicate it as inferred (‘[PFV]’) in glossing as it does not correspond to an inflectional morph. If the reader prefers, the perfective is marked by a null affix on clause final event verbs (or better yet, a null prefix in complementary distribution with the imperfective prefix ai- (§7.3)).

The boundedness of a verb may be part of its lexical semantics, or it may be derived as an event, refined (where ambiguous with respect to situational aspect) or enhanced through the addition of one of the aspectual suffixes (§7.5.2). A subset of these suffixes derive or enhance durative or telic features.

adverbs are considered in §9.
7.3 Imperfective Viewpoint

Imperfective aspect is expressed by the prefix ai- ‘imperfective’. The imperfective is a component of the future and past imperfective, and the progressive.

The imperfective is a grammaticalisation of the animate existential verb ai (§3.1.1.1). This is a common source of continuous marking (e.g., progressives) cross-linguistically (Bybee, Perkins and Pagliuca, 1994; Heine and Kuteva, 2002). It is notable in Momu as the only prefixing aspectual marker. Imperfective marking applies only to events. States cannot be marked imperfective.

The imperfective in the absence of modal marking is read as past imperfective.2

\[(7.1)\]
\[(a)\] Te anu=m a-ki.  
1SG here=OBL IMPF-sleep[1SG]  
‘I had been sleeping here (also habitual: I sleep here).’

\[(b)\] Fyi (nu) a-kyekin.  
water (just) IMPF-boil  
‘The water has (just) been boiling / the water has boiled.’

\[(c)\] Wiwawa=m a-wina-si.  
swing=OBL IMPF-swing-3PLS  
‘They were swinging on a swing.’

In combination with the modal markers -mu ‘volitional future’ or -meta ‘epistemic future’, the form is read as a future imperfective.3

\[(7.2)\]
\[(a)\] Mu-yime spirit=m  
woman-man spirit=OBL  
a-naige-t-mu.  
IMPF-many.follow:3SGO:VTR-1PLS-VOL.FUT  
‘We people will be (habitually) following the holy spirit.’

\[(b)\] Te nu y-a-moms-wan-a.  
1SG already D-IMPF-talk.to-1|2SGO:VTR-1SGS:NZR  
A-bufwar-f-mu.  
IMPF-think.of.:one:VTR-2SGS-VOL.FUT  
‘I am talking to you. You will be listening to me.’

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2Because these can be read as habitual, I do not consider them progressive. See §7.4 for more.

3Again, I do not consider these progressive as they can be read as habitual.
7.4 Progressive Viewpoint

Progressives are a sub-type of imperfective which express an ongoing action, at a reference time (Bybee, Perkins and Pagliuca, 1994; Comrie, 1976). They describe a broad range of imperfective types and are usually understood to exclude state verbs. In addition to this, progressives are usually excluded a habitual reading (Comrie, 1976).

Momu has a two-way contrast in progressives. There is a form restricted mostly to interrogative and related subjunctive-like clauses which I label the irrealis progressive, and two forms of realis progressive which incorporate a deictic component in the form of distal or proximal marking (§7.4.2.1). Historically, many papuan languages have been analysed as making a realis/irrealis distinction (Foley, 1986; Roberts, 1994), but the distinction has been called into doubt (Bybee, 1998; Cristofaro, 2012; De Haan, 2012). An alternate analysis which avoids an irrealis/realis distinction altogether is that Momu progressives make a three-way deictic distinction between proximal “here” space, distal “not here” space, and an unlocatable space. Such an analysis is present in, for instance, Wolof (Robert, 2006). An unlocatable space in Momu includes unrealised states, or unknown locations.

These progressives stand out from other forms of aspect marking in Momu in that they are complex signs composed of more than one morpheme where the meaning of the morphemes together is not the simple product of their separate meanings. Thus, while the future imperfective is the combination of future marking and imperfective marking, the irrealis progressive is not predictably understood as the combination of imperfective marking and stativisation. In fact, imperfective marking does not otherwise combine

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4Given that progressives exclude state verbs, this is usually taken in turn as a partial test of state-hood (§7.5.1.1).
5The realisation of a three-way distinction in Wolof shows affixal consistency across the paradigm (in the sense of Corbett, 2015). This is not the case in Momu. The proximal and distal distinctions are overtly marked. The “unlocatable” distinction is unmarked. Further to this, the realis progressive is a nominalised form while the irrealis is a stativised verbal form.
with state verbs. Nor is it clear why the combination of a deictic marker, the imperfective and nominalisation results in a progressive sense.

Despite being an odd combination of features, there are other languages with similar combinations of deixis on the verb. In the West African language Wolof, there is a three way distinction made by suffixing on nouns, predicates and subordinators indicating a spatio-temporal location that is proximal, distal and non-localised (or absent). This is similar to the the three-way distinction made in Momu across the progressives (proximal, distal and unknown/irrealis), but in Wolof it is far more pervasive, and heterosemous (Robert, 2006). Similarly, Abui has a set of pronominal and (ad)verbal demonstratives, which is also highly heterosemous, but which, amongst many other interesting functions, locates participants in an event in space (Kratchochvil, 2011). The deictic component of the realis progressive is discussed in detail in §7.4.2.1.

7.4.1 Progressive morphology

The progressive is a multipart construction, with relevant morphemes all obligatory and present on the left and right side of the root.

A template covering the realis and irrealis forms is given in (7.3). At the core of the progressive is a subject inflected root that is prefixed with the imperfective marker. Progressives are effectively transformed into state-like forms. In the case of the realis, they are nominalised (§16.5.1.1). In the case of the irrealis form they are stativised (§7.5.3). Finally, a deictic distinction is prefixed onto the realis form. Fittingly, the irrealis form is unspecified for location. For transitive verbs that mark objects using prefixes, these prefixes do not occur when the verb is marked as progressive.

\[
\begin{array}{cccccc}
\text{realis:} & \text{deixis} & \text{imperfective} & \text{root} & \text{subject} & \text{nominaliser} \\
\text{irrealis:} & \text{imperfective} & \text{root} & \text{subject} & \text{stativiser} \\
1 & 2 & 3 & 4 & 5 \\
\end{array}
\]

For first singular (-\((y)a\)), third singular (-\((w)a\)) and third plural subjects (-\(sa\)) the subject and nominalisation of the realis progressive is coded by portmanteau morphs.\(^6\) Where first and third person singular subjects are

\(^6\)Portmanteau morphs for first and third person singular subjects effectively “reovers” a distinction lost to very common syncretism of these values for \(n\)- or \(r\)-final roots (§6.4).
differentiated by rounding of the final segment(s) (§6.2.1), subjects are effectively marked twice. Second singular (-af) and second plural (-am) subjects are marked not by their usual morphs, but by forms used in subjunctive clauses (§15.7.1).

An example realis progressive paradigm is given in (7.4) for the verb won ‘go up(river)’. Portmanteau subject-nominalisation morphs are in bold. Irregular subject marking is underlined.

(7.4)

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<tbody>
<tr>
<td>SG</td>
<td>y-a-won-a</td>
<td>y-a-won-af-u</td>
<td>y-ai-won-o</td>
</tr>
<tr>
<td>DU</td>
<td>y-a-won-rai-u</td>
<td>y-a-won-mi-u</td>
<td>y-a-won-fi-u</td>
</tr>
<tr>
<td>PL</td>
<td>y-a-won-t-u</td>
<td>y-a-won-am-u</td>
<td>y-a-won-sa</td>
</tr>
</tbody>
</table>

The corresponding irrealis paradigm for won ‘go up(river)’ is given in (7.5). In comparison to the realis form, the morphology is far more straightforward. The only exception is the third plural. The form is occasionally marked with the portmanteau morph for third plural subject and nominalisation -sa. This form appears to be a progressive which is occasionally read as a habitual.

(7.5)

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<tr>
<td>SG</td>
<td>a-won-ta</td>
<td>a-wo-f-ta</td>
<td>a-won-ta</td>
</tr>
<tr>
<td>DU</td>
<td>a-won-rai-ta</td>
<td>a-won-mi-ta</td>
<td>a-won-fi-ta</td>
</tr>
<tr>
<td>PL</td>
<td>a-won-t-ta</td>
<td>a-wo-m-ta</td>
<td>a-won-si-ta-(sa)</td>
</tr>
</tbody>
</table>

The existential verbs ai (animate) and wu (inanimate) have irregular paradigms. The root and imperfective slots are filled just by the roots for each of the paradigms. The realis and irrealis progressive for the animate existential are given in (7.6) and (7.7).

(7.6)

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<th>3</th>
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<tbody>
<tr>
<td>SG</td>
<td>y-ai-ya</td>
<td>y-ai-af-u</td>
<td>y-ai-wo</td>
</tr>
<tr>
<td>DU</td>
<td>y-a-rai-u</td>
<td>y-a-mi-u</td>
<td>y-a-fi-u</td>
</tr>
<tr>
<td>PL</td>
<td>y-a-r/t-u</td>
<td>y-ai-am-u</td>
<td>y-a-sa</td>
</tr>
</tbody>
</table>

(7.7)

The past imperfective of ta(i) ‘do’ is differentiated from the irrealis progressive of a(i) for first and third person singular subjects by the presence or absence of the final i in each. The irrealis animate progressive is aita ‘I/he/she is there’ and the past imperfective forms for ta(i) are atai ‘I was doing it’ and ata ‘s/he was doing it’.

7The past imperfective of ta(i) ‘do’ is differentiated from the irrealis progressive of a(i) for first and third person singular subjects by the presence or absence of the final i in each. The irrealis animate progressive is aita ‘I/he/she is there’ and the past imperfective forms for ta(i) are atai ‘I was doing it’ and ata ‘s/he was doing it’.

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The inanimate progressive is defective for first and second person subjects, because of semantic incompatibility. A specialised use of the verb for caused locations does allow animate subjects (§13.2.3.3). These additional local subject cells are therefore greyed in (7.8). It is not clear that the same local cells can be filled for the irrealis form in (7.9), however.

Verbal aspectual suffixes (§7.5.2) can occur inside the progressive. I take this to be a sign that these suffixes are a component of a single lexical form. This is a useful tool for differentiating serial verb constructions in various stages of grammaticalisation. In (7.10), (a) extended aspect, (b) exhaustive aspect, and (c) directional aspect all occur within the progressive.

(a) Sufy y-a-i-e-nepri-fi-u eru.
   hold D-IMPF-pull-3SG:VTR-EXT-3DU:S-NZR that
   ‘They two are holding him, pulling him away.’

(b) Baso wobu
    child 3SG:COM:GEN
    onyipi=on-u=ne
    look.towards[1|3SG:S]=see.one[3SG:S]-NZR=FOC
    y-a-pyinu-pin-o, suff-mu,
    D-IMPF-[one.]runs-EXH-3SG:S:NZR hold[1|3SG:S]-VOL:FUT
    bafu=m bafu sisy eru.
    father:SG:POSS=OBL father:SG:POSS also that

---

8I know that caused locative forms can occur as questions. I’m not sure if local person referents can be used in question forms for this construction type.
‘After his child looks toward (him), he is running to him, and will hold him, his father (also).’

(c) Te nu y-a-otonor-a anu-a.
1SG already D-IMPF-put:down-1SGS:NZR this-EMPH
‘I’m putting it down/under here.’

7.4.2 Realis progressive

The realis progressive is used in the declarative mood (§10.3.1) to assert non-future ongoing actions. A necessary component of the realis progressive is to make a deictic distinction (§7.4.2.1). As a deverbal form, the realis progressive is the only other aspect of modal marking possible for sentential complements to verbs which restrict their form to non-verbally predicated complements (§16.5.1).

7.4.2.1 Deictic distinctions

The progressive in Momu obligatorily marks a proximal or distal distinction when constructing the realis form. My label for this distinction takes spatial distance as a metaphor for identification of a contextually mediated and conversationally constructed notion of a location within whose bounds the deictic centre is included (i.e., “here”). In most ordinary utterances the deictic centre is the speaker, and additionally, the reference time is the moment of speech. Thus, the proximal form is almost always reserved for descriptions of activities performed by or co-located with the speaker at the moment of utterance.

(7.11) Te nu n-a-bun-a!
1SG just PX-IMPF-listen-1SGS:NZR
‘I’m listening!’

But certain types of speech act automatically shift the deictic centre. For instance, in the example below the speaker responds to a request from another individual to come to their location.

(7.12) Te ni=y-a-pwen-a.
1SG just=D-IMPF-[one.]comes-1SGS:NZR
‘I’m coming right now.’

Momu, like English, shifts the deictic centre to the addressee of the utterance of motion verbs. Thus, one refers to oneself as “coming”, not “going” (keeping
the deictic centre as the speaker) as is the case in standard Japanese (Fillmore, 1997). A further shift is indicated by the use of the distal form of the progressive. Despite the speaker being literally collocated with themselves through the entirety of the utterance, the proximal form is not used. With the shift in deictic centre clearly indicated by the choice of motion verb, “here” has moved to the location of the addressee. The activity is not taking place within the bounds of a location that includes the deictic centre.

The situation becomes even more complex in a subordinating context. In the example below, the speaker conveys a (prior) promise made to a person non-present at the moment-of-speech (7.13a). At the moment-of-speech of a promise outside a subordinating context, the proximal form would likely apply (7.13b). In this shifted context, the distal applies, despite the activity taking place proximally to the moment-of-speech and present location.

(7.13) (a) Te teku ni
1SG work just
y-a-tapuw-an-rai-u=m
promise[1|3SGS]
‘I promised that we are finishing the work right now.’

(b) Yery teku ni n-a-tapuw-an-rai-u.
1PL work just PX-IMPF-finish-one:VTR-1DUS-NZR
‘We are finishing the work now.’

Further work is needed to clarify this, but deixis appears sensitive to time as well. In the example below, the speaker relates a location that is concrete and relatively proximal (the main river in the village). The proximal may not apply here because the situation described is not of immediate relevance.

(7.14) Yunyi ugenu fob y-a-ina-t-u, busne ere
sun hot day D-IMPF-many.go-1PLS-NZR sweat like.that
zu pi=ai-ta-r-mu.
come.down\3SGS GO.FUT=IMPF-do-1PLS-VOL.FUT
‘Travelling under a hot sun, we would be walking along with sweat dripping down.’

The progressive in context in the example below is distal despite being a first person subject. It may be that it is distal because the activity described (in a series of pictures) is not proximal to the speaker at the time of utterance, or
it may be that it was in the past. A lot more is going on in this example. The tail-head linkage with a shift from progressive (imperfective) to perfective is also backgrounding detail.

(7.15) Kuw tyi-rai. Eru kosy
food carry.many-1DUS that road
y-a-na-pwe-rai-u. Na-pwe-rai, yime eru
D-IMPF-many.-come-1DUS-NZR many.-come-1DUS man that
bekubeku nukwu.
things load\3SGS

‘We carried them. We’re coming along the road. We came, and the man loaded the things.’

Making proximal/distal deictic distinction on a verb is odd as it is a category that usually relates participants to an event, and thus is prototypically marked on participants. For this reason, it can be unclear at times what is being located by the realis progressive: the activity, the affected (absolutive) participant, or the subject. I tentatively conclude, however, that it is the affected participant being located. In (7.16a) it is clearly tracking the affected participant. The utterance is directed to the hearer (and marked as such) and performed by the speaker, but the distal form is used. In (b), affected participants are identified but not cross-referenced in the final progressive verb. A proximal form tracks the subject, which is also the affected participant here.9

(7.16) (a) Te ni y-a-moms-wan-a,
1SG just D-IMPF-talk.to-2G0:VTR-1SGS:NZR
a-bufw-ar-f-mu.
IMPF-think.of.-one:VTR-2SGS-VOL.FUT
‘I am talking to you, and you will be thinking about it.’

(b) Yery otokta=a-r-u=ba,
1PL many.sit=ANIM:there.be-1PLS-NZR=COM[ADV] Fiona
wow eru=ti oton=ye, Tom
go.across\3SGS that[REL]=DIR one.sits[1|3SGS]=there Tom
kusen=ye, Luk oto=ya,
one.lies.down[1|3SGS]=there Luke one.sits[1|3SGS]=here
Te oton mony n-a-momsen-a.
1SG one.sits story PX-IMPF-talk-1SGS:NZR
‘As we sit, Fiona sits over there, Tom lies there, Luke sits here, I sit talking.’

(7.17a) shows, via a parenthetical question between question marks (¿?) (§10.3.2.4), that a referent can be unidentified but still located. In (b) despite all participants (and grounds) being clear, because the entire predication is called into question, the irrealis form is used instead.

(7.17)  

(a)  ¿Yime=s a?  y-ai-pwen-o.  
man=rstr or D-IMPF-[one.]comes-3SG:NZR  
‘A man (Is it a man?) is coming.’

(b)  Anu=ne oimni-ta=a-bu-ta=s  
this=FOC ruined-INCT=IMPF-put.many[1|3SG]-STVZR=rstr  
or yet  
‘As for these, I’m putting them in the wrong spot, or (not?).’

Morphologically, the deictic distinction is two-way, but if one includes the irrealis progressive construction, the distinction across the progressive is actually three-way. By locating the participants in an event, the speaker (or asserted knowledge holder) is indicating that in knowing where they are, they have reason to hold that knowledge as real. In situations where this is not the case, the speaker must use the irrealis form of the progressive.

Making an inflectional deictic distinction on verbs is unusual but not unheard of. More commonly affixal deictic distinctions might be considered cliticised adverbial form, for instance, a rich system of spatial distinctions including proximity which in some way affix to the verb is not uncommon in North American languages. For example, in Kwakwala, amongst a large inventory of suffixes which “reflect the natural environment in which the language is spoken” there is a suffix -$em` ‘nearby’ which indicates proximity (Mithun, 2001, p149). However, unlike the distinction required in the Momu progressive, these are not obligatory categories. The Papuan language Berik makes a two way distinction on verbs between an unmarked activity and verbs marked with -$tet to indicate that the activity occurred at some distance (Westrum, 1988, p153).10

Diachronically, the Momu distinction is possibly closer to a grammaticalisation of motion verbs (§C.4). In the North American language Nez

10Berik also marks the spatial distinction of relative height (Westrum, 1988).
Perce a proximal (cislocative) and distal (translocative) distinction is optionally marked on verbs (Deal, 2008). The proximal and distal markers in Nez Perce are grammaticalised forms of the verbs ‘come’ and ‘go’. These synchronically mark motion towards/away (in a similar fashion to Momu directionals (§7.5.2.1)) but also spatio-temporal distance.

Nearby to Momu, Kwomtari has a proximal and distal durative aspect. Both interact with portmanteau marking of person and number of subject, and status (irrealis or realis). Honsberger et al. (2008, pp117–118) comment that the proximal form -la is likely a grammaticalisation of the verb la ‘remain’. In Momu, the grammaticalisation of similar verbs fenoi ‘leave’ (corresponding to the incompletive aspect) and ketya ‘lose’ (corresponding to ‘lose-completive’ aspect) do not achieve a similar meaning. The combination of proximity and status marking is a similar set of features to that in Momu however.

See §C.4 for a hypothesis on the development of the deictic distinction on the progressive.

### 7.4.3 Irrealis progressive

The irrealis progressive is the combination of imperfective marking (ai-) and the stativiser -ta(i). The form is most commonly used in the interrogative mood as in (7.18a), in interrogative-like modal usages like (7.18b) where the speaker is uncertain about the status of their assertion, or in subjunctive-like complements (§16.6.2) to certain complement-taking predicates (§16.1) like (7.18c) (in combination with other markers of subjunctivity).

\[(7.18)\]

(a) Mo yime anu-a syi kumuw to=m
    yet man here-EMPH bird ground.nest 1SG:GEN=OBL
    a-musku-ta=fa.
    IMPF-unearth\3SGS-STVZR\3SGS=YNQ
    ‘This man must be digging up my wild fowl nest?’

(b) Oko nu a-pan-tu-ta, yekeb.
    ground already IMPF-sunrise-DISTR-STVZR[1\3SGS] sunlight
    ‘The sun must be rising.’

(c) Mo u wobu
    yet sago 3SG:COM:GEN
    wu-ta=s yenu.
    [IMPF]INAN:there.be-STVZR=RSTR[COMP] say\3SGS

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‘He thought that his sago was there (i.e. that it was okay).’

7.5 Situation Aspect

Here I define the relationship between verb constellations (verbs with arguments and adverbials) and the various situation types. The primary division between types is between states, which lack dynamism and events. Events further divide on the basis of boundedness or telicity and durativity (Dowty, 1979; Smith, 1997; Vendler, 1967).

Here I am less concerned with the classification of the inherent features of verbs (e.g., per Van Valin Jr, 2005), than identifying these features in verb constellations (e.g., per Smith, 1997). Momu is a language with a degree of ambiguity or vagueness of situation type for many verbs, and so it will at times suit the analysis to consider the verb constellation over the verb.

Relevant criteria for locating basic verb constellations within types are participants in a basic clause, especially goals and the applicability of adverbials. Not relevant is the coding of number in participants. Although there are numeral modifiers, there are only a handful of natural occurrences in my corpus where number is specified for a nominal. Verbal number is relevant, however, for the consideration of the durative component of constellations.

A major component in the derivation of situation aspect are the various suffixing aspects. The stativiser derives a state (§7.5.3), a number of forms either convert states to events, or further modify components of events such as durativity or telicity (§7.5.2). Reduplication modifies the duration or intensity of an event verb (§7.5.4).

7.5.1 Basic situation types

In this section I survey the basic, underived situation types in Momu, according to the framework of Smith (1997).

7.5.1.1 States

States are at their core static or non-dynamic. States are commonly expressed by nominal or nominal-like predicates in Momu (§11).
States in Momu include verbs like: *oton/otokta* ‘one/many are seated (or sit)’, *onyipin* ‘be facing towards (face/look towards)’, *afnu* ‘be upturned’, *sen/ten* ‘be dead (or die)’, *sukni* ‘be sick’, *efiyeni* ‘be disinterested’, *ai* ‘be (animate)’, *titita* ‘be painful/hurt’ and *sayinu* ‘be ripe’. Some of these are ambiguous between a state and event reading (as indicated by parenthetic translations).

Some basic examples of states are given below. This situation type in Momu is ambiguous between a present or past reading. The translations below reflect the context of the utterance.

(7.19) (a)  
*Te  efiyen.*

1SG  be.uninterested[1SGS]

‘I am not interested.’

(b)  
*Yeksu  takeenu.*

umbilical.cord  be.severed

‘The umbilical cord is severed.’

(c)  
*Kusen  o  sen  ai  o?*

[one.|be.lies  or  [one.|be.deads  ANIM:there.be[1|3SGS]  or

‘Is he lying down or is he dead/unconscious?’

States include constellations with mono-morphemic verbs and verbs with a variety of word forming strategies building from nominal or bound forms. The intransitive verb-forming suffixes -*ta* (§6.3.1) and -*nu* (§6.3.2) feature heavily in this class, but are not defining of it. For state verbs that select for non-human subjects, it is particularly common for them to demonstrate a defective subject paradigm such that they are fixed upon the form a third person singular subject (indicated by rounding of the stem-final segment, §2.5.1.3), and are defective for number.\(^\text{11}\)

The lack of applicability of a progressive (§7.4) is very commonly given as a test of states. This holds true in Momu, except that some states can have event readings as well. States very commonly surface in regular utterances as a non-final verb in serialisation, describing a state which held while an activity was performed (§13.2.1). Postural state verbs like *otota* ‘many sit’ can combine with a progressive form of the existential, which creates a form that could be taken as a periphrastic alternative for forms that cannot otherwise be expressed in the progressive:

\(^{11}\)In the example forms at the beginning of this subsection, *afnu* ‘be upturned’, *titita* ‘be painful’, *sayinu* ‘be ripe’ and *takeenu* ‘be severed’ in (7.19b) are examples of state verbs that have defective paradigms.
Most inchoative verbs (§3.1.1.2) formed by verbalising adjectives are ambiguous between states or change-of-state. *Titita* ‘be painful/hurt’ is an example of an inchoative verb solely focused on the result-state. It has a corresponding adjectival form *titu* ‘hurt’, which can be used predicatively. Both constructions express states, but the adjective form is used for enduring states while the verbal form is used for transient states. This form is not used inchoatively.

Many non-state verbs in Momu can be coerced into a state form with the addition of the stativiser -*ta* (§7.5.3). This applies both to mono-morphemic verb roots and to verbs with other derived situation aspect (§7.5.2).

### 7.5.1.2 Activities

Activities are events which are dynamic, durative and atelic. They can be modified by pace adverbs in Momu to emphasise their durative component. Some activities are rendered telic with the addition of an object or goal.

Examples of activity verbs include *fwas* ‘bathe’, *koyfita* ‘cry’, *fefeyta* ‘play’, *bufta* ‘think’, *uy* ‘sing’, *kiy* ‘consume’, *kwasta* ‘mark/write’, *ni* ‘perform’, *sisy* ‘scrape’, and non-goal based uses of verbs of motion including manner of motion such as *pyinu* ‘run’, *pin* ‘one goes’ and *won* ‘go upriver’.

(7.20) Baso peru eru sisy, abo ye ko anu, child small that also frog true this
	ootol=au-ufi-a.

many.sit=PX-[IMPF]ANIM:there.be-3DU-S-NZR

‘The small child there and the frog here are seated there.’

(7.21) (a) Baso fefey-ta-si.

child [PFV]play-do-3PLS

‘The children played.’

(b) Te samni kiy.

1SG slowly [PFV]consume[1SGS]

‘I ate slowly.’

Activities are natural partners for the progressive or imperfective viewpoints in Momu, where they are understood to be ongoing (as opposed to, say, repetitions of the same activity).
7.5.1.3 Achievements and accomplishments

Achievements and Accomplishments both express telic events, but differ in duration. Achievements are (effectively) instantaneous, while accomplishments are not. Many verbs in basic clauses are ambiguous with respect to this durative component in Momu, and aspectual suffixes such as extended aspect can make the durative component more obvious. Verbal number (§6.6), where present, can interact with the durative component, as some telic events may be effectively instantaneous as a singular event, but durative as a plural event. The acceptability of pace adverbs (§9.3.1) can in some cases disambiguate achievements from accomplishments in Momu.

Examples of achievements are: tekenaiyen ‘snap’, niy ‘shoot’, titan ‘tie one’, kwo ityen ‘light a fire’. Examples of accomplishments are: kyekin ‘boil’, goal based uses of verbs of motion such as fikym pin ‘go to the house’, taty ‘shoot many’, kwo itnin ‘light many fires’.

(7.22) achievements

(a) ‘I plucked a pumpkin.’ Pakini pumpkin [PFV]pluck.one[1SGS]

(b) ‘I put on (my) shoes.’ Su shoe slide-.many:vtr[1|3SGS]

(7.23) accomplishments

(a) ‘I harvested pumpkins.’ Pakini pumpkin [PFV]pluck.many[1|3SGS]

(b) ‘I crossed to the other side (of the river)’ Mamo=ti other.side=DIR

bini.

[PFV]ford[1SGS]

Most inchoative verbs have a default reading in basic occurrences which focuses on the result-state, rather than change of state. Many are ambiguous with a change-of-state reading, and depending on the specific verb and participant, may express achievements or accomplishments. Compare the uses of the inchoative verb sukta in (7.24). As an adjective, sukwi is unambiguously a two-place state predicate to relate similar referents (§11.2.2). As a
verb sukwta either describes a state (7.24a), or a change of state (b). The
durative component is dependent on the nature of the transformation.

(7.24) (a) Kwo feku sukw-ta, bofu wobu,
    tree branch similar-INCH head 3SG:COM:GEN
y-o-wo eru.
D-[IMPF]NAN:there.be-3SGS:NZR that
‘Something like a tree branch, is on his head.’ (describing
antlers) ma-frog-story

(b) Wune suk-ta-fi y-o-fi-u.
stone similar-INCH-3DUS D-[IMPF]NAN:there.be-3DUS-NZR
‘They became stones (staying there).’ yarin-tumbuna

Some achievement and accomplishment predicates can be coerced into a
stative form with the addition of the stativiser (§7.5.3). In some cases, the
aspectual suffixes (§7.5.2), all of which more or less add or confirm a telic
feature to the formed verb, can highlight the change-of-state or durative
component of these accomplishment and achievement verbs.

7.5.1.4 Semelfactives

Semelfactives are dynamic, instantaneous, and atelic.

At the present stage of analysis, I do not have many clear examples of
semelfactives. Examples include: tuunu ‘thunder/make a noise’, and non-
goal based uses of (na)byenetyin ‘one jumps (or many jump)’. For these
verbs, combining with a progressive indicates an iterative sense.

Some uses of the incompletive -fenoi can derive a semelfactive. Usually,
the incompletive indicates that an activity was performed, but not to the
point of completion. The overall viewpoint is still perfective in that no
further energy is put into the activity. This is compatible with a semelfactive
in some cases. For instance, when it combines with the activity verb on ‘see’,
onfenoi means ‘to glimpse’ (see (7.40) on page 272).

The verb niy ‘shoot one’ is not usually semelfactive in that there is
usually a change of location for the instrument, and possibly a change-of-
state in the patient. In the use below, the instrument is the fist of the
thrower, and so it returns to its initial state at the end of the action. As
such this could be seen a semelfactive use of the verb.12

12Whether (7.25) is semelfactive would in part hinge on whether the patient undergoes
a change-of-state.
7.5.2 Dynamic (“suffixing”) aspects

The suffixing aspects are all concerned with deriving situation aspect. The forms considered here (the “suffixing aspects”) are all concerned with various features related to events. The stativiser, while also suffixing, is considered separately (§7.5.3).

All suffixing aspects can be related to synchronic full verbs. All probably arose from grammaticalisation of serial verb constructions. Many relate to cause-effect type serialisation (§13.2.3). Cause-effect serialisations are otherwise not all that common in Momu.

I treat suffixing aspects here as verb marking rather than serialisation for several reasons. First, the suffixes generally combine with a verb as a single phonological word. They variably show some sign of grammaticalisation, ranging from phonological reduction to loss of semantic detail, or loss of inflectional categories. Some suffixes host subject marking, while others do not, but generally speaking if both host subject marking then they are interpreted as serial or coordinated verbs. A major test is progressivisation. Suffixed forms can be progressivised, while in serial verb constructions, only the final verb can be progressivised.

Verbs marked by any of the suffixes in this section are events, and as such are perfective in the absence of further marking. These marked forms can be rendered imperfective with the addition of the imperfective marker a(i)-.

The forms discussed here show varying degrees of grammaticalisation, analogous to the relative order in which they apply to a verb stem, with those forms closest to the stem being the most grammaticalised. I break them down into three rough categories, as indicated below:

(7.26) VERB ROOT -(DIRECTION) -(INNER) -(OUTER)

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13In very specific cases, a suffixing aspect may not generally host subject inflection, but becomes the host of inflection when the verb root is unable to distinguish some values due to phonologically conditioned syncretism (§6.2.1).
14The only suffixing form that has an imperfective reading is the stativiser -ta(i) (§7.5.3).
Concerning the order of suffixation, it is clear that directional distinctions (§7.5.2.1) are the inner-most. They are the most common, most phonologically integrated, and the most subject to lexicalisation.

Following directionals are “inner operators”: extended aspect (§7.5.2.2) and exhaustive aspect (§7.5.2.3). These are more verb-like in that they host subject marking. Between inner and outer is the transitional incompletive (§7.5.2.4).

Finally, there are the “outer operators”: the distributive (§7.5.2.5), the “until sunrise” aspect (§7.5.2.6). These are less verb-like, in that they do not host subject inflection. Examples of the “lose-completive” -keyta (§7.5.2.7) are too scarce to classify at the present stage of analysis.

7.5.2.1 Directionals

A distinction common in Papuan languages is optional marking for spatial components called directionals or elevationals (Foley, 1986, pp148–152). The verbs that are drawn upon to achieve this in Momu are most commonly the spatial motion verbs (§3.6.2.1), but the basic motion verbs (§3.6.2.2) can also be used in this way.

In Momu, the spatial motion verbs include directionals and elevationals. These describe a path of motion with a (terminal) position of the most affected (i.e., absolutive) argument of the clause. By adding a telic feature, this effectively renders an activity as an achievement or accomplishment.

Basic motion verbs, on the other hand, are only directional, and project a vector toward or away from the deictic centre. The riverine spatial motion verbs in particular, when used in context, have an implied origin or terminal point, but this is not the case with basic motion verbs. Hence the difference in meaning as directionals.

The placement verb pair oton/bun ‘put one/many’ very commonly reflects for directionals. Some basic examples are given in (7.27).

(7.27) (a) oton/bun ‘put one/many’ + won ‘go up(river)’ → otonon/bunon ‘put one/many up’
(b) oton/bun ‘put one/many’ + woky ‘go down(river)’ → otonoky/bunoky ‘put one/many down’
(c) oton/bun ‘put one/many’ + woy ‘go across’ → otonoy/bunoy
As described so far, directionals in Momu could be considered a type of serial verb construction (§13, or specifically a cause-effect type: §13.2.3), however, there is some evidence that grammaticalisation has proceeded further than this. Directionals are the inner most operator for all aspectual operators in Momu. As such they can occur within the progressive (§7.4).

Many serial verb constructions optionally mark the same subject on all verbs. In the example below, it is clear that with separate subject marking, this is a simple case of coordination. Note also, that for coordinated clauses, the shared subject is the undergoer of the motion, not the object of the transitive verb.\(^{16}\)

\begin{equation}
\begin{array}{ll}
Ni & \text{bun-si,} \\
3PL & \text{won-si.}
\end{array}
\end{equation}

\begin{itemize}
\item \text{put.many-3PLS}\hspace{1cm} \text{go.upriver-3PLS}
\end{itemize}

‘They put them and went upriver.’

The basic motion verbs code verbal number, but only the singular subject forms\(^{17}\) are used as directional markers. For instance, the verb \textit{on} ‘see’, when combined with a directional marker, becomes a postural verb. In the example below, the singular form \textit{pwen} is used in \textit{onyipwen} ‘face toward’, despite multiple referents.

\begin{equation}
\begin{array}{ll}
Ne & \text{onyipwe=y-a-koy-nin-fi-u} \\
& \text{face.toward=DMPF-see.many-3PLO-3DUS-NZR} \\
& \text{that}
\end{array}
\end{equation}

\begin{itemize}
\item \text{seen.many-3PLO-3DUS-NZR}
\end{itemize}

‘And they are looking, facing toward them.’

Finally, the directional marking often tends towards lexicalisation. For instance, (7.27c) \textit{otonoy/bunoy} ‘put one/many across’ has also lexicalised to mean ‘lean one/many’.

\(^{15}\)i.e., “put one/many inside” is the gloss of (7.27c) if the deictic centre is outside, or “put one/many outside” is the gloss if the deictic centre is inside. \textit{Otonoy/bunoy} has also lexicalised as a postural verb meaning ‘lean one/many’, for standing an object up by leaning it against something else.

\(^{16}\)When the motion of the object is together with the subject, a transitivised form of the motion verb is employed (§13.2.3.2). Thus there are three types of transitive construction: independent motion of subject (coordination, as in (7.28)); independent motion of object (directional marking); and co-ordinated motion (serial verb construction involving a transitivised motion verb (§13.2.3.2)).

\(^{17}\)For \textit{pwen} ‘one comes’ the singular form is the unmarked form. The plural verb is derived: \textit{napwen} ‘many come’. For ‘go’ the stems are dissimilar: \textit{pin} ‘one goes’ versus \textit{ima} ‘many go’.

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On this point of lexicalisation, it is worth noting that when directionals combine with motion verbs, they are probably best thought of as compounds. Verbs of motion away and towards along the same path are often combined to create a sense of the path without the directional component (7.30a). Complex paths are created by spatial motion verbs that are not on the same path (usually a riverine followed by a transversal motion verb, as in (b)). A spatial motion verb combined with the basic motion verb pwen ‘come’ is a mixing of viewpoints coding a point of origin and the deictic centre (the speaker in the example). With the basic motion verb pin ‘go’ in (d), the meaning is clearly the other grammaticalisation of the form: the exhaustive.

(7.30) (a)  *Key futu-mes kowek.*
   hand  bum-ADV come.down:go.down[1|3SGS]
   ‘Her hands are down behind her.’
   monica-reciprocals

(b)  *Kosy nuaow-mu eru=m yeb*
road  come.up:go.across[3SGS-VOL.FUT]  that[REL]=OBL  then
     sanor       anyer.
slide:go.down[1|3SGS]  do.like.this
   ‘The road that (he himself) comes up and through then slides
down like so.’
   yarin-tumbuna

(c)  *Oke mesi=now-pwen-esen fiiki*
okay  again=come.across-come[1|3SGS]-COMPL  close
     a=m eru na-pwe-t tyekta-r-meta.
here=OBL  that  many.-come-1PLS  fill.up-1PLS-EPI.FUT
   ‘Okay, having come close to us again, we can come to fill up
again.’
   antonia-river

(d)  *Menyo fanebo tyeknu*
   sibling  children  be.accompany.by.many\3SGS
   nua-pin eru.
   come.upriver-EXH[1|3SGS]  that
   ‘She came upriver with her brothers.’
   yarin-tumbuna

7.5.2.2  *-nepri* Extended

Extended aspect (what Bybee, Perkins and Pagliuca (1994) call ‘excessive duration’) indicates that an activity is performed over a (longer) period of time, or more intensely than what might otherwise be expected. The form is a grammaticalisation of the verb *nepri* ‘take one (away)’. The inflection is the host of subject marking, and may be further marked as imperfective.
or with the volitional future. The event is ambiguous with respect to telicity, meaning that this form will usually enhance the durative component of an activity or accomplishment, disambiguate an accomplishment from an achievement, or derive an accomplishment or activity from a semelfactive.

On an otherwise unmarked verb the extended aspect indicates a past perfective.

(7.31) (a) *Kwo pitpaito eru, tety-nepri.*

‘I cleared away the little trees.’

(b) *Anu=ne pupwe-nepri-si-u=ne,*

‘In this (picture), having thoroughly beat him,...’

This form can combine with the volitional future to indicate an intention to perform the activity thoroughly.

(7.32) (a) *Eru ukwa-meta,*

‘He will search for him there, they are searching for the frog. And they will search the tree hole here.’

(b) *Mweke=m garden=obl i-nepri-r-mu.*

‘You will plant it out in this garden.’

Verbs marked with the extended aspect can be further inflected for the imperfective. In (7.33), extended forms are marked as past imperfective (§7.3). In (7.34), extended forms are marked realis progressive (a), and irrealis progressive (b).

(7.33) (a) *Fuo tunwu eru wo-ti-ne,*

‘He, for his part, was killing all the sago beetles, he said "these are mine..."’

(b) *Tabu 1sg:com:gen 3sg:dir:fo c a-te-nepru-u=ne,*

‘...”

Verbs marked with the extended aspect can be further inflected for the imperfective. In (7.33), extended forms are marked as past imperfective (§7.3). In (7.34), extended forms are marked realis progressive (a), and irrealis progressive (b).
(b) *Ereye=a-bu-nepri.*
   do.like.that=IMPF-put.many-EXT[1SGS]
   ‘You have been putting them like that.’ (arranging pages on the ground, after the wind blew some away)

(7.34) (a) *Key, tit-a-si=b eru yeb*
   hand tie.one:VTR-3PLS=COM[ADV] that then
   y-a-i-a-nepri-fi-u.
   D-IMPF-pull-1SGO:VTR-EXT-3DUS-NZR
   ‘When they tied my hands, they were dragging me away.’

(b) *Te nu a-momse-nepri-ta.*
   1SG just IMPF-talk-EXT-STVZR
   ‘I might be talking through this now.’

7.5.2.3 -pin Exhaustive

The exhaustive indicates that an activity is performed completely. The referent of the most affected argument is fully transformed, transferred, or destroyed by the action. In some cases, it appears that the usage is emphatic or indicates that the outcome is surprising, or is done within the bounds of some accepted social norm. In other cases, this form take an atelic situation and makes it telic.

Subject marking occurs on the verb to which the exhaustive attaches. Under some circumstances (particularly where subject marking is unclear elsewhere) the exhaustive may host subject inflection. The form is transparently a grammaticalisation of the basic motion verb *pin* ‘one goes’. Note that the ungrammaticalised form of the verb alternates with a plural form *ina* ‘many go.’ I take the lack of alternation in this context as an indicator of grammaticalisation. Bybee, Perkins and Pagliuca (1994) note several languages where a completive has grammaticalised from a motion verb, especially ‘go’ verbs.

In (7.35a) *tekopwan* is a verb that might ordinarily be read as telic, but in context is understood to be atelic. By marking the final form with the exhaustive the situation is explicitly telic, and the derived situation is as an achievement. In (b), *opwan* ‘extract’ is already an achievement so the exhaustive emphasises that the activity is fully completed.

(7.35)
Having hacked at it over and over, he then cuts right through it.

Having pulled (the pen) right out (of its cap), he is there, seated, holding it.

The exhaustive can combine with other aspectual distinctions. Spatial distinctions occur on the inner edge, as in (7.37a). Exhaustive forms can also be marked imperfective as in the past imperfective in (7.37b) (and (7.35c) above), and can also be further stativised, as in (7.37c).

The exhaustive can combine with other aspectual distinctions. Spatial distinctions occur on the inner edge, as in (7.37a). Exhaustive forms can also be marked imperfective as in the past imperfective in (7.37b) (and (7.35c) above), and can also be further stativised, as in (7.37c).
The exhaustive can combine with stative intransitive verbs as well. Many of
the forms in (7.38) are used in serialisation to indicate the complete trans-
formation of an object in a cause-effect serialisation (§13.2.3). The combi-
ation with pin here derives a telic event from a state. But additionally, it
can indicate a level of surprise at the outcome.\footnote{In context, (7.38b) is a
description of the surprising outcome of someone chopping
through a taut piece of cloth with just their hand.}

\[(7.38)\]
\begin{enumerate}
  \item \(\ldots \text{nebesy e=m ten-u=ba}\text{ sweet.potato e=OBL pierce[1]SZS-NZR=COM[ADV]}
\)
  \(yeb \text{ kaanu-pin.}\)
  \(\text{then} \text{ be.broken}\text{SZS-EXH}
\)
  \(\text{‘... and when he pierces the sweet potato (carrot in video) it}
  \text{then breaks off.’}\)
  \text{cut-and-break-part2}
  
  \item \(\text{Toonu-pin.}\text{ be.break.through\text{SZS-EXH}
\)
  \(\text{‘(She) broke through (the stretched out}
  \text{cloth).’}\)
  \text{cut-and-break-part2:ckarate}
  
  \item \(\text{I-e-ketya ai-ar-u=ne, yeb pull-3SGO:VTR-LCOMPL IMPF-do.to-NZR=FOC then
}\)
  \(\text{poonu-pin.}\text{ be.broken\text{SZS-EXH}
\)
  \(\text{‘Having pulled it taught over and over, it then broke}
  \text{completely.’}\)
  \text{cut-and-break-part1}
\end{enumerate}

The durative atelic state \textit{bufta} ‘think’ in (7.39a) is derived as an accomplish-
moment when the exhaustive makes it telic, but preserves the durative com-
ponent. Interestingly, a stativised verb, as in (7.39b) can also be (re)transformed
into a telic event with the exhaustive.

\[(7.39)\]
\begin{enumerate}
  \item \textit{Bufta-pin} \textbf{eru.}\text{ thought-do\text{SZS-EXH that}
\)
  \text{‘He thinks it through in that (picture).’}\text{picture-task-part2:image-13}
  
  \item \textit{Nebsi-ta-pi-fi.}\text{ wash.many-STVZR-EXH-3DU
\)
  \text{‘They washed them up completely.’}\text{cut-and-break-part1}
\end{enumerate}
Pin is also used as a directional to indicate motion away from the deictic centre (§7.5.2.1). There is also a proclitic form (pi= ‘go/future’) which appears to be grammaticalising as a future marker. Similar meanings are expressed by another completive ketya ‘lose-completive’ (§7.5.2.7), the cause-effect type serialisation of tapuunu ‘be finished’ (§13.2.3), and the adverbial completive marker -sen (§15.4) ‘completive’.

7.5.2.4 -fenoi Incompletive

The incompletive -fenoi indicates that an activity or accomplishment is performed part way, and left in an incomplete state. This form renders an event either atelic or instantaneous (or both). It can also indicate that the action is performed in a careless or inconsiderate fashion relative to expected norms. In this regard, the meaning of the form can be quite subjective or judgemental in nature.

The incompletive is clearly related to the synchronic full verb fenoi ‘leave’. As an indicator of its partial grammaticalisation, the incompletive is sometimes the host of subject marking and sometime is not.

Some basic examples of the incompletive are given in (7.40). In (a), combining with on ‘see’ conveys that the viewer didn’t fully see or understand what was happening. The situation is derived as semelfactive, indicating instantaneousness. In (b), combining with sisyen ‘saw it’, a cucumber is not cut right through, indicating atelicity.

(7.40) (a) Na koy mofu=ne ony-e. Nu and eye base=FOC see.one-EMPH already on-feno.
see.one-INCP\3SGS
‘And the corner of his eye caught it. He (partially) saw him.’ yarin-tumbuna

(b) Yime eru, nene petku pana, akoy menya man that knife little get.one\3SGS cucumber ripe sisye-feno.
Akoi scrape:.one:VTR-INCP\3SGS cucumber sisyen-o=b, nene key=m
scrape:.one:VTR-3SGS:NZR=COM[ADV] knife hand=OBL
tapwan.
cut[1|3SGS]
‘The man gets a little knife, and (partially) saws into a ripe
cucumber. When sawing into the cucumber, the knife cuts his hand.'

In (7.41a), the incompletive combines with *bun* ‘put many’ as part of a placement/preparative serialisation (§13.2.3.1). Placement serialisations are used to describe performing an activity for a purpose, and as such tend to be durative. For instance, chopping up food, or loading a basket. In combination with the incompletive, the preparation looses its telicity, meaning in this example that only some of the chopped food is placed on the table, despite more having been chopped. In (7.41b), in combination with *abkobkota* ‘be sprayed’, the sense is that the action was performed carelessly.

(7.41) (a) \( ... \ tekopwa \sim tekopwa=ta \ bu-feno. \) cut\( \sim \)ITER=do\3SGS put.many-INCMP\3SGS

‘and he chops it repeatedly and puts some of it (on the table).’

(b) \( Abkobkota-feno. \) be.sprayed-INCMP\3SGS

‘He left (his drink) spilled (carelessly).’

The incompletive can combine with other aspectual markers. Directional-marked verbs can be marked with the incompletive, as in (7.42a). There are imperfective and iterative combinations, such as the periphrastic iterative construction in (b). In (c) the form is stativised. In (d) the form is habitual. Interestingly, in (e), the exhaustive and incompletive combine together. The utterance is a description of someone cutting part way in and across half a watermelon. On the one hand, the action was intentional and complete—the knife is taken out of the watermelon—but from the speaker’s perspective the task is incomplete.

(7.42) (a) \( Napwa-tu-feno. \) break-come.down\3SGS-INCMP\3SGS

‘She (partially) ripped (the cloth) downwards.’

(b) \( Nukubu=ne \ on-si-feno, \ ai-ar-si. \) police=FOC see.one-3PLS-INCMP IMPF-do.to-3PLS

‘The police were repeatedly only partially seeing (his actions).’

(c) \( Te \ kwobo \ yesy \ ere \ skub \) 1SG not.know only like.that place take.one[1SG]-INCMP[1SG]-STVZR
‘I don’t know, I only take it (the story) part way.’

(d) *Kanu* *tya* *bu-feno-si-ta-sa.*

Canoe RCO put many-INCMP-3PLS-STVZR-3PLS:NZR

‘(The place where) they (habitually) leave the canoes (scattered about the place).’

(e) *fekopwa-pi-feno.*

Score[1|3SGS]-EXH-INCMP

‘She cut a score across (the melon)’ (leaving it in such a state)

7.5.2.5 -tu Distributive

The distributive is probably a grammaticalisation of the synchronic verb *tu* ‘come down’. Distributive marking combines with verbs without subject inflection. The subject is understood to be plural, and the person unrestricted (despite being unmarked).

(7.43) (a) *Eru ere,* *fefeyu* *ai-ar-u=ne* *efke* *utwu.*

And then play IMPF-do.to-NZR=FOC song sing:DISTR

‘And then, they were playing, and sang all over the place’

(b) *Yekeb* *tyinu-wo-esen* *yeb* sunlight be.shine\3SGS-3SGS:NZR-COMPL then

Kia-ta-tu-esen-a,

dry.INGCH-DISTR-COMPL-EMPH

‘The sun shone in and then (the area) dried up all over the place’

The distributive can also combine with the imperfective, as in (7.44a) and (b). Further work is needed to clarify the situation, but it appears that it can also occur in the progressive, as in (c).

(7.44) *tu* + IMPF

(a) *Baibel* *mony,* *nu* *a-bu-tu.*

Bible words already IMPF-hear:DISTR

‘We have been hearing the message of the bible (all over).’

The spatial verb *tu* ‘come down’ is also grammaticalised as a directional inflection (§7.5.2.1) identical in form, but is usually the host of subject inflection.

20 The progressive distributive in (7.44c) is irregular in that the verb is inflected for the subject, unlike all other uses of the distributive.
The form -pan('until sunrise') is used to indicate a state endured, or event performed until the sun comes up. The origin of the optional tu at the end of the form pantu is unclear at this stage (see (7.46c) for an example). It may be an idiosyncratic feature for some speakers, or possibly distributive marking (§7.5.2.5). Further investigation is necessary.

The form also exists as a stand alone verb pan('be sunrise/dawn'). The verb inflected for this aspect hosts subject marking.21

The examples in (7.45) exclude imperfective marking, while all activity verbs in (7.46) are marked (past) imperfective.

(7.45) (a) *Mesis* ki-r-pan *key* afa. again sleep-1PLS-unt..sunrise hand another
‘We slept until sunrise, another day.’

(b) *Wu-pan.*
inan:there.be[3SGS]-until.sunrise
‘(The corpse) was there until sunrise.’

(7.46) (a) *peenu* eru e=m [one.]arrives[3SGS] that there=obl
ai-ku-pan.
IMPF-sleep\3SGS-unt..sunrise
‘He arrived there, and was sleeping until dawn.’

(b) *Mony eru a-momse-t-pan.*
talk that IMPF-talk-1PLS-unt..sunrise
‘We were talking until the sun came up.’

21The evidence for this form to be considered a grammaticalised aspect is weak, hence this form is not labelled with a grammatical gloss. This form could reasonably be considered a cause-effect type serial verb construction (§13.2.3). In the absence of further evidence, such as whether this form can be progressivised, I tentatively place it here amongst the aspectual suffixes.

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(c)  
\textit{Maw yeb ai-tu-pantu.} 
\textit{rain then IMPF-\text{come.down}\_3SGS-\text{until.sunrise}\_3SGS} 
\textit{‘The rain was falling until the sun came up.’}\textsuperscript{\textcopyright\textregistered\texttrademark}

(d)  
\textit{eru ere, a-kaani-pan-u=ne,}  
\textit{mopri and.then IMPF-\text{cook}[1SGS]-\text{until.sunrise}-NZR=FOC Mopri fekob e=m.} 
\textit{place there=OBL} 
\textit{‘And then, I was cooking (sago) until the sun came up, at Mopri.’}\textsuperscript{\textcopyright\textregistered\texttrademark}

\textbf{7.5.2.7 -\textit{ketya} “lose-completive”}

The verb \textit{ketya} ‘drop/lose’ (as in (7.47)) is recognised by some speakers as a form of grammaticalised completive.

(7.47)  
\textit{Ie anu ketia anu.}  
\textit{fish this lose this} 
\textit{‘He lost this fish.’}\textsuperscript{\textcopyright\textregistered\texttrademark}

At this stage, I have too few data to comment further, but from these examples, we can see at least that the form can combine with an inchoative state (\textit{mutita} ‘be blackened’ in (7.48a)) and activity/accomplishment verbs (as in (b)).

(7.48)  
(a)  
\textit{Nafoke sisy yery tuw aven.}  
\textit{Oko anu mist too 1PL come.down cover:.one:VTR ground this fe= muti-ta-ketia.}  
\textit{INTENS= black-INCH-LCOMPL} 
\textit{‘The mist too came down and covered us. The ground/area was completely dark.’}\textsuperscript{\textcopyright\textregistered\texttrademark}

(b)  
\textit{Awen-ketia eru nu ten-tuw eru.}  
\textit{cover:.one:VTR-LCOMPL that just kill.many-DISTR that} 
\textit{‘The cloud covered them completely and killed all of them.’}\textsuperscript{\textcopyright\textregistered\texttrademark}

\textbf{7.5.3 -\textit{ta(i)} Stativiser}

-\textit{Ta(i)} is a highly heterosemous morpheme, clearly related to the synchronic full verb \textit{ta(i)} ‘do’. The same form is employed in word forming processes to construct intransitive verbs (§6.3.1) including inchoative verbs (§3.1.1.2) and the irrealis progressive (§7.4.1). As a free form, \textit{ta(i)} is used in periphrastic
constructions to express iterative senses (§7.6) and reciprocal constructions (§10.2.2.1).

Here I consider a range of meanings which I group under a general label of stativisation. However, the stativised verbs here do not have the same distribution as mono-morphemic stative verbs or intransitive verbs formed with the verb-forming suffix -ta(i) (§6.3.1). The specific meaning is of a state, including both moment-of-speech states, and gnomic states, and also of the habitual.

Verbs marked with -ta are rendered static. For instance, the unmarked pin ‘one goes’ is usually read as past perfective. The -ta marked form in (7.49a) can only be used during the undertaking of the event. If one has not left yet, or even if one stands in readiness to depart, it is not a valid utterance. In such cases, the realis progressive in (7.49b) is used instead.

(7.49) (a) \textit{Te nu pi-tai.}\textsuperscript{1sg already one.goes-STVZR[1SGS]}\textsuperscript{1}
\textit{‘I’m off.’} (said during the actual leaving, not before)

(b) \textit{Te n-a-pin-a.}\textsuperscript{1sg PX-IMPF-one.goes-1SGS:NZR}\textsuperscript{1}
\textit{‘I’m going.’} (said before, or during the actual leaving)

Both the stativiser -ta and the imperfective ai- are used to code regularly occurring situations.\textsuperscript{22} The past imperfective in (7.50b) can also be read as habitual, but I do not consider this the primary sense.

(7.50) (a) \textit{Fiona ku-ta, peteku.}\textsuperscript{Fiona sleep\3SGS-INCH small}\textsuperscript{Fiona hotel Steven}\textsuperscript{22}
\textit{‘Fiona sleeps on the small one.’}

(b) \textit{Fiona anu=m a-ku.}\textsuperscript{Fiona here=OBL IMPF-sleep\3SGS}\textsuperscript{Fiona hotel Steven}\textsuperscript{22}
\textit{‘Fiona has been sleeping here.’}

In procedural texts, -ta is used to describe the acts or steps made in certain common tasks. Unlike the use of -ta in (7.49a), in this context the reference time is divorced from the moment-of-speech time in (b) and (c). I take the form in (b) and (c) to be a reading of a gnomic state.

\textsuperscript{22}See also (7.42d) on page 273 which is a specific use of -ta for a habitual form used to describe the habitual behaviour of a group of people. This involves using a third person plural deverbalising suffix in addition to -ta.
(7.51) (a) *Te nu oto-ta, yeko anu ...* Waia
1SG already put.one[1|3SG]-STVZR true this wire
kwo ayer san-ok-ta.
tree do.like.this slide-go.in[1|3SG]-STVZR
‘I place it, this one ... I slide the wire into (the split in) the wood like this.’ (said while demonstrating)  

(b) *Fyi nebsi-ta-si.*
water wash.many-STVZR-3PLS
‘They wash them in the water.’  

(c) *Kuw tya pun nukuw-ta.*
food RCO get.many load\3SGS-STVZR
‘She collects and loads the food.’ 

Forms marked explicitly as dynamic by the suffixing aspects (§7.5.2) can be (re)derived as a state -ta, (where -ta is on the outer edge). For instance, the exhaustive-marked form in (7.51a), and the incomplete-marked form in (b) are both stativised. Further examples are given throughout §7.5.2.

(7.52) (a) *Fyi eru*
water that
fe=pi=nefkota-pi-ta.
INTENS=one.goes=turn.many.over-EXH-STVZR\3SGS
‘The flood water goes, thoroughly upturning (the sago palms).’

(b) *Te kwobo yesy ere skub*
1SG not.know just like.that place
nepri-fenoi-ta.
take.one[1SG]-INCMP[1SG]-STVZR
‘I don’t know, I just take (the tale) partway to this point.’

There is some variability as to whether subject marking is hosted by -ta or by the verb that it is applied to. Compare the position of the third plural subject marker -si (7.49a) nebsi-ta-si ‘they wash them’ to pupwa-si-ta ‘they beat me’ in (7.53) below. (7.49a), the third person plural subject marking -si is hosted by -ta, and below it is hosted by the verb and then stativised.

(7.53) *Yeb pupwa-si-ta.*
then beat:1[2SGO:VTR-3PLS-STVZR
‘And so they beat me.’
Because first person singular subjects are unmarked, and because third person singular is often also unmarked (and in these cases identical to first person singular), the “host” of subject marking is frequently indeterminate for first or third person singular subjects. In this case, it appears that the subject can be hosted by -\textit{ta} in order to clarify the reference.

### 7.5.4 Verbal reduplication

Some verbs have a reduplicated initial syllable to indicate that the activity is of greater intensity or duration. For instance, \textit{ikar} ‘do well’ and \textit{bufwar} ‘think of it’ (and their intransitive counterparts) have reduplicated counterparts, as in (7.54a) and (b). Vowel initial forms duplicate the second syllable (7.54a), and consonant initial forms duplicate the initial syllable (7.54b, c, d). There are other forms which can be related to synchronic counterparts which may have arisen from a drift from reduplicated counterparts. For instance, \textit{bar} ‘be with’ (c), or \textit{fwan} ‘smoke (tobacco)’ (d).

\[(7.54)\]
\begin{align*}
(a) & \quad \text{\textit{ikar} ‘do well’} \rightarrow \text{\textit{ikakar} ‘do really well’ (also \textit{ikakta} ‘be done well’)} \\
(b) & \quad \text{\textit{bufwar} ‘think of it’} \rightarrow \text{\textit{bubufwar} ‘think something over’ (also \textit{bubufta} ‘be thoughtful’)} \\
(c) & \quad \text{\textit{bar} ‘be/mixed with’} \rightarrow \text{\textit{babar} ‘gather’} \\
(d) & \quad \text{\textit{fwan} ‘imbibe smoke’} \rightarrow \text{\textit{fufwan} ‘blow on a fire’}
\end{align*}

Some reduplicated stative or inchoative verbs can also have this process applied, although I currently have few examples. The meaning, in this case, is concerned with (verbal) number. In (7.55a), a reduplicated form of \textit{poonu} ‘break’ is used to create \textit{popota} ‘shatter’. It is used when something breaks into many pieces. The inchoative verb \textit{kuta} ‘become dry’ is not usually concerned with verbal or nominal number, but the sense in (b) of \textit{kukuta} ‘many become dried’ is of many tobacco leaves being dried.\footnote{These forms have the appearance of a verbal number distinction. I have queried this, and I should also note that \textit{poonu} has a clear plural counterpart \textit{kukuni} ‘many break.’ It is one of the few stative verbs with a plural counterpart. None of the other inchoative verbs have plural counterparts, and in elicitation \textit{kukuta} was not given to me as a plural counterpart to \textit{kuta} ‘become dried’.}

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The plate, when struck, is shattered (raining downwards).

He went and dried all the tobacco leaves.

Otherwise, the most productive form of verbal reduplication is in combination with -ta(i) ‘do’ or ar ‘do to’ to express iterative aspect (§7.6).

7.6 Iterative

Iterative senses are created by a periphrastic (serial) combination of a verb root (often reduplicated) with either ta(i) ‘do’ or ar ‘do to’. Ar is used when there is a clear undergoer affected by the repeated action. Ta is used when the focus is on the repetition of the action.

The iterative construction is periphrastic. This is demonstrated by ta/ar being the sole host of progressive marking, to the exclusion of the reduplicated root as in (7.58a). Ta/ar is the host of further aspectual marking such
as the progressive in (7.58a), the stativiser in (7.58b) or extended aspect in (7.58c). Aspektual marking can also be a part of the reduplicated root, as in the use of the exhaustive in (7.58d). Modal marking occurs only on ta/ar, as in the volitional future in (7.58c) and the epistemic future in (7.58d).

(7.58)  
(a)  
Eru ere, yime eru ama pana-wu=ne, yeb and so man that hammer get.one\3SGS-NZR=FOC then nuwse~nuwse=y-a-ar-o.  
hit~ITER=D-IMPF-do.to-3SGS:NZR  
‘And so, the man, having grabbed a hammer, hits it repeatedly.’

(b)  
Mobo wobu yesy source 3SG:COM:GEN just  
abye~abye=ta-ta, ukumosy name:3SGO:VTR~ITER=do-STVZR ancestor.story wobyer.  
3SG:COM:EMPH  
‘This is just declaring the beginning of the story.’

(c)  
Ere-ta~ere-ta=ta-nepri-si, like.that-do=do-EXT-3PLS  
tapupw-a-si-mu. finish-one:vtr-3PLS-VOL.FUT  
‘They did it like that repeatedly, over an extended period of time until it was finished.’

(d)  
Aneh, ai-a-f-sen efeke now IMPF-ANIM:there.be-2SGS-COMPL song  
wu-pi~wu-pi=ar-meta. sing\3SGS-EXH~ITER=do.to-EPI.FUT  
‘You should stay first, so they can sing songs repeatedly.’

At the present stage of analysis, it is not clear why some verb roots are reduplicated, and others are not. Examples of non-reduplicated roots are given in (7.59).

Irregular subject marking is consistent with this being a serial verb construction. Subject marking varies between exclusive marking of the final verb and concurrent marking of subjects on prior verbs, as in (7.59a). In (7.59b) a compound indicates a complex path of iterative behaviour. In (7.59c) the iterative action is a complex of serialised verbs.

(7.59)  
(a)  
Kifyi a-ta-fi-mu. consume:3DU\S IMPF-do-3DU\S-VOL.FUT
‘They will be eating again and again.’

(b) **Wow-now**  
\texttt{ai-ta-mu.}  
\texttt{go.across\textbackslash 3SGS-come.across\textbackslash 3SGS \textsc{impf-do}\textbackslash 3SGS-VOL.FUT}  
‘(The river) will be coming and going repeatedly’ (describing the changing path of the river over time)

(c) **Yeko anu kwu tya**  
\texttt{true this food RCO}  
\texttt{te-pwe=bu=y-a-ta-fi-u,}  
\texttt{TRANS\textgreater many-come=put.many=D-IMPF-do-3DU\$-NZR}  
\texttt{mweke=m.}  
\texttt{garden=OBL}  
‘In this (picture), they two are repeatedly bringing food and placing it at the garden.’
Chapter 8

Grammatical Relations

In previous chapters I examined the elements that constitute arguments (§5) and verbs (§6), which commonly function as the head of a clause. In this chapter I begin to tie the two together, by identifying the major relationships between arguments and clauses in Momu. I first enumerate the various elements that help define grammatical relations (§8.1) before defining the individual argument types (§8.2).

Momu has a “nominative subject” (or the function denoted by the shorthand {S=A}, per Bickel (2010)) indicated by subject marking on verbs, and the absence of case marking (or a zero nominative case if one prefers) combined with clause-initial positioning of the argument NP. Objects {O=G, O=T} (again, per Bickel (2010)) are indicated by the presence of oblique marking (§8.1.2) in combination with being in second position in a clause. There is a minor split in objects between those used in high- and low-transitive predicates (§3.1.2, §8.1.4). Locative and instrumental oblique arguments are predominately indicated by postpositions or case markers (§8.1.2).

Verbs and non-verbs can both function as predicates in Momu. Non-verbal predication is almost entirely limited to intransitive clauses.\(^3\) When using the term predicate, I mean it to be exclusive of participants. I do not

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\(^1\)The single letter abbreviations used here describe generalised roles of arguments to predicates on the basis of their valency (Bickel, 2010). These are drawn originally from Dixon (1979) and Comrie (1978), except that Comrie uses P where I follow Dixon and Bickel in using O. Definitions for these labels are given in §8.1.1.

\(^2\)Oblique is used in two senses here: the “Latinate case” oblique marker used in Momu and the syntactic oblique argument. The two overlap but are not equivalent.

\(^3\)There is a single non-verbal transitive (or two-place) predicate, *momu* ‘not have’.
use it in the classical sense to refer to the portion of a clause that excludes the “subject”. In the present discussion I use the term “participants” to refer to both arguments and adjuncts. Arguments are those participants licensed by a predicate while adjuncts are those that are not. Arguments further divide into direct (or core) arguments and oblique arguments (§8.2.3). Obliques are those arguments licensed by a verb, but which occur optionally. The direct arguments in Momu are subjects (§8.2.1) and objects (§8.2.2).

Part of the approach taken here is to classify clauses by valence. Bickel (2010, p402) collapses the distinction between valence and transitivity, but I use them for overlapping but different purposes. I use “transitivity” for the number of objects licensed by a predicate, and exclusive of obliques. Intransitive predicates lack an object. Transitive predicates licence a single object. Ditransitive verbs licence two objects. I use “valence” to refer to the number of arguments in a clause (i.e., inclusive of both objects and obliques). Thus, an intransitive predicate can occur in either a monovalent (§10.1.1) or bivalent clause (meaning that it includes an oblique argument, §10.1.2). A transitive verb can occur in either a bivalent (§10.1.2) or trivalent clause (meaning that it selects for an object and oblique argument, §10.1.3).

8.1 Elements of grammatical relations

Grammatical relations integrate morphosyntactic constructions used across different clause types (Bickel, 2010). There are four main areas of the grammar from which I draw evidence for defining the morphosyntactic constructions that identify grammatical relations: (1) case marking (§8.1.2); (2) relative ordering of participants in a clause (§8.1.3); (3) bundles of features that differentiate predicate classes (§8.1.4); and (4) the mapping of arguments to generalised semantic roles (§8.1.1). Descriptions of grammatical relations often draw on other construction types as support. But in Momu, there are no productive kinds of diathesis alternation, relative clauses do not distinguish argument types, nominalisation does not privilege an argument, and there are no floating quantifiers.4

4There are several construction types that privilege the {S=A} subject, but this is the easiest of all to define, and so I draw upon only what is necessary so as to be brief.
8.1.1 Generalised argument roles

Bickel (2010), building upon the classic works of Comrie (1978) and Dixon (1979) defines the following generalised argument roles:

S ‘sole argument’ of a monovalent predicate
A ‘most actor-like argument’ of a transitive predicate
O (or P) ‘not most actor-like argument’ of a bivalent predicate
G ‘most goal-like or ground-like’ argument to a trivalent verb
T ‘most patient-like’ argument to a trivalent verb

These are intended to be generalised descriptions of the specific semantic relationship between an argument and predicate, in the tradition of macro-roles (Foley and Van Valin Jr, 1984) or proto-roles (Dowty, 1991). The single letter terms clearly come from existing well-recognised terminology but are not intended to be abbreviations of them (e.g., S is not subject) (Dixon, 1979). They stand instead simply as defined.

Predicates are paired with arguments and roles are assigned accordingly. Clauses are compared on the basis of valence. Combining arguments with predicates via these relational mappings, we see below that common properties of arguments (via case marking, §8.1.2, argument indexing §8.1.4, and relative order or position, §8.1.3) across predicate classes (§8.1.4) collapse certain roles across clauses of differing valence.

8.1.2 Case marking

Momu has a simple system of grammatical case. There is a single marker, the “oblique” =m. It applies both to object and oblique arguments. Oblique marking does not occur on topics (§8.2.4), subjects (§8.2.1), predicate complements (§11.1.2), or complements to deverbal predicates (§16.5.1). In the examples below, oblique marking occurs on objects in (a) and (b), and oblique arguments in (c) and (d).

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5I have modified the terms used here to match my varying use of terminology as explained at the opening of this chapter. I exchange “transitivity” for “valence” (a distinction that Bickel (2010) collapses), and also exchange “verb” for “predicate” to be inclusive of non-verbal predicates where necessary. While the single-letter labels align with those used by Comrie (1978) or Dixon (1979), it is worth noting that the use and meaning of these terms by Bickel (2010) is different (Haspelmath, 2011). They are to be taken only as I have defined them here.
Marking with the oblique \(=m\) does not differentiate objects from oblique arguments. In such cases, relative order (§8.1.3), and properties of the verb (§8.1.4, §8.1.1) help to distinguish them. In natural data, objects and obliques rarely occur together in the same clause; instead one or the other is already topically active, having been previously introduced, and is thus elided (§13.3.3).

Momu also has a range of case markers and postpositions that contribute to the identification of oblique arguments (§8.2.3).

Non-subject participants marked with the comitative (§4.8.3) are instrumental oblique arguments (§8.2.3) as in (8.2a). However, instrumental oblique arguments can also be marked with the oblique \(=m\), as in (b). The comitative is also used to mark temporal adverbial adjuncts, as in (c). Finally, subjects alone can be coordinated with the comitative (§14.2.2) as in (d), but not objects, which are instead either explicitly coordinated with the comitative verb bar (§13.2.6) as in (e), or simply coordinated asyndetically (§14.2.1.1).

(8.2) (a) \(Nepu=tya\ wune=b\ kaani-ta-sa\ yesy\.
animal=RCO stone=COM cook-STVZR-3PLS:NZR just
‘They would cook meat with stones.’

The comitative \(=b\) is fused into the form of all temporal adverbs, e.g., \(kab\) ‘morning’ or \(finyib\) ‘night’, and is also used with deverbal clauses to form temporal adverbial clauses (§15.3). The overwhelming majority of productive temporal adverbial uses of the comitative are with Tok Pisin loan words relating to time concepts.
Spatial postpositions (§3.5.1) usually clearly indicate a locative oblique argument. In (8.3a) it is the directional case marker, in (b) it is the postposition tin ‘inside.’

The oblique marker =m can also be used to mark a locative (goal or path) NP, as in the path mwem ‘across the sea’ (c).

Complicating the matter slightly, oblique marking is subject to discourse-pragmatic conditioning: it is optional on elements the speaker deems topical
(i.e., recently mentioned referents, or those that are contextually available to participants in the speech act). Typically, clauses occur with at most two participants expressed by overt NPs. In cases where two objects, an object and oblique, or two obliques occur, usually only the last argument is marked oblique. In others words, a single clause prototypically introduces at most one new referent, and if that referent is not coded as a subject then it is oblique-marked. Otherwise, oblique marking is not used.

8.1.3 Ordering of participants

The typical, pragmatically unmarked ordering of participants relative to the predicate in a clause is given by the following scale:

\[(8.4) \text{Subject} \succ \text{Object(s)} \succ \text{Oblique(s)} \succ \text{Adjunct(s)} \succ \text{Predicate}\]

A clause can have at most one subject,\(^8\) two objects, and multiple oblique arguments and adjuncts, all preceding the predicate. There is no preferred ordering of participants of the same category. Objects to a ditransitive verb can occur in either order, but are preceded by the subject. Where multiple oblique arguments occur, I am unaware of a preferred ordering between them, but together they follow core arguments.

Generally speaking, all participants occur before the final predicate. However, the final participant can sometimes occur immediately after the verb. Such a positioning retains the linear ordering of participants relative to the scale in (8.4). This post-predicate position can be differentiated from extra-clausal “afterthought” style clarifications in that there is no pause.

Topical afterthought or right-dislocation (Lambrecht, 1996) can break the above ordering of elements in that an argument higher in the scale can occur after a lower one in a clarifying role in an afterthought. Topical afterthoughts are further differentiated from standard post-predicate position by intonation. The post-predicate position typically occurs within the falling terminal contour, while, for topical afterthoughts, that terminal contour falls on the predicate, and the afterthought has a flat or rising intonation. Both patterns of post-predicative positioning (including the combination of both) are demonstrated below.

\(^8I\) argue that external possessors are placed within a topic slot preceding the subject. In some cases this kind of construction has been argued to be a “double subject”. See §10.2.1 for more detail.
In (8.5) the oblique-marked NPs occur within the clause but after the verb, while (8.6) contains examples of an extra-clausal afterthought. Orthographically I differentiate the two by placing a comma at the pause of the topical afterthought. In (8.6a) *nepu pwatem* ‘The animal Pwate’ occurs as a clarifying afterthought, further specifying what type of animal the speaker was referring to. In (b) the speaker clarifies the location, having not previously mentioned it.

(8.5) (a) Momsen-rai-mu eru=m.  
talk-1DU:S-VOL.FUT that=OBL  
‘We will talk about that.’

(b) Te yeb yey-en Luk=m.  
1SG then say-3SGO:VTR[1|3SGS] Luke=OBL  
‘I then spoke to Luke.’

(8.6) (a) Nepu sis-ta petyin, nepu  
amail worry-do\3SGS [one.\runs.away[1|3SGS] animal  
pwate=m.  
possum.sp=OBL  
‘(He) worried about meat and ran away... (worried) about possum meat.’

(b) Yeb peeni, fiky wobu=m.  
then [one.\arrives[1SGS] house 3SG:COM:GEN=OBL  
‘Then I arrived...at his house.’

Both a post-verbal argument and topical afterthought can occur together. This appears to be the maximum number of participants that can occur after the predicate. In the example below the elided subject to the two prior clauses is post-posed as a topical afterthought.

(8.7) Baso wobu=m sif-mu.  
child 3SG:COM:GEN=OBL hold[1|3SGS]-VOL.FUT smile  
y-ai-ian-o baso wobu=m, bafu  
here  
‘(He) will hug his child. (He) is smiling at his child, his father  
here.’

picture-task-part1
8.1.4 Features of predicates

Grammatical relations in Momu depend on predicate class. Table 8.1 plots the presence or absence of five features that I use to classify predicates in Momu. These features are:

- Object cross-reference. A small set of “high-transitive” verbs (about 5% of the verbal inventory, §3.1.2.1) are formed with object cross-referencing verb-forming suffixes (§6.3.3.1), in a paradigm with non-zero forms for all persons.

- Object prefixes. These partially cross-reference objects in that they are limited to first and second person referents, at least as far as overt marking.

- Verbal number (§6.6). Verbal number patterns in such a way that it can be used to argue for the difference between an object and an oblique argument. It can also be used to identify transitivity based on the presence or absence of defective paradigms. Both of these points are expanded upon below.

- Full subject marking. The absence of this feature implies either a defective paradigm along the lines of number or animacy or the appearance of fixing upon a third person singular subject.

- Verbal predicate. The absence indicates either a non-verb word class or phrasal predicates such as an NP or PP. All non-verbal predicates lack any of the preceding features. Conversely, the presence of any of the preceding features implies the predicate is a verb.
The primary predicate classes (and the feature combination they align to in Table 8.1) are:

- Intransitive predicates: feature bundles (1–4)
- Low-transitive verbs (§): feature bundles (4–7)
- High-transitive verbs (§): feature bundles (8–11)

The boundaries between these classes often contain a few verbs that are of ambiguous class membership. Note that (4) describes both intransitive verbs and transitive verbs without object cross-reference. The number of participants that occur with the verbs determines the valence of the verb.

The boundary between low- and high-transitive verbs (feature bundles (7) and (8)) represents a transition point between these two classes that I argue in §6.6.5.2 is triggered by the combination of object prefixing, and verbal number.9 There are two verbs that fall under feature bundle (8). In §6.4.3 I discuss the irregular paradigmatic shape of on/koyin ‘see/watch/visit one/many’ (§6.4.3.3) and naakni/tyekni ‘be accompanied by’ (§6.4.3.4). These forms represent a point mid-transition from partial object cross-referencing to high-transitive verbs in that a full paradigm may include a blend of object prefixes and object-cross-referencing verb-forming suffixes. I also take these verbs to mark the point of unification of separate paradigms, with stem alternation within the paradigm.

9See §10.2.2.1 for reciprocal forms of verbs. There is a split in behaviour between high- and low-transitive verbs when forming reciprocal counterparts to transitive verbs.

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Table 8.1: Predicate features

The boundaries between these classes often contain a few verbs that are of ambiguous class membership. Note that (4) describes both intransitive verbs and transitive verbs without object cross-reference. The number of participants that occur with the verbs determines the valence of the verb.

The boundary between low- and high-transitive verbs (feature bundles (7) and (8)) represents a transition point between these two classes that I argue in §6.6.5.2 is triggered by the combination of object prefixing, and verbal number. There are two verbs that fall under feature bundle (8). In §6.4.3 I discuss the irregular paradigmatic shape of on/koyin ‘see/watch/visit one/many’ (§6.4.3.3) and naakni/tyekni ‘be accompanied by’ (§6.4.3.4). These forms represent a point mid-transition from partial object cross-referencing to high-transitive verbs in that a full paradigm may include a blend of object prefixes and object-cross-referencing verb-forming suffixes. I also take these verbs to mark the point of unification of separate paradigms, with stem alternation within the paradigm.

9See §10.2.2.1 for reciprocal forms of verbs. There is a split in behaviour between high- and low-transitive verbs when forming reciprocal counterparts to transitive verbs.
Full object cross-referencing is a necessary condition for being a high-transitive verb (§3.1.2.1). Partial object cross-referencing in the form of object prefixes is not sufficient for being a high-transitive verb. This is particularly clear in the behaviour of object sharing in serial verb constructions. High-transitive verbs cannot share objects with low-transitive verbs, maintaining the same overall valence. Combining the two types in a single serialisation increases the valence of the overall structure (§13.3.1).

Predicates, as described above, may specify oblique arguments, but do not give any formal indication of this on the predicate.

Only high-transitive verbs clearly indicate transitive status in the form of the verb for all cells in the paradigm. Object prefixing of low-transitive verbs is similarly rare. Together, these are clearly in the minority amongst transitive verbs in Momu.

### 8.1.4.1 Verbal number and transitivity

As mentioned above, verbal number—where present—can be a useful diagnostic for transitivity. Verbal number in Momu is a fairly pervasive pattern where verbs alternate to select for the number of a participant on an absolutive basis (§6.6).

Intransitive paradigms with verbal number are defective for subject marking on the basis of number.\(^{10}\) Hence in the feature bundles shown in Table 8.1, full subject marking is absent for bundle (3). Singular intransitive verb stems only occur with singular subject markers. Plural verbs only occur with dual and plural subject markers. This split is demonstrated in Table 8.2, for *oton/otokta* ‘one/many sit.’

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\(^{10}\) See §6.6.3 for argumentation as to why verbal number pairs are treated as separate verbs, rather than as a case of suppletion.
Table 8.2: Paradigms for oton/otokta ‘one/many sit’

Transitive verbs with verbal number differ from intransitive ones in that transitive verbs are not defective with respect to subject marking. In Table 8.1, only the presence or absence of full subject marking differentiates verbs of type (3) from (5). So, while low-transitive verbs with verbal number as indicated by (5) lack any form of object cross-reference, we know that these are transitive on the basis of their paradigmatic shape. For instance, paradigms for the pair uy/kwen ‘cut down one/many’ are given in Table 8.3 alongside the paradigm for the low-transitive verb saspar ‘fix up’ which does not pattern for verbal number.

Table 8.3: Paradigms for uy ‘cut down one’, kwen ‘cut down many’ and saspar ‘to fix up’

Transitive verbs that code verbal number via object prefixing show defective number marking for objects. This is demonstrated in Table 6.9 on page 208 for the verb pair nepri/tyepri ‘take away one/many’. The ditransitive pair no/tu ‘give one/many’ (corresponding to the features of (11) in

11If a verb pair exhibits defective paradigms on the basis of subject number then it is intransitive. If it does not, then it is transitive.
Table 8.1) has full object cross-reference for both verb forms, and codes verbal number. The full paradigms for the pair are given in Table 6.11 on page 211. Transitive verbal pairs with object prefixing can be differentiated from the ditransitive verbs by defective and non-defective marking of object and (indirect) object respectively.

So, summarising the difference between verbal number pairs, the difference between intransitive and transitive verb pairs is defective subject marking for intransitive verb pairs. Similarly, transitive pairs can be differentiated from the ditransitive pair by the absence of marking of objects, or defective marking of object number on transitive pairs, and full indirect object marking on the ditransitive pair.

8.1.4.2 Verbal number and object/oblique distinctions

Verbal number can similarly be used to differentiate objects and oblique arguments. This line of argumentation depends upon accepting that verbal number in Momu patterns absolutively.\(^\text{12}\) Bivalent clauses with intransitive verbal predicates coding verbal number do not alternate on the basis of the number of an oblique. So for instance, repeating (6.32a) below (§6.6.1), we see that verbal number is not sensitive to the number of the locative NP (or, for that matter, the number of “sub-events”).

(6.32a) \(\text{*}^1\text{Te } fi\text{k}y \text{ kwobo=}m \text{ pi-mu.}^2\)
\(1\text{sg} \text{ house } \text{ many=}\text{obl } \text{ one-goes=}^2[1\text{sgs}]\text{vol.fut}\)
‘I will go to many houses.’ (i.e., visit separate families) 2010.204

Trivalent clauses with a transitive predicate coding verbal number are sensitive to the number of the object and not the oblique argument. In (8.8a) a single object is placed on a plural ground\(^\text{13}\) and vice versa in (b) where multiple objects are placed in a (singular) hole. In both cases the placement verbs \text{oton/bun} ‘put one/many’ code the number of the object, not the locative oblique argument.

(8.8) (a) \(\text{*}^1\text{Kwo seboy niny y-a-oton-a anu.}^2\)
\(\text{tree } \text{ tree.sp } \text{ above } \text{ d-impf-put.1sgs:nzr here}\)
\(\text{2010.204}\)

\(^{12}\)The absolutive patterning of verbal number is very strong cross-linguistically, regardless of syntactic patterning (Corbett, 2000; Durie, 1986).

\(^{13}\)In (8.8a) the ground is topically active and hence elided. Kaspar is setting a log on top of some crumpled leaves. Note that the number of the ground is not usually marked on the nominal. Only from the original context can one usually be sure of the actual number value.
‘I am putting the Seboy log on top of (the leaves) now.’

(b) *Byekubyeku eru-a, redi-ta-fi-u=ne, yeb,*

things that-EMPH get.ready-do-3DUS-NZR=FOC then

*tinu eru=m yeb buno-fi-mu.*

hole that=OBL then put.many.across-3DUS-VOL.FUT

‘Having prepared the things, they then put (them) down into the hole.’

8.1.4.3 Predicate classes and the referential hierarchy

The relationship between arguments and predicates is shaped in part by the interrelated properties of animacy, humanness, locality, definiteness and specificity. These are often presented in a scale (or collection of scales) variously known as the referential, animacy, person, or indexicality hierarchies (Bickel, 2008; Comrie, 1989; Haspelmath, 2007b; Silverstein, 1976).

In Momu this is partially located in the semantics of nominals, in marking on nominals, and in the semantics of verbs and marking of categories of arguments of a verb in the form of cross-reference. Verbal number is an indicator of a selectional preference for a large number of verbs in Momu. Secondarily, transitive verbs in Momu that code verbal number strongly prefer objects that refer to non-human entities.\(^{14}\)

The feature components I used in Table 8.1 to identify predicate classes can be refactored into a scale of variable form (or word class), and variable degrees of indexation. The single/plural point in the indexing scale refers to the effects of verbal number on the shape of paradigms as described in the previous subsection (§8.1.4.1).

(8.9) Word class: non-verb (noun > adjective) > verb

(8.10) Subject Marking: none > third person singular subject > single/plural > full subject marking

\(^{14}\)High-transitive verbs (those including full object cross-reference, or nominal object number) have the opposite selectional preferences to verbs coding verbal number. High-transitive verbs strongly prefer human objects while transitive verbal number pairs prefer non-human objects. Cross-referenced subjects are most commonly human, but as the selectional preference tends towards non-human referents, the predicate tends towards defective person and number, with the endpoint being a non-verbal form. Given this, intransitive verbs that pair for verbal number do not exhibit the same selectional preference for non-humans on the absolutive argument, unlike transitive verbal number pairs.
(8.11) Object Marking: none > singular/plural > local object prefix > full object marking

These are rough manifestations of the referential hierarchies as given in Bickel (2010, p410). The non-verbal classes in the scale in (8.9) are almost exclusively the domain of intransitive predicates in Momu. The variation in word class for intransitive predicates in turn captures variation in coding of animacy, specificity, number and temporal stability (Stassen, 1997). The various non-verbal predicates are discussed in §11. In §11.12 I examine the variation in meaning as non-verbal predicates become more verb-like in coding.

The scale of subject marking in (8.10) starts with the complete absence of subject marking (on non-verbal, mostly intransitive predicates). “Third person singular subject marking” is a defective pattern limited to a subset of intransitive state verbs which select for non-human subjects (§3.1.1.2, §6.3.1, §11.12.1). The coding of verbal number (“singular/plural” in the scale) sits in the scale because, while not inflectional (§6.6.3), it has the effect of producing paradigms that are defective for number. The end point of this scale is full subject marking.

The scale of object marking in (8.11) begins with transitive verbs that lack any cross-referencing of objects. Having a regular selectional pattern for the number of the object signals that the verb is “more transitive” in the sense argued for by Hopper and Thompson (1980). Verbs that lack any form of object marking are highly likely to select for inanimate or non-human objects. In addition to this, the majority of verbs coding verbal number do so via a derivation that marks them as transitive (§6.5, §6.6.2.3). The point where local object marking is possible marks not only the beginning of acceptability of human referents for objects but also a preference for referents local to the speech act to be indicated. The end of the scale is full object marking (which includes syncretism, §6.4).

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15I sometimes refer to the defective subject marking for stative verbs as the “appearance of third person singular subject marking” because it is difficult to know for sure that this is the relevant distinction. The final vowel segment on Adjectives is typically rounded (§2.5.2). Marking of third person singular subjects is indicated by a rounding operation (§2.5.1.3). Nominalisation is marked by a final -u (§4.9). Thus, many stative verbs have the surface appearance of a third person singular subject verb, or of an adjective or noun.

16The syncretism of first and second person runs against the general trend in transitive verbs. The more common pattern is to be syncretic in the local persons of the subject (Baerman, Brown and Corbett, 2005, pp75–81).
8.2 Arguments

Having assembled in the previous section all the elements that inform grammatical relations in Momu, in this section I define “subjects” (i.e., the major alignment type denoted by \{S=A\}), and a minor alignment type \{S=O\}, “objects” (two alignment types: \{O=G\} and \{O=T\}) and oblique arguments. A topic position is employed in some minor construction types (§8.2.4).

8.2.1 Subject \{S=A\}

Almost all clauses in Momu have an \{S=A\} subject. Subjects of mono-, bi- and tri-valent clauses are all treated much the same way. Clause-initial positioning of this argument and the absence of oblique marking occurs in almost all clauses. Subjects are variably cross-referenced across verbal predicates. Verb pairs coding verbal number neutralise singular/non-singular distinctions (§6.6, §8.1.4.1). State verbs are uninflectable (§3.1.1.2, §3.1.1.3) as are non-verbal predicates (§11).

In (8.12), we see a range of more or less prototypical actors to verbs. All are treated in the same fashion, with respect to subject-marking. Experienter verbs like \textit{kafokta} ‘be afraid’ show some signs of being a verbalisation of experiential source nouns.\textsuperscript{17}

\begin{enumerate}
\item \textit{Slupi nu pin.} \textsuperscript{1}\textsuperscript{7}
\textsuperscript{1}Remnants of this system are still seen in some parts of the grammar (§11.12.3). Further discussion is given at the end of this subsection.
\textsuperscript{17}Remnants of this system are still seen in some parts of the grammar (§11.12.3). Further discussion is given at the end of this subsection.
\item \textit{Slupi nu kafok-ta.} \textsuperscript{1}\textsuperscript{7}
\item \textit{Slupi yenu.} \textsuperscript{1}\textsuperscript{7}
\item \textit{Slupi nu sen.} \textsuperscript{1}\textsuperscript{7}
\end{enumerate}

\textsuperscript{17}Remnants of this system are still seen in some parts of the grammar (§11.12.3). Further discussion is given at the end of this subsection.
Subjects of transitive verbs are identical: they are the first argument in the clause and are cross-referenced on the verb in the same manner. Again, the \( S = A \) subject cannot be oblique-marked.

(8.13) (a) \( \text{Slupi bekubeku=m nepru.} \)
\( \text{Slupi things=OBL TRANS>one:go}\_3SGS \)
‘Slupi took the things.’

(b) \( \text{Slupi yime=m kafoky-er}. \)
\( \text{Slupi man=OBL afraid.of-3SGO:VTR[1|3SGS]} \)
‘Slupi feared the man.’

(c) \( \text{Slupi yime=m gey-en}. \)
\( \text{Slupi man=OBL say-3SGO:VTR[1|3SGS]} \)
‘Slupi spoke to the man.’

(d) \( \text{Slupi yime=m nuw sen}. \)
\( \text{Slupi man=OBL shot.one\_3SGS one.dies[1|3SGS]} \)
‘Slupi shot the man dead.’

A subset of state verbs which select for non-human subjects only have a third person singular subject form available. (8.14a) is an example of the (inchoative) verbal counterpart to the adjective \textit{motu} ‘black’ which can also function as a predicate, as in (8.15a). A human subject is not possible for these verbs. An alternate coding strategy of external possession is used (§10.2.1), where the human possessor is expressed as a topic. This is the case in (b) where the initial pronoun is an extra-clausal topical possessor.

(8.14) (a) \( \text{Wune muti-ta}. \)
\( \text{stone black-INCH} \)
‘A stone / stones is/are blackened.’

(b) \( \text{Te ebsi titi-ta}. \)
\( \text{1SG leg painful-INCH} \)
‘My leg(s) hurt.’

(c) \( \text{Kwo feku kaanu}. \)
\( \text{tree branch be.broken} \)
‘The branch(es) is(/are) broken.’

There are also many non-verbal predicates (§11). Clause-initial position indicates the subject for all of these constructions. Amongst non-verbal predicates are various nominal predicates. For instance, attributives are expressed by adjectival predicates, as in (8.15a), and proprietive predicates
are expressed by proprietive-marked NPs, as in (8.15b). (8.15c) demonstrates the only two place non-verbal predicate that I am aware of at this stage in the analysis. Many non-verbal predicates select for an inanimate subject. In some cases external possession is used with these predicates as well.

(8.15) (a)  \textit{Wane motu.}  
\hspace{1cm} stone black  
\hspace{1cm} ‘The stone is black.’

(b)  \textit{Te nwu=bu.}  
\hspace{1cm} 1SG mustard.flower=PROP  
\hspace{1cm} ‘I have mustard flowers.’

(c)  \textit{Te nwu momu.}  
\hspace{1cm} 1SG mustard.flower NEG  
\hspace{1cm} ‘I don’t have mustard flowers.’

There is a set of attributive constructions that show an alternate coding of subject. These constructions describe a human referent as being in an experiential state (\textit{happy, sad, sick} etc.). These have a basic adjectival predicate form, like that shown in (8.15a), and alternate coding where the experiencer and experiential state are linked by a verbal copula. With the animate existential functioning as a copula, the normal order of subject and predicate complement are maintained. With the inanimate existential functioning as a copula, the order of subject and predicate complement is reversed. Thus the choice of copula determines where the subject is expressed.\textsuperscript{18}

In (8.16a) the experience \textit{emsu} ‘good/happy’ is the predicate complement. By switching the animate existential verb to the inanimate counterpart in (b), the experiential source then sits in what is otherwise the \{S=A\} subject position. This alternate construction has a subtly different meaning whereby the experiencer lacks volitionality over the experience.

(8.16)  

\begin{itemize}
\item[(a)]  \textit{Te emsu=m n-a-ya.}  
\hspace{1cm} 1SG good=OBL PX-[IMPF]ANIM:there.be-1SGS:NZR  
\hspace{1cm} ‘I am happy.’

\item[(b)]  \textit{Emsu te=m n-o-wo.}  
\hspace{1cm} good 1SG=OBL PX-[IMPF]INAN:there.be-3SGS:NZR  
\hspace{1cm} ‘I am lucky.’
\end{itemize}

\textsuperscript{18} Put another way, the choice of copula could be seen as promoting or demoting the subject.
In (8.16a), the \{S=A\} subject is clearly a subject as defined throughout this section. Not only is it cross-referenced on the verb, it is in clause-initial position, and not marked by the oblique. Additionally, it can be topicalised (fronted, focussed, or right-dislocated) or simply elided. The predicate complement, on the other hand, is fixed in position, and unavailable to discourse pragmatic operations.

_Emsu_, the apparent subject in (8.16b), does not have this same variability. It is fixed in clause-initial position, governs agreement on the copula, and cannot be oblique-marked. But it also cannot be topicalised. In (8.16b) I take _emsu_ ‘lucky’ to also be the predicate complement, and so _tem_ ‘at me’ is then the sole argument of this intransitive construction.

The participants in the clause type in (8.16b) are commonly rearranged such that the \{S=O\} subject is topically fronted. In this position, it is not oblique-marked (but nor is the predicate complement), and the form of the verb is unchanged.

\[(8.17)\]  
\[
Te\ efeke\ n-o-wo. \\
1SG\ sick\ PX-[IMP]\INAN:there.be-3SGS:NZR \\
‘I am sick (suffering under an illness).’
\]

Thus Momu exhibits a split subject for intransitive verbs (e.g., like Taba (Bowden, 2001)) such that there is one minor pattern of alignment for the copula (\{S=O\}), and a major one for all other intransitive verbs (\{S=A\}).

### 8.2.2 Objects \{O=G, O=T\}

In Momu, objects divide up by predicate class, such that there is a split in object coding. Low-transitive verbs license \{O=T\} objects. High-transitive verbs license \{O=G\} objects. This is similar to Taba (Bowden, 2001), which has different constructional types on the basis of animacy.\(^{19}\)

Momu has just two ditransitive verbs which can be aligned with transitive verbs. The verb pair exhibit features from both high- and low-transitive verbs such that \{O=G\} and \{O=T\} respectively. The verbs _no_ ‘give one’

\(^{19}\)Haspelmath (2011) argues that in the approach adopted here (as in Bickel, 2010), just about all languages are split-O. An alternate approach is to consider this a single object type, whose construction type varies based on the position of the object on the animacy hierarchy. In §8.1.4 I explain the differentiation of partial and full object cross-referencing in diachronic terms. Partial object cross-referencing (in the form of prefixes that mark local singular and plural objects) is a step in the reanalysis of certain verbs as being fully object cross-referencing.
and *tu* ‘give many’\(^{20}\) incorporate full object cross-referencing for \(G\) (the recipient). The verbs alternate such that they each select for a given number (singular or plural) of \(T\).\(^{21}\) Object prefixes cannot be used to cross-reference a first or second person \(T\).\(^{22}\) Object NPs to these verbs have no preferential ordering except that they both occur after the subject NP. Both are marked by the oblique case marker \(-m\) (unless subject to discourse pragmatic restructuring) as in (8.1b), repeated below. Directional or comitative case cannot be used with either object.

(8.1b) *Baso*=\(m\) *yeb* *fiy*=\(m\)

\(\text{child}=\text{OBL}\) \(\text{then} \) *breastmilk}=\text{OBL}

\(a\text{i-no-mu}\).

\(\text{IMPF-give.one:3SG.IO} \backslash 3\text{SGS-VOL.FUT}\)

‘She will then be giving the child breastmilk.’

In particular, it is the variable ordering of objects that I take as the primary indicator that these objects are afforded the same status of object by the syntax. In combination with verbal number, such a coding of arguments for a ‘give’ verb is not common in Papua New Guinea (Reesink, 2013),\(^{23}\) nor around the world (Comrie, 2003).

Ditransitive verbs have two objects in a trivalent clause. Trivalent clauses are otherwise predicated by a transitive verb containing an object and oblique argument. The invariance of ordering (i.e., objects before oblique arguments, §8.1.3) and, sometimes, case marking indicates the difference between objects and oblique arguments for these clause types.

Consider three transitive verbs with similar meanings to ‘give’ when including an oblique: the high-transitive *as* ‘show/teach’ (8.18a), and the verb pair *naf(w)as/tyef(w)as* ‘reveal/show one/many’ (8.18b). *As* ‘show/teach’ is a high-transitive verb,\(^{24}\) cross-referencing the \(G\), and \(T\) is oblique. The verb pair *nafwas/tyefwas* ‘reveal one/many’ code the number of the \(T\) by stem alternation, and \(G\) is an oblique argument. A first or second person \(G\) is not marked by object prefixes (just as it is not for ‘give’ either).

\(^{20}\)Paradigms for the pair ‘give one/many’ are given in Table 6.11 on page 211.

\(^{21}\)See §8.1.4.1 for arguments that these verbs are ditransitive.

\(^{22}\)The ‘give’ verb can be used with a human \(T\), but if first or second person, it is not object prefixed.

\(^{23}\)See also further discussion of ‘give’ verbs in Papua New Guinea in §6.4.3.1.

\(^{24}\)As ‘show’ is an irregular verb (§6.4.3). See §6.4.3.2 for details including a full paradigm.
Despite their similar semantics, these verbs map T and G differently onto grammatical relations. Both verbs are confirmed as transitive via the features laid out in §8.1.4.1. Additionally, the object or oblique status of non-subject arguments is confirmed by their fixed ordering (while the objects of a ditransitive could occur in either order). The choice in alignment above demonstrates the split in behaviour for coding objects such that \{O=G\} and \{O=T\}. Transitive verbs essentially fall into these two categories.

The above trivalent clauses are concerned with a human recipient-G. Many other trivalent constructions dis-prefer or disallow a human G. This is the case for verbs of placement, or caused location. For instance, the G of the verb etyinu cannot be a human referent. Instead a body part (formally treated as inanimate) is given as G.

For these trivalent clauses, the G is often clearly an oblique argument when it is coded by a locative NP, as shown by the spatial term \(\text{nym} \) ‘above’ (8.20a), and the directional-marked \(\text{mamoti} \) ‘on the other side’ (b). However, G can still be an oblique-marked NP as in \(\text{kwo afam} \) ‘to another tree’ in (b), or \(\text{obim} \) ‘in the pot’ in (c). Oblique argument status is confirmed by the transitive status of the verbs in (a) and (b) on the basis of verbal number patterning (§8.1.4.1), and also the fixed ordering of object and oblique arguments. For (c) \(\text{nukiy} \) ‘load’ only the fixed ordering of T before G confirms that the T is an object and G an oblique argument. For this verb, G cannot be marked with directional case or a spatial postposition.
For trivalent clauses with instrumental oblique arguments, these can be indicated by the comitative case =b as in *ebkyeb ‘with ebkye leaves’ in (8.21a)\(^{\text{25}}\), but oblique =m marking is also possible on instruments, as in (8.21b). Again, relative ordering determines argument status.

\(^{\text{25}}\)Note that the same verb pair *titan/titnin ‘tie/fasten’ here has two case frames: the one in (8.20b) has as its object the thing used to fasten, while the use in (8.21a) denotes this to an oblique argument, and instead has the thing being tied up as an object. Note that the verb selects for the number of the object for both.
verbal number (§8.1.4.1). This works for bivalent clauses with intransitive verbs coding verbal number, which indicates that the second argument is oblique, and also for transitive verbs, indicating that the second argument is an object. For other low-transitive verbs, many have both an intransitive and transitive case frame, as in babar ‘to gather’ (yime babarsi ‘the men gathered’) and ‘gather up’ (wo yimem babar ‘he gathered the men’). Overt marking of obliques (i.e., directional or instrumental marking) can be used to differentiate objects from obliques in this case.

8.2.3 Oblique arguments

There are two basic types of oblique arguments: locative and instrumental. Many of the means used to differentiate them from objects are discussed in the previous section.

Locative oblique arguments can be identified by the use of spatial postpositions (§3.5.1) and the directional case. Unless further modified, such locative obliques are not marked with the oblique case. In (8.22a) the directional-marked locative oblique occurs with an intransitive verb. In (b), the postpositional-marked oblique occurs with a transitive verb.

(8.22) (a) Siesi afa yunyi wor-o=ti
wind another sun go.down-3SGS:NZR=DIR
y-o-wo.
D-IMPFINAN:there.be-3SGS:NZR
‘There is a fan (on the side of the room) towards the sunset.’

(b) Nepu eru kusko niny bu-si.
animal that leaf above put.many-3PLS
‘They put the meat on the leaves.’

Similarly, an instrumental oblique argument is comitative-marked (=b), and cannot be additionally oblique-marked (i.e., =b=m is not possible). Comitative-marked oblique arguments tend to indicate unexpected instruments, such as in (8.23a) where a hand is used to cut something.

(8.23) (a) Key=b tapwa-pin.
hand=COM cut.aross-EXH[1|3SGS]
‘He cut through (it) with his hand.’
now then pan=COM many.-cook-1PLS before=FOC

bamboo only

‘Now we cook with saucepans. Before, it was bamboo (for cooking) only.’

Otherwise, all oblique arguments are marked with the oblique marker =m in the absence of the above features (or, unmarked if their role is recoverable from context, §8.1.2). A locative goal or path is usually expressed with an oblique-marked NP. Instrument-oblique arguments can also be oblique-marked.

8.2.4 Topic

In many languages, topics are a separate (extra-clausal) category outside of the relation of arguments to a clause. This is mostly true in Momu. There is an initial position where topical or focal material can reside. It is usually identifiable by a small pause before subsequent participants. It may be marked as focal by the focus marker =ne. The topic appears more integrated in some minor construction types, particularly where the usual cues for extra-clausal expression are absent.

In the most common clause types, the topic position is conditioned purely by discourse pragmatics (Lambrecht, 1996). I refer to these as left-dislocated topics or topicalised participants throughout this thesis. Any single participant lower on the scale given in (8.4) on page 288 may occur in the topic position preceding the subject. In addition to this, topics can be expressed as right-dislocated after the clause. I refer to these as topical afterthoughts. I am not further concerned with this kind of discourse pragmatic restructuring in this section, as these are clearly extra-clausal topics.

The topic position and category is important in the minor construction type of external possession (§10.2.1), and so I mention it here. In external possession constructions the possessor is placed in the topic position. (8.14b), repeated below, demonstrates the use of the topical slot for external possession.

(8.14b) Te ebsi titi-ta.

1SG leg painful-INCH

‘My leg hurts.’
External possession is a strategy which brings on stage a human referent that would not otherwise be involved in clauses with predicates that select for non-human subjects. Such predicates are all intransitive, and very frequently draw from non-verbal predicates. Attributional and body-part postural predicates especially select for inanimate subjects. The possessed subject of these clauses can only be inalienably possessed. In Momu, such relations are limited to body parts and houses (§10.2.1).

(8.24) Mo teb sisy amku emsu=m onfa.  
       yet 1SG:COM also backside good=OBL NEG.MOD  
       ‘My back is no good!’

See also the coding of relativised possessors of inalienable possessions for a similar structure (§15.1.3).
Chapter 9

Adverbs

In this chapter I briefly examine a small set of adverbs in Momu. Major functions of adverbs include various event structuring (§9.5) and modal uses (§9.6). Manner is usually expressed by serial verbs in Momu (§13.2.1), but a handful of adverbial forms are discussed here (§9.3).

I begin by dividing adverbs into two broad modifying relationships: participant (§9.1) and predicate modifying adverbs (§9.2). Most adverbs discussed here fall into the second class, but a small number cover both functions.

9.1 Participant modifying adverbs

Participant modifying adverbs in Momu modify nominals. The adverb *sisy* ‘also’ straightforwardly modifies nominals (§9.9). The adverb *menyi* is an intensifier of nominals and some adverbs (§9.8).

Both can be differentiated from nominals in that they cannot be marked with a relational case, and when modifying nominals, such nominals cannot be marked with a relational case. A similar distribution applies to the restrictive marker *=s* (§4.8.8), and as such it may be considered an enclitic adverb (See §9.5.7 for a possible historical source).

9.2 Predicate modifying adverbs

In discussion of participant ordering in §8.1.3, adjuncts were ranked lowest on a scale of relative ordering. Consistent with this, adverbs tend to occur after arguments, and before the predicate. A single participant position is
available within the clause and after the predicate, and this may also be filled
with an adverb. Adverbs can also be left- and right-dislocated as topicalised
and topical afterthought respectively. A simple template is given below.

(9.1) (topic), (arguments) (adverbs) predicate (adverb), (afterthought)

Multiple adverbs can and do occur in a clause. They can occur together
before the predicate, or can occur separately when topicalised, or when oc-
curring in the post verb position. It is unclear at the present stage of analysis
if there is a preferential order for adverbs when they occur together, however.

Several adverbs indicate a nominal past with relational case markers
fused into their form. Some event-structuring adverbs (§9.5) include a final
segment $b$ which is the same as the comitative case marker. Some modal
adverbs (§9.6) have a final segment $m$ which is the same as the oblique case
marker.

Despite the two main classes of adverbs coding event-structuring (§9.5)
and modal (§9.6) meanings, there is no indication that marking of aspect
or modal inflection has developed from adverb-like forms. Instead, many
aspectual distinctions transparently relate to synchronic full verbs (§7.5.2),
and many modal inflections have a clear relationship with complement-taking
predicates (§16.3.2).

9.3 Manner

Manner adverbs are a relatively impoverished group of adverbs. Only pace
(§9.3.1), and demonstrative manner (§9.3.2) are expressed by adverbial forms.
Manner is instead usually expressed by verbal forms such as the evaluative
manner verbs *oimnit* ‘do badly (v.i.)’, *oimnyer* ‘do s.t. badly (v.t.)’, *ikakta*
‘do well (v.i.)’, or *ikkar* ‘do s.t. well (v.t.)’. These are usually used as
non-final verbs in serialisation (§13.2.1).

9.3.1 Pace

There are two adverbs denoting pace (*yimas* ‘quickly’, *samni* ‘slowly’). These
verbs usually occur prior to the predicate.¹

(9.2) (a) *Kwa eru yimas pu-mu=m onfa.*
feathers that quickly grow-VOL.FUT=OBL[COMP] NEG.MOD

¹Both pace adjectives have variant forms: *yirmas* ‘quickly’ and *sames* ‘slowly’.
'It is not the case that the feathers will grow quickly.'

(b) Yefu=ne \textit{samni} \\
husband:SG:POSS=FOC \textit{slowly} \\
y-a-momsen-o. \\
d-\textit{IMPF-talk.with}:3SGO-3SGS:NZR \\
‘Her husband is talking with her slowly/gently.’

9.3.2 Demonstrative manner

There are two demonstrative manner adverbs in Momu: \textit{ere} ‘like that’, and \textit{ane} ‘like this’. The distal form is used to refer to a described or understood manner relevant to the predication while the proximal form is usually accompanied by a gesture indicating the manner. Demonstrative manner adverbs modify predicates, but can also function predicatively.

(9.3) demonstrates pre-predicative uses of manner demonstratives. In (9.3b) and (c) multiple adverbs occur.

(9.3) (a) \textit{Ofuy tabu ere sen, Muy.} \\
elder 1SG:COM:GEN like.that one.dies Muy \\
‘My elder (Muy) died under those circumstances (while I was away in town).’

(b) \textit{Kubti eru ere Tipinyi ere yeb} \\
before and.so Tipini like.that then \\
ye-nin-meta \\
say.to-3PLO:VTR[1]\textit{|3SGS|EPL:FUT} \\
‘Before, Tipini might then speak to them like so.’

(c) \textit{Mu anu fyi ere=yesy} \\
woman this water like.that=just \\
\textit{nebsu=n-ai-wo.} \\
hold.one\textit{|3SGS|=PX-\textit{IMPF|ANIM:there.be}-3SGS:NZR} \\
‘This woman is there, just holding a beer like that.’

The manner demonstratives frequently occur after the predicate as well.

(9.4) (a) \textit{Wok ane nu anei-ta ere.} \\
3SG:RE like.this just big-INCH\textit{|3SGS} like.that \\
‘It (the pile of meat) like so, became huge (like that).’
(9.5) demonstrates non-verbal predicates modified by manner demonstratives. (9.5a) shows an equational construction, and (9.5b) is a possessive construction (inside reported speech).

(9.5) (a) *Afa ere Muru.*
other like.that Muru
‘(Having named the first relative) The other is thus Muru.’

(b) *“Muy ere abu-a”* cassowary like.that 2SG:COM:GEN-EMPH fe=yey-en.
INTENS=say.to-3SGO:VTR[1|3SGS]
‘That’s your cassowary” he said to him.’

(9.6) demonstrates predicative uses of manner demonstratives.

(9.6) (a) *Ay sisy ere.*
2SG also like.that
‘You too, like (I have done it).’

(b) *Au wobu wu-pan=ba,* body 3SG:COM:GEN INAN:there.be[3SGS]-until.sunrise=COM kab ere.
morning like.that
‘When her body had stayed there until sunrise, morning (came) thus.’

9.4 Derived -mes adverbs

The adverbialiser -mes derives a predicate modifying adverb from a small closed subset of nominals.

The most common derivations are adjectives. For instance, *peru/petu/peteku* ‘small’ and *anow* ‘big’ can be used to form adverbs as in (9.7). But note that the suffix does not appear particularly productive: not all adjectives can be adverbialised

(9.7) (a) *Nebesy=m na-pwe=kirip-nin,* peteku-mes sweet.potato=OBL many.-come=chop..many:VTR small-ADV peteku-mes ta bun.
small-ADV do put.many

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‘He cuts the sweet potato into small bits, and puts it.’

(b) *Mufo-ne anou-mes y-a-momsen-o.*
wife:SG:POSSESS-FOC big-ADV D-IMPF-talk-3SGS:NZR
‘As for his wife, she’s talking firmly / a lot.’

A handful of nouns can be adverbialised. For instance, *fyi* ‘water/river’ is commonly adverbialised to describe the manner in which a path was traversed, usually preceding a riverine verb (9.8a). The spatial nominal *makwu* ‘middle’ can also be adverbialised (b).

(9.8) (a) *Nisnak fyi-mes key.*
river.name river-ADV come.downriver[1SGS]
‘I came downriver along Nisnak.’

(b) *Fyi makwu-mes ai-mu.*
river middle-ADV ANIM:there.be[1|3SGS]-VOL:FUT
‘It will be in the middle of the river.’

The pace adverb *sames* (§9.3.1) ‘slowly’ bears some resemblance to *samni* ‘slowly’, and the two forms may be related. *Yirmas* ‘quickly’ may also have been a derived form originally.

(9.9) *Sames etepwa-yar-e!*
slowly push-go.down-SG:IMP
‘Push it down slowly!’

## 9.5 Event-structuring adverbs

There are a small number of aspectual adverbs, or adverbs which in some way affect the structure of the event. In this section, I list the majority of these markers. Note that a fused form of the comitative marker =b is common amongst many forms expressing time-related meanings (§4.5, §4.8.3.3, §15.3).

### 9.5.1 *nu* “just/already”

The adverb *nu* ‘just/already’ indicates that the event is proximal to the reference time. By proximal I mean that the event has some sense of immediacy with respect to the reference time. Baron (1984), following Li, Thompson and Thompson (1982) referred to the particle as marking currently relevant state of affairs (CRS). Li, Thompson and Thompson used the term to refer
to the perfect marker *le* in Mandarin Chinese. As described, it is a good fit for the behaviour of *nu* in Momu when the overall viewpoint is perfective. In the typologically sensitive treatment of tense, aspect and modality by Bybee, Perkins and Pagliuca (1994), the present distinction might be referred to as “immediate”, however, treatment of the immediate in that work is in combination with anterior or future tense. There is no consideration of an “immediate” aspect independent of tense. A similar use of “immediate” is found in Bininj Gun-Wok (Evans, 2003, pp524–525), where a prefix *h*-expresses “immediacy of the predicate or its simultaneity with the deictic centre” and also “in presentatives to give vividness”.

*Nu* can occur with either perfective or imperfective clauses, but more commonly with perfective clauses to express the past perfect. *Nu* can occur with volitional future marking, and also with the epistemic future, although textual occurrences are rare. Possible co-occurrence with the rarer modal markers has not been confirmed.

By way of demonstrating the various combinations, (9.10) below includes separate clauses taken (in order) from various points in an explanatory text. Here, Kaspar narrates as he demonstrates lighting a fire using friction created by pulling a vine against a split branch pinned under his foot. In the introduction, he explains that his ancestors did not have matches, (e.g., (a)). These simple facts are all expressed without *nu*, as predicted by Li, Thompson and Thompson (1982).

Only when he starts to demonstrate does he start to use *nu*. Just before, or as he begins, he utters (b), combining *nu* with a volitional-future-marked verb. He is signalling that the action is imminent. He then alternates between perfective utterances like (c) where he narrates actions just performed (and highly relevant to the demonstration) and those like (b) where he flags a progression in the narrative. He also uses the realis progressive in (d) at critical points where something of interest is happening and again reverts to the perfective in (e) as the demonstration wraps up.

(9.10) **Kaspar demonstrates lighting a fire with a Kukok vine**

(a) *Nỵi* tabu masis momu.  
ancestors 1SG:COM:GEN matches NEG
‘My ancestors did not have matches.’

(b) *Olsem na, anu te nu kukok=m*  
so this 1SG just vine.sp=OBL
i-en-mu anu.
pull-3SGO:VTR[1][3SGS]-VOL.FUT here
‘So, in this case, I will make a fire with Kukok vine now.’

(c) Nu oton yeko anu.
just [Pfv]put.one[1][3SGS] true this
‘I have put it down, this one.’

(d) kwo nu y-ai-swu-wo. Fufw-an-a,
fire just D-IMPF-be.burn-3SGS:NZR blow.-one:VTR-SG:IMP
fufw-an!
blow.-one:VTR
‘The fire is burning now! Blow it! Blow it!’

(e) Nu nu swu wok=u anu.
just just be.burn 3SG:RE=SG:GEN this
‘It has burned / it is alight.’

At all times in the above example, the currently relevant state is relative to the default reference time, which is the time of utterance.

The reference time need not be the time of utterance. In texts or discourse centred around past or future events nu signals relative proximity or relevance to those events. However, the reference time can even be abstract. For instance, in the elicitation data below, I am probing imperfective forms involving -ta ‘stvzr’ (§7.5.3). The context is describing unwitnessed pigs that may have eaten through a garden plot. We begin with hypothetical occurrences and end at habitual behaviours. Habitual behaviours abstract time across several points which may span past and/or future occurrences. In the right context, nu can apply to habitual actions as well.

In (a) the irrealis progressive indicates possible behaviour that might be in play at the time of utterance. This is similar to the realis progressive in (9.10d), except that in the example the event is definitely occurring. In (9.11b) we shift to the possibility that it had been happening last night. In both cases, these combine with nu to express the immediacy of the events (i.e., everyone wants to avoid his or her food crops being eaten). In (c) we shift to describing the habitual behaviour of pigs. As a simple statement of fact, nu does not occur with the habitual in (c), but when the relevant time for the habitual is the present, then nu is used to signal this in (d).

(9.11) talking about pigs eating garden plots 2008.303
(a) *Nu a-kisyi-ta.*
   just IMPF-consume:3PLS-STVZR
   ‘They might be eating right now.’

(b) *Nu fonde feniy kisyi-ta.*
   just Thursday night consume:3PLS-STVZR
   ‘Yesterday night they must have been eating.’  (said on a Friday)

(c) *Fenyib kisyi-ta-sa.*
   night consume:3PLS-STVZR-3PLS:NZR
   ‘They (habitually) eat at night.’

(d) *Nu kisyi-ta-sa.*
   just consume:3PLS-STVZR-3PLS:NZR
   ‘They (habitually) eat now.’

Otherwise, *nu* is not likely to occur in clauses describing habitual actions. In the example above, it is relative to what has occurred before that we are able to set up the use of *nu* with a habitual form.

*Nu* can also combine with the inceptive *=meni* (§12.1.2.4).

(9.12) *Te fe=nu=koyfitai=meni.*
   1SG INTENS=just=cry[1SGS]=INCEP[1SGS]
   ‘I came close to tears.’

*Nu* is often proclitic. As a proclitic it may be that the vowel is reduced, and/or that it harmonises with the following vowel. For instance, (d) above may be rendered as *ni=kisyitasa*. But *nu* can also occur alone as a lexical item. It is a valid response to a request where the respondent indicates that they have already performed the action (and that they have just done it).

(9.13) *Te nu-ye.*
   1SG just-EMPH
   ‘I just (did so)’

9.5.2 *yeb* ‘then’

*Yeb* signals that the activity expressed by the clause in which it occurs is subsequent to some other activity.

(9.14) *Baso papyer-sen oku=m yeb*
   child move[1|3SGS]-COMPL bush=OBL then
   ma-r-nu.
   many.go-1PLS-VOL.FUT
   ‘Once the child starts to move, we will go to the bush.’
The adverb occurs in simple non-coordinated clauses but also signals a progression in the events expressed by prior clauses. It also frequently occurs after (and together with) several related adverbial clause types such as the completive -sen (§15.4) in the above example, or restrictive clauses (§15.6), or simply coordinated perfective clauses, as well as with the fixed phrase eru ere ‘and so (lit. ‘that’ + ‘like that’)’, which all function similarly to progress segments of narrative.

9.5.3 siskub ‘simultaneously’

Siskub signals that multiple participants perform an action simultaneously. See §14.2.7 for discussion of simultaneous coordinated events.

(9.15) Siskub ina=otota-fi, kifyi. same.time many.go=many.sit-3DUS consume:3DUS
‘At the same time, they go sit, and eat.’

9.5.4 wakeb ‘continuously’

Wakeb signals that the activity expressed by the verb persists continuously or for a long period of time.

(9.16) (a) Wakeb mu abu continuously woman 2SG:COM:GEN
pupw-er-afo,
beat-3SG:VTR-COND:2SGS
‘If you beat your wife all the time...’

(b) Te wakeb pi=fyi=m 1SG continuously GO.FUT=river=OBL
fwas-tai-a.
bathe-STVZR[1SG]-EMPH
‘I go wash all the time.’

9.5.5 fesib ‘completely’

The adverb fesib is used to indicate thoroughness or completeness for telic events, or the emphatic expression of a state. This can be for an achievement (9.17a), accomplishment (9.17b) or a state (9.17c). It can also occur with events marked with the volitional future (d).
Having pulled it and let go repeatedly, it then broke through, completely snapping.

(The flood water) went completely into the roots of the sago palms.

‘As for this man, he was completely drunk.’

‘They are searching again (i.e. they resume searching).’

‘You will clear another garden again. It is the same process.’

This adverb is not that common across my corpus. Further investigation is needed to understand it.

**9.5.6 fesis ‘again’**

The adverb fesis ‘again’ is used to indicate that an action is repeated, or returned to in some fashion, including being resumed.

‘I then returned along the (same) road.’

‘They are searching again (i.e. they resume searching).’

‘You will clear another garden again. It is the same process.’

In coordinated clauses (§14.4), fesis can in part signal an adversative or concessive sense.\(^2\)

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\(^2\)See also (14.54) on page 485 in §14.4.
(9.19) *Kwu eru efiyenu, fesis nu*
food that be.uninterested again just
*y-a-kuwe*
D-IMPF-consume:3SGS:NZR
‘He doesn’t like that food, but he still eats it.’

An alternate form *mesis* exists, but it is unclear why or how this variation is motivated.\(^3\) Both forms are often truncated, occurring procliticised onto the word that comes after it.

(9.20) *Eru ere, mesi=yeb na-pwe-rai.*
and.so again=then many.-come-1DU
‘And so, then we came back again.’

The form *fesis* may have a relationship with the similar participant modifying form *sisy* and similarly may be related to *fesib* ‘completely’ (§9.5.5).

### 9.5.7 *yesy* ‘Restrictive/just’

*Yesy* ‘just’ is a predicate modifier indicating that of possible events, *only* the marked event occurred.

(9.21) (a) *Masu=ne yesy ai-meta.*
‘As for (the child’s) mother, she can just stay. (i.e. having given birth, she can rest)’

(b) *Bafu yesy yeb pin napenwu.*
father:SG:POSS just one.goes bury.body\(3SGS\)
‘Her father then just went and buried (her mother).’ (i.e., that’s all he could do at that point)

*Yesy* could be considered a predicate modifying counterpart to the (participant modifying) nominal restrictive marker =s (§4.8.8). Indeed, =s may be a reduced encliticised form of *yesy* which operates only on participants.

(9.22) *Jaklin=s pana-si.*
*Jaklin=RSTR get.one-3PLS*
‘They took just Jaklin.’

\(^3\) A similar alternation exists for *famoti/mamoti* ‘towards the other side’.
9.6 Modal adverbs

There are a handful of modal or modal-like meanings expressed by adverbial forms.

Activities that persist counter to expectation are marked with the adverb *mo* ‘yet/still’ (9.6.1). Attempts and inability are expressed by modal adverbs. Common to these modal adverbs is oblique (=m) marking, fused into the form of *(fe)*sim ‘attempt to’ (§9.6.2) but synchronically separable from *bio(m)* ‘inability’ (§9.6.3). Negative permission is coded by the adverb *bie* (§9.6.4).

In some cases these modal adverbs are the only way of expressing such means, in other case they are complementary to existing modal marking which is primarily achieved via marking on the verb (§12.1.1), or via “modal predicates” (§12.1.2).

9.6.1 *mo* ‘yet/still’

*Mo* is a shortening of *mory* ‘wait.’ This is possibly a recent innovation as I have not found it in older (and particularly Western Momu) texts. *Mo* signals that the activity described by the clause is not yet complete or fulfilled, it also has a secondary function as an “emotional” element (De Roeck, 1994), especially in direct reported speech and thought (§16.1.1).

Most commonly the form is used in non-future oriented clauses, and especially negated or interrogative clauses. As such it can occur with the irrealis progressive (9.23c). In the right context, it can occur with a perfect clause, as in (d), where the prior utterance by Monica sets up a proposition counter to expectations, which Bernard maintains with *mo*.

(9.23) (a)  *Mo  abo  ai-momu-ya.*
> yet  frog  ANIM:there.be[1|3SG]-NEG-EMPH
> ‘The frog still isn’t there.’

(b)  *Mo  teb  sisy  amku  emsu=m  onfa.*
> yet  1SG:COM also  back  good=OBL  NEG.MOD
> ‘My back is no good! (I’m in pain still)’

(c)  *Mo  pi=kosy=m*
> yet  GO:FUT=road=OBL
> *a-bu-si-ta,  kwu  anu.*
> [IRR.PROG]IMP-put.many-3PLS-STVZR  food  this

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‘They must be putting this on the road, this food.’

(d)  

M: ketya-momu.  
B: mo  
lose\3SGS-NEG yet
na-pwe=a=m  
TRANS>one-come[1\3SGS]=here=OBL  
oton-u=ne,  
\kwo\ \anu\ \a=m.  
one.sits[1\3SGS]-NZR=FOC tree this here=OBL  
‘M: He didn’t drop it. B: He still, brought it here and sat down in this tree here.’

Mo can also occur with realis progressives, such as (a), where the ongoing state of affairs is understood to be counter to expectations. In very rare cases it can be used with the volitional future, such as in (b).\(^4\) In (c), the postposed use of \(mo\) is taken to be a kind of exclamation.

(9.24)  

(a)  

\(Mo\ \yet\ \y-a-tyepria-wo,\ \nameky\)  
\yet\ \D-IMPF-[one.\flies-3SGS:NZR \in.mouth\  
‘He’s still flying with it in his mouth.’

(b)  

\(Mo\ \anu\ \na\ \a-rai-mu,\)  
\yet\ \this\ \now\ \ANIM:there.be-1DU\S-VOL.FUT  
\ki-rai-mu.\  
sleep-1DU\S-VOL.FUT  
‘Let’s stay for now, and sleep.’

(c)  

\(Kow\ \ \an=ti\ \ \bu-f-mu\)  
\come.across\3SGS \this=DIR \put.many-2SGS-VOL.FUT \mo.\  
\yet[EXCLM]\  
‘Place it in the spot coming from downriver!’

Mo has a secondary function as an emotive element. It is very common on the left edge of reported speech with or without a quotative verb. While not formally a quotative marker, the emotive element, alongside changes in vocal quality (i.e., shifting into character), flag the utterance as an instance of direct reported speech or thought. Within her typology of reported speech, De Roeck (1994) called such elements expressive or emotive elements. In combination with shifter elements and other categories, such elements variably combine to mark direct or indirect reported speech or thought.

\(^4\)The use of \(mo\) with the volitional future in (9.24b) is possibly enabled by the reading of the clause as hortative.
9.6.2 *(fe)sim* ‘attempt to’

*(Fe)sim* ‘attempt to’ is a modal adverb used to express attempts to perform an action. The construction implies that the action failed, but subsequent clauses need not affirm this.

As a construction, the final verb cannot be inflected for modal categories (except the modal predicate =meni ‘inceptive’, §12.1.2.4). Nor can the clause combine with the modal adverb nu ‘just/already’ (to express the perfect). The final verb must be unmarked for modal categories or the imperfective.

(9.26) (a) \[na-pufki-fi \quad sim \quad on-fi \quad ere. \quad Mo \; abo \quad \text{try.to} \quad see.1\text{-DU}\text{S}\quad \text{like.that} \quad \text{yet} \quad \text{frog} \quad \text{momu-ya!} \]
\[
\text{ANIM:there.be}\{1\}\text{SGS}\quad \text{NEG-EMPH}
\]
‘and they set off and tried to look. Yet there was no frog!’

(b) \[Fesim \quad e=m \quad ku \quad ai-ta=b \quad \text{try.to} \quad \text{there} \quad \text{obl.} \quad \text{sleep}\{3\text{SGS}\} \quad \text{IMPF-do}\{3\text{SGS}\} \quad \text{COM}\{\text{ADV}\} \quad \text{yeb} \quad \text{wune} \quad \text{Suk-ta} \quad \text{then} \quad \text{stone} \quad \text{similar.to-INCH} \]
‘When he tried to stay sleeping there, he turned into a stone.’

(c) Wob fesim kwu.
3SG:COM try.to consume\3SGS
‘He tried to eat.’

(d) Te fesim pi=on.
1SG try.to GO.FUT=see.one[1|3SGS]
‘I went, and tried to see.’

These are past oriented attempts. Future oriented attempts can be expressed by the volitional future (§12.1.1.1).

The form (fe)sim may be related to the other adverbs fesib ‘completely’ (§9.5.5) and fesis ‘again’ (§9.5.6). The final segment in these three forms corresponds neatly to the three markers =m (oblique), =s (restrictive) and =b (comitative), all of which are often (apparently) fused into adverbial forms.⁵

9.6.3 biom ‘inability’

Biom ‘inability’ is a modal adverb used to express inability to perform an action. The verb must be volitional-future-marked. Most commonly this adverb modifies a volitional-future-marked verb in the interrogative mood.

(9.27) Bio=b ma-nebu-f-mu=a?
INAB=OBL 1|2PLO-hear-2SGS-VOL.FUT=Q
‘You won’t be able to hear us (/ How will you hear us?)’

Biom can occur within more complex constructions. For instance in (9.28a) it occurs in an absolutive adverbial clause. In (b) a volitional-future-marked complement to the modal negative predicate usually expresses inability, but biom can also be added.⁶

(9.28) (a) ... oko nu yekan eru, Biom ...
ground already cover[1|3SGS] that INAB
on-u-e.
see.one-NZR-EMPH
‘...and it is covered with dirt, such that it can’t be seen.’

An alternative etymology for (fe)sim may be that the initial syllable, often dropped, may be the intensifier fe=. In which case the form sim may be related to sisy ‘also,’ which is also often shortened to just si.

It is unclear at this stage what nuance this adds to the semantics, however.
(b) \[Bio=m \ a-nebu-mu=m\]
\[INAB=OBL \ 3SGO-hear[1|3SGS]-VOL.FUT=OBL[COMP]\]
\[onfa.\]
\[NEG.MOD\]
'I won’t be able to hear it.'

9.6.4 \textit{bie} ‘negative permission’

\textit{bie} is used to construct jussive sentences like those shown in (9.29). The form may be related to the ‘whatsit’ form \textit{bie} used, for instance, when the speaker is trying to name something (but has forgotten).

(9.29) (a) \textit{Yes ai-a, fey bie ta-f.}
\textit{just ANIM:there.be-SG:IMP fight INAB do-2SGS}
'Just stay—you can’t fight.'

(b) \textit{Ay bie=nify!}
\textit{ssg INAB=shoot.one:2SGS}
'You can’t shoot it!'

(c) \textit{Te bie=niy!}
\textit{1SG INAB=shoot.one[1SGS]}
'I can’t shoot it!'

9.7 \textit{fe} ‘endure/struggle/really’

The predicate modifying adverb \textit{fe} means to endure, struggle or perform with intensity. At emotional peaks in a tale this adverb is quite common.

(9.30) (a) \textit{Fisu anow eru fe=ina-r-mu.}
\textit{sand big that INTENS=many.go-1PLS-VOL.FUT}
'We would endure going (to get water) over lots of (hot) sand.'

(b) \textit{Oko anu fe=muti-ta ketya.}
\textit{ground this INTENS=black-INCH LCOMPL}
'The ground/area was completely dark.'

(c) \textit{Denis jumps into a boat to travel on the open sea.}
\textit{Wok fe=ikaka=titan-e.}
\textit{3SG:RE INTENS=do.well=fasten:.one:VTR[1|3SGS]-EMPH}
'I held on for dear life (lit. I really tied down my hands well)'
Fe is also common in direct reported speech (§16.1.1) where “emotional elements” (De Roeck, 1994) are a way of signalling a shift to reported speech. In such cases, it doesn’t necessarily have to indicate endurance or hardship.

(9.31) (a) “Te fe=a-kafoky-er-momu maro eru, te fe=pwe-meta.”
1SG INTENS=IMPF-afraid.of-3SGO:VTR[1|3SGS]-NEG cloth
that 1SG INTENS=[one.|comes][1|3SGS]-EPI.FUT
(he said) “I’m haven’t been afraid of a piece of cloth; I will come (anyway).”

(b) “Mo yime anu fe=skab-ta!”
yet man this INTENS=bad-INCH
(he said) “(lookout) this man is no good!”

9.8 menyi ‘very/Intensifier’

Menyi is an intensifier of nominals and pace adverbs. Menyi also modifies non-verbal predicates.

Menyi modifies predicate (attributive) adjectives (§11.3) to intensify their meaning, as in (9.32).7

(9.32) (a) Eru ere stori nu peteku menyi ye ko eru mu
and.so story just small INTENS true that woman
Fiona.
Fiona
‘And so, this is a really small story, truly, Fiona.’

(b) Yime anow menyi, oko a=m ikar-u=ne,
man big INTENS ground here=OBL do.well-NZR=FOC
nin y e=m ikar.
above there=OBL do.well[1|3SGS]
‘A great/important man, (he) having made the earth, made the heavens.’

(c) Amsu menyi!
good INTENS
‘(It) is really good.’

7 All examples in my corpus are of predicative uses of adjectives. I assume only on the basis of the participant modifying uses of menyi on other word classes that menyi can also modify non-predicative instances.
Menyi can modify a locative oblique to indicate an extreme point within the location. (9.33c) demonstrates a predicative use of a spatial nominal modified by menyi.

(9.33) (a) Masis eru fiiki menyi eru=m matches that close INTENS there=OBL bu-f-mu.
put.many-1SGS-VOL.FUT
‘You should put the matches really close there.’

(b) Kubti=ne, wok fe=wok pen before=FOC 3SG:RE INTENS=3SG:RE one.goes[1|3SGS] fyi benya menyi e=m pwenin water tributary INTENS there=OBL [one.|stands
wu, anu nu y-ai-pwen-o STANCE[PFV] now just dprog-[one.|comes-3SGS:NZR
gime=m wu-ta-we. man=OBL STANCE-STVZR-EMPH
‘Before it was the case that he stood right at the point where the tributary met the river, and now it must be that the man is coming.’

(c) Fiiki=m onfa, makwu menyi. close=OBL NEG.MOD far INTENS
‘(It’s) not close, (it’s) really far.’

The intensifier modifies temporal adjuncts headed by time-of-day nouns (§4.5), as shown in (9.34). (9.34c) demonstrates a predicative use of a time-of-day noun modified by menyi.

(9.34) (a) Te kab menyi patyai.
1SG morning INTENS set.off[1SGS]
‘I set off early in the morning.’

(b) Kubu~kubo menyi, mony wob=s long.long.ago INTENS talk 1SG:COM=RSTR
ai.
ANIM:there.be[1|3SGS]
‘A long time ago, there was just the story itself.’

(c) Fenyib menyi.
night INTENS
‘It was the middle of the night.’

The intensifier can also modify pace adverbs, such as gi(r)mas ‘quickly.’
The example below shows novel uses of *menyi* with a numeral in (9.36a), and the noun *mu* ‘woman’ (9.36b).

(9.36) (a) *Oko yeb, fesni menyi nanu-tu.*

*ground then one INTENS thunder-come.down\3SGS*

‘Thunder rang out just one time.’

(b) *Eru te=m ereye-si “ay mu menyi that 1SG=OBL reckon.to.one-3PLS 2SG woman INTENS nu=pi=a-uk-f-mu.” just=GO.FUT=IMPF-adopt-2SGS-VOL.FUT*

‘They said to me “you are the right woman, (so) you should be adopting (her).’

9.9 *sisy* ‘also’

The form *sisy* ‘also’ is a modifier of participants. (9.37) demonstrates modification of nominals, (9.37a), and pronouns (§5.4), as in (b). The form is very commonly reduced to an enclitic, as in (c). See also §14.2.6 for detail on parallel structures signalled by the use of *sisy*, as per (b) and (d).

(9.37) (a) *Fyi sisy faskoy.*

*water too same*

‘The river too is the same.’

(b) *Ay eru=ti kuswar, te sisy anu=ti kuswar 2SG there=DIR forbid 1SG roo here=DIR forbid n-a-ar-rai-u. PX-IMPF-do.to-1DU5S-NZ*

‘You tabooed that location and I too tabooed it here, we have been doing that (in parallel).’

(c) *Fyi eru=sí*

*water that=too ma-koy-man-esen, 1\2PLO-sec.many-1\2PLO-VTR[1\3SGS]-COMPL*

*The form may be related to the restrictive which has a similar meaning.*
Once the river sees us, it might come back again (i.e., change its path again).

A man sits, facing away, and a woman also sits facing away (i.e., they sit with their backs to each other).

Sisy does not modify case-marked nominals, and cannot itself be marked with a relational case.
Chapter 10

Simple Clauses

This chapter surveys core aspects of simple clauses in Momu. Here, I look at clauses as a relationship between arguments and verbal predicates (Bickel, 2010; Dryer, 2007a), in a basic form (§10.1), and defer treatment of non-verbal predicates to §11. Some special constructions diverge from these basic clauses (§10.2). These special constructions have in common the need to resolve a mismatch between argument structure and semantic roles. The specific constructions considered are external possession (§10.2.1), reciprocals (§10.2.2) and reflexives (§10.2.3). Common to both external possession and reflexives is that body parts serve as a proxy undergoer for many psychological or emotional expressions in Momu.

In §10.3 I examine a different form of “clause”: that of sentences as speech-acts. This is a consideration of clauses in their context of use (König and Siemund, 2007).

10.1 Basic clause types

I here provide a basic overview of clause types on the basis of valency and transitivity.¹ This section considers mono-predicative clauses, while multi-predicative clauses—extremely common in everyday Momu—are considered in §13. This section is also limited to verbal predicates, while non-verbally predicated clauses are considered in §11.

¹I take valency as a count of arguments in a clause, and transitivity as a count of objects (0, 1 or 2 in Momu) licensed by a predicate.
10.1.1 Monovalent clauses

Nearly all intransitive predicates have a subject and a predicate. Subjects
do not take oblique marking, and they occur clause-initially (§8.2.1).

Non-verbally predicated clauses include proper-inclusion (§11.2.1), simil-
arity (§11.2.2), attribution (§11.3, §11.5), possession (§11.4, §11.5), location
(§11.6), and some further minor types (§11.7, §11.8). Amongst these predic-
ates are single lexical items, phrases, and predicates that include predicate
complements. Further details are given in §11, including a consideration
of the non-verbal and verbal coding of some semantic types of predicate in
§11.12. Otherwise, this section is mainly concerned with verbal predication.

Some basic monovalent clauses are given in (10.1). Note that the state
(§7.5.1.1) and achievement (§7.5.1.3) verbs in (a) and (b) are fixed on a third
person singular subject form of the verb, but the nominal can be plural. A
subset of state (§7.5.1.1) and achievement/accomplishment (§7.5.1.3) verbs
have this restriction in subject marking (§3.1.1.2, §3.1.1.3, §8.2.1). Subjects
are otherwise also cross-referenced on the verb. (c) is an example of a mono-
valent activity verb (with subject marking).

(10.1) (a) \textit{Kwo su.}  
\begin{tabular}{l}
fire & be.alight\3sgS \\
\end{tabular}
\begin{tabular}{l}
‘The fire was/is alight.’
\end{tabular}

(b) \textit{Kwo fuku kaanu.}  
\begin{tabular}{ll}
tree & branch & broke\3sgS \\
\end{tabular}
\begin{tabular}{l}
‘The branch broke / is broken.’
\end{tabular}

(c) \textit{Te kiy.}  
\begin{tabular}{ll}
1sg & consume\[1sgS] \\
\end{tabular}
\begin{tabular}{l}
‘I ate.’
\end{tabular}

10.1.2 Bivalent clauses

Bivalent clauses always include a subject, a second argument and a predicate,
in that order. The second argument can be an object with a transitive
predicate or an oblique with an intransitive predicate. Also possible are
some predicates which take predicate complements.\footnote{Predicates that take predicate complements include: the similarity predicate \textit{sukw}
‘be similar to’ (§11.2.2), or its inchoative verbal form \textit{sukta}, and copulative uses of the
existential verbs \textit{ai} ‘be (animate)’ and \textit{wu} ‘be (inanimate).’ For these predicates, the
predicate complement cannot be expressed by zero anaphora. Note also that the copulas}

\begin{tabular}{l}
\end{tabular}
predicate \textit{momu} (§11.10) is the only non-verbal transitive predicate. The remaining predicates are verbs, which is the focus of this section.

Some basic examples of intransitive bivalent clauses are given in (10.2). All include subjects (8.2.1), obliques (§8.2.3) and verbal predicates, in that order. Obliques are marked by either the oblique (a), directional (b), or comitative relational cases (c), or by spatial postpositions (d).

\begin{enumerate}[(a)]
\item \text{Ay} Vanimo\text{=}m pin.  
2SG Vanimo\text{=}OBL one.goes[1|3SGS]  
‘You went to Vanimo.’
\item Wasi fiky\text{=}ti y-o-wo.  
pawpaw house\text{=}DIR D-[IMPF]INAN:be.at-3SGS:NZR  
‘The pawpaw is at/towards the house.’
\item Wo uikeno\text{=}b ta.  
3SG joint\text{=}COM do\text{'}3SGS  
‘He walked on his knees.’
\item Te wune niny oton.  
1SG rock above one.sits[1|3SGS]  
‘I sat on the stone.’
\end{enumerate}

Some basic examples of bivalent clauses with transitive predicates are given in (10.3). These clauses all include a subject, oblique-marked object, and a verb, in that order. Mono-transitive verbs in Momu differ between (a) no overt marking of objects, (b) stem alternation coding verbal number (§6.6), and (c) object cross-referencing (§6.2.2). Note also that the oblique case is used for both objects and obliques.

\begin{enumerate}[(a)]
\item \text{Flerwick} ie\text{=}m kuw.  
Flerwick fish\text{=}OBL consume\text{'}3SGS  
‘Flerwick ate fish.’
\item Te yeswo\text{=}m niy.  
1SG pig\text{=}OBL shoot.one[1SGS]  
‘I shot a pig.’
\item \text{Flerwick Slupi\text{=}m ai-yey-en.}  
Flerwick Slupi\text{=}OBL IMPF-talk.to-3SGO:vtr[1|3SGS]  
‘Flerwick was talking to Slupi.’
\end{enumerate}

allow for two orderings of participants in the clause such that a \{S\text{=}O\} subject is possible (8.2.1).
10.1.3 Trivalent clauses

All trivalent clauses include three arguments: a subject plus either: two objects, or two obliques, or an object and an oblique. As elsewhere, the subject cannot be oblique-marked, and is cross-referenced on the verb. The general preference in everyday Momu is to limit clauses to one or two (overt) participants. Clauses which can be expressed as a single trivalent clause tend instead to be broken apart into separate (serialised) clauses that introduce participants individually (§13.3.3). As such, full clauses with three overt arguments are actually quite rare in Momu.

The verb pair *no/tu* ‘give one/many’ is the only case where two objects occur. These verbs alternate for the number of the theme (T) and cross-reference the recipient (G) in the form of the verb. There is no general preference for ordering of the two objects in the clause. The alternate positioning of the common theme *wasim* ‘pawpaw(s)’ and variable recipients shown for both the singular (10.4) and plural (10.5) verbs are grammatical.

\[(10.4)\] (a) \(Te\) \(Flerwick=m\) \(wasi=m\) \(nui.\)
\(1 SG\) \(Flerwick=OBL\) \(pawpaw=OBL\) \(give\text{-}one:3SGIO[1SGS]\)
\(‘I gave Flerwick a pawpaw.’\)

(b) \(Ag\) \(wasi=m\) \(yery=m\) \(nema\text{-}f.\)
\(2 SG\) \(pawpaw=OBL\) \(1SG=OBL\) \(give\text{-}one:1PIO-2SGS\)
\(‘You gave us a pawpaw.’\)

\[(10.5)\] (a) \(Ni\) \(ary=m\) \(wasi=m\) \(tima\text{-}si\)
\(3PL\) \(2PL=OBL\) \(pawpaw=OBL\) \(give\text{-}many:1PIO-3PLS\)
\(‘They gave you (pl.) pawpaws.’\)

(b) \(Flerwick\) \(wasi=m\) \(wo=m\) \(tu.\)
\(Flerwick\) \(pawpaw=OBL\) \(1PL=OBL\) \(give\text{-}many:3SGIO\backslash 3SGS\)
\(‘Flerwick gave him/her pawpaws.’\)

All other trivalent clauses combine a subject with an object and oblique (in that order), or with two obliques.\(^3\)

Below are some basic examples of trivalent clauses with a transitive predicate. Arguments for differentiating objects and obliques are given in 8.2.2.

\(^3\)There are no examples in my corpus of two obliques occurring together in the one clause. Admittedly, I did not confirm or refute this in elicitation. While it is likely possible, further probing is necessary to confirm this.
(10.6) (a) Slupi \textit{wasi}=m \textit{man}=m \textit{nukwu}.
Slupi pawpaw=OBL string.bag=OBL load\textsubscript{3SGS}
‘Slupi loaded the pawpaw into the string bag.’

(b) Tē \textit{wasi} amku=ti \textit{oton}.
1SG pawpaw behind=DIR put.one\textsubscript{1|3SGS}
‘I put the pawpaw behind.’

10.2 Special clause types

This section deals with a few reasonably frequent clause types that fall outside the simple clause types described in the first section of this chapter. External possession (§10.2.1) is quite common in Momu, being triggered by stative verb types that select for non-human subjects. Reciprocal (§10.2.2) and Reflexive (§10.2.3) constructions are special relative to basic clauses because of the relationship between arguments, and the means of coding this in Momu.

10.2.1 External possession

External possession (sometimes identified as “possessor raising”) concerns constructions where a possessor sits in (or is ‘raised to’) an argument position in a clause (Payne and Barshi, 1999). Most importantly, the possessor is not a licensed argument of the predicate itself. This definition excludes non-argument realisations of possessors, but Aissen (1999a) includes logical subjects (internal/structural topics\footnote{The internal topic status of possessors in Tz’utujil is disputed by Duncan (2013), who claims these are external topics.}) within the domain of external possession. This is an extension of the generally agreed upon definition of external possession as this is (usually) a non-argument participant, and indeed may be considered extra-clausal. Of interest here is that a topic can be at least a precursor to the development of external possession (Payne and Barshi, 1999).

Momu is a language where external possession is limited to a small set of intransitive predicates, with a possessor expressed by a topic NP. These verbs have in common that they select for non-human subjects, and (when verbal) do not show full cross-reference of the subject.\footnote{I have elsewhere described this as having the “appearance of a third person singular subject” (see footnote 15 on page 296).}

\(10.7\) demonstrates
the kinds of predicate relevant to this section, but with inanimate alienable subjects, and no external possession. The forms in (a) and (b) are verbal and in (c) adjectival.

(10.7) (a) \textit{Kaf kaanu.}  
\textit{cup be.broken}  
‘The cup is broken.’

(b) \textit{Fyi skab-ta.}  
\textit{water bad-\textsc{inch}}  
‘The water is/became blackened.’

(c) \textit{Kwo eru anow.}  
\textit{tree that big}  
‘The tree is big.’

When these predicates are used to describe a body part, then a possessor may be expressed externally by a full topic NP, preceding the possessum, or it may be expressed internally as a genitive modifier. For the external forms, there is no intonational break indicative of an external topic, participants cannot be reordered in these clauses, and the possessum cannot be oblique-marked.

(10.8) (a) \textit{Te ebsi kaanu.} / \textit{Ebsi to kaanu.}  
\textit{1SG leg be.broken leg 1SG:GEN be.broken}  
‘My leg is broken.’

(b) \textit{Wo boku skab-ta.} / \textit{Boku wobu skab-ta}  
\textit{3SG heart bad-\textsc{inch} heart 3SG:COM:GEN bad-\textsc{inch}}  
‘His heart was troubled.’

(c) \textit{Ay amku tetu=fa?} / \textit{Amku abu tetu=fa?}  
\textit{2SG back sore=\textsc{ynq} back 2SG:COM:GEN sore=\textsc{ynq}}  
‘Does your back hurt?’

External possession in Momu is mainly limited to (inalienable) body parts and houses, and includes the “person parts”: thoughts, spirits, and shadows. This is the case in the Trans-New Guinea language Mian (Fedden, 2011)\textsuperscript{6} and many Australian languages (McGregor, 1999), which commonly focus internal possession on body parts, though they also include other “person parts” like ‘name’, ‘voice’ and ‘dreaming’.

\textsuperscript{6}The realisation of external possession in Mian is markedly different to that in Momu. Applicativisation allows the possessor of an argument to be coded as an indirect object. Momu lacks such rich valence modifying morphology.
Prosodically marked external topics are generally excluded from the discussion of grammatical relations in §8, along with the consideration of basic clause structure in this chapter (§10.1). Briefly, Momu allows for a single non-subject participant to be fronted. This fronted participant cannot be oblique-marked, is prosodically marked as separate and can include a pause. Fronted participants can be marked with the focus marker =ne (§4.8.9) to indicate contrastive focus. Because reordering of participants is not possible here, I do not consider the possessor to be a fronted topic.

In (10.9a), the single fronted topic position is filled with the locative demonstrative anu ‘here.’ This shows that the possessor does not fill the external topic slot, and that it has its own (internal) position.\(^7\) With regards to contrastive focus, the possessor can be marked with =ne, as in (b), but the possessum can only be =ne marked if the possession is coded internally, as in (c).

(10.9) (a) *Anu te nu bufo emsu ere.*
here 1SG already thought good like.that
‘Here (in this picture) I’m thinking straight. (lit. my thoughts are good)’

(b) *Te=ne boku skab-ta.*
1SG=FOC heart bad-INCH
‘As for me, my heart became bad.’

(c) *Boku to=ne skab-ta.*
heart 1SG:GEN=FOC bad-INCH
‘As for my heart, it became bad (when I drank).’

That the possessum in the external construction cannot be fronted implies that it may not be a full argument. A further consideration is that topical referents are frequently elided in Momu.

On the basis of all this, there are two possible analyses. The first is that this is a “double subject” of the kind found in Japanese, or many Sinitic languages (Chappell, 1999; Uehara, 1999). Alternatively, the possessor may be an internal topic, and the possessum a subject. Neither analysis is a perfect fit given my existing analysis of grammatical relations. At no point have I

\(^7\)The position of the adverb *nu* in (10.9a) is a further indicator of the status of the possessor. Adverbs can occur initially (as a fronted topic), in second position, in the preverbal position or postposed as an extra-clausal afterthought.
drawn upon the concept of an internal topic as an explanatory mechanism. Double subjects are also not coded elsewhere. Additionally, at those points in the syntax where a double argument of the same type is allowed, they can commute (§8.1.3, §8.2.2). This is not the case here however. Nonetheless, I tentatively lean towards the internal topic possibility given a broader consideration of the integration of this clause type into more complex constructions below.

In transitive clauses, when the subject is the possessor of a body part which occurs as the object or oblique in a clause, then it need not be modified by a genitive pronoun. This is the general preference across my corpus, where expressions like those in (10.10) and (10.11) outnumber internally coded possession by approximately 10 to 1. These are not external possessor constructions because the possessor is the subject of the clause (i.e., it is licensed by the verb). Under such circumstances, body parts can be expressed unmarked in an object (10.10) or oblique (10.11) role.

(10.10) (a) Yime eru key si-nin-tuw.
    man that hand slide-3PLO-come.down\3SGS
    ‘The man slides his hands downwards.’

(b) Te yefko=m y-a-un-a.
    1SG mouth=OBL D-IMPF-open.mouth-1SGS:NZR
    ‘I am opening my mouth.’

(10.11) (a) Mu eru siiki pana, key=b
    woman that sugarcane get.one\3SGS hand=COM
    snap[1|3SGS]
    ‘The woman gets a sugarcane and snaps it with her hands.’

(b) An=ti pin-afu, fuku=ti an=ti
    this=DIR one.goes-COND:2SGS chest=DIR this=DIR
    on-ya-f on-f-mu.
    look-down-2SGS see.one-2SGS-VOL.FUT
    ‘If you go this way, look downwards towards your chest.’

Where internally coded possession occurs, it is commonly in cases where the subject is not the possessor, as in (10.12).
This is not to say that internal coding is required in such a situation. Topically active referents, regardless of their syntactic role, can be possessors to body parts otherwise unmarked for possession in subsequent clauses. Whether possessors are explicitly coded or differentiated is a pragmatic decision made by the speaker.

Returning to actual external possession now, the usefulness of the construction is most apparent in serialisation. Serial verb constructions in Momu require the same subject to be shared between serial verbs. In serialisation the possessor is the shared subject, and the possessum is not considered a
subject. In the examples below *munta* ‘be crossed’ and *ufta* ‘be closed’ are intransitive verbs. Their subjects are the body parts that immediately preceed them (and these cannot be oblique-marked). They can be included in the serialisation because the shared subject is a grammatical subject to the transitive verbs, and a logical subject (or internal topic) to the stative verbs.

(10.14) (a) *Baso wobu sisy key munta*

*child 3SG:COM:GEN also hand be.cross.arms*

*y-ai-wo.*

D-[IMPF]ANIM:there.be-3SGS:NZR

‘His child too is there with his arms crossed.’

(b) *Te koy ufta tyeponi.*

*1SG eye be.shut open.eyes[1SGS]*

‘I close and open my eyes.’

10.2.2 Reciprocal constructions

Reciprocal constructions prototypically express an exchanged activity between humans or animals. This explanation is barely sufficient, in that all components can be extended or to some degree inverted. The nature of the exchange can be extended, by allowing non-equivalent exchange. The internal composition of this activity can be complex, or so simple as to describe a state. The participants need not be animate. Languages vary greatly in the degree to which they realise these properties (Evans, 2008; König and Gast, 2008).

At the present point of analysis of Momu reciprocals, it is clear that there is a construction type involving a reciprocal particle or fused pronominal-particle combination ([§4.1.4](#)), and a special form of the verb, depending on its class. In addition to this, there are several construction types containing *akfu* ‘reciprocation.’ The analysis here remains preliminary in that a fuller range of construction types are clearly evident, but still poorly understood.8

10.2.2.1 Reciprocal clauses

Reciprocal constructions use a single position to represent the subject and object of a corresponding transitive clause such that the (multiple) parti-

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8A great many examples from this section are taken from recordings of responses to videos detailing various reciprocal actions (Evans et al., 2004). These videos were critical in expanding my understanding of reciprocals in Momu, and greatly expanded the range and depth of my understanding. The labels for the relevant texts are “bernard-reciprocals” and “monica-reciprocals”, but where possible I use examples drawn from narrative texts.
cipants are all performing the same action upon one another.

There are four basic elements in the reciprocal construction in Momu. (1) the subject and object of a transitive clause are collapsed onto a single non-singular subject which is cross-referenced on the final reciprocal verb complex. (2) the reciprocal-emphatic adverb ak precedes the predicating verb complex. (3) a specific form of the verb must be used, depending on the verb. In essence, transitive verbs are coerced into behaving as intransitive verbs, if not exchanged for actual intransitive forms, as summarised in Table 10.1. (4) this verb combines with the verb ta(i) ‘do’ in a periphrastic construction similar to the iterative (§7.6). This final verb is usually the host of subject inflection.

<table>
<thead>
<tr>
<th>class</th>
<th>transitive form</th>
<th>reciprocal complex</th>
<th>strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>high</td>
<td>i-nin ‘pull 3PLO’</td>
<td>i-e=ta</td>
<td>3SGO</td>
</tr>
<tr>
<td></td>
<td>ye-nin ‘say to 3PLO’</td>
<td>yey-e=ta (*yen=ta)</td>
<td>3SGO</td>
</tr>
<tr>
<td>low</td>
<td>sufy ‘hold’</td>
<td>suf=ta</td>
<td>no change</td>
</tr>
<tr>
<td></td>
<td>tyebsi ‘grasp many’</td>
<td>nebsi=ta</td>
<td>free stem choice</td>
</tr>
<tr>
<td></td>
<td>ikak-ar ‘do well to’</td>
<td>ikak-ta=ta</td>
<td>intransitive</td>
</tr>
</tbody>
</table>

Table 10.1: Verb forms used for reciprocal clauses

The reciprocal form of a high-transitive is the third singular object form. The high-transitive inin ‘they (2) pull them’ has a corresponding reciprocal form ie=ta in (10.15), built using the third singular object form of the verb ien ‘pull him/her’. Note that this is regardless of the person of the subject, as shown in (10.15b), where ien is used instead of ian ‘pull you/mi’.

(10.15) (a) Mu eru ak i-e=ta-fi.  
woman that RE pull-3SGO:VTR=do-3DU   
‘The women shake hands.’

(b) Ary key ak i-e=ta-mi.  
2PL hand RE pull-3SGO:VTR=do-2DU   
‘You (2) shake hands.’

The reciprocal counterpart to yenin ‘say to them’ is the third singular object form momsen ‘say to him/her’ (10.16a). The ditransitive verb pair not/tu ‘give one/many’ also uses a third singular object form for reciprocals (10.16c).

(10.16) (a) Yime eru ak moms-e=y-a-ta-fi-u.  
man that RE talk-3SGO:VTR=IMPF-do-3DU-S-NZR   
‘Those two men are talking with each other.’
Most low-transitive verbs simply combine with \( ta(i) \) ‘do’ without any change in the form of the verb. The verbs \( suf(y) \) ‘hold/detain’ and \( fofya(r) \) ‘kiss’ are examples of such verbs (10.17). While some low-transitive verbs can take object prefixes in regular transitive use, object prefixes are not used in reciprocal constructions.\(^9\)

\[(10.17) \text{Unetin. } Na-pwe=ak \quad suf=ta-fi, \quad \text{yell[1|3SGS]} \quad \text{TRANS>one-come=} \text{RE} \quad \text{hold=} \text{do-3DU} \]

\[suf=fofya=ta-fi. \quad \text{hold=}: \text{one:VTR=} \text{do-3DU} \]

‘She cries out. She comes, and they hug each other—they hug and kiss each other.’ \(^9\)

Low-transitive verbs constructed with verb-forming suffixes which have intransitive counterparts formed with an intransitive verb-forming suffix employ the intransitive form in reciprocal constructions. High-transitive verbs which have intransitive counterparts do not employ the intransitive counterpart. The high-transitive verb \( yenin \) ‘say to them’ has an intransitive counterpart \( geni \) ‘say’, which is not used in reciprocal constructions. Instead, the third singular object form \( yeyen \) is used (10.18a). The low-transitive verb \( fefeyer \) ‘play with’\(^10\) uses the corresponding intransitive form \( fefeyta \) ‘play’ in reciprocal constructions (10.18b).

\[(10.18) \text{a) Apfu=b} \quad ak \quad yey-e=ta-fi. \quad \text{eSSSi}: \text{S:POSS=} \text{COM} \quad \text{RE} \quad \text{say-3SGO:VTR=} \text{do-3DU} \]

‘(The two sisters, she) and her elder sister, they were cross with each other.’ \(^{10}\)

\[b) Pi=ak \quad fefey-ta \quad ta-fi. \quad \text{GO.FUT=} \text{RE} \quad \text{play-do} \quad \text{do-3DU} \]

‘They go play with each other.’ \(^{10}\)

For low-transitive verbs that code verbal number, at the present stage of analysis\(^{11}\) the choice of verb appears unrestricted by forming a reciprocal.

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\(^9\)Note that third person objects are unmarked by prefixes (§6.2.2.2).

\(^{10}\)The low-transitive verb \( fefeyer \) has a plural counterpart \( fefeynta(i) \) ‘play with many’.

Verbal number and reciprocal constructions are addressed below.

\(^{11}\)All examples of reciprocal constructions that involve verbal number in my corpus show...
As mentioned in opening, the reciprocal form of a transitive verb combines with \textit{ta(i)} ‘do’ in a periphrastic combination similar to the iterative construction (§7.6). The form of the reciprocal verb is consistent with a pattern of serialisation with \textit{ta(i)} ‘do’. First, the reciprocal verb is not inflected for subject. Second, the reciprocal construction varies between a tighter phonological form and a looser form. In (10.20a), the stem-final consonant of the reciprocal verb is preserved in a looser construction, but deleted in the tighter form in (b). Deletion of stem-final suffixes in the context of either inflection, or tight serialisation is a common process in Momu (§2.5.3). Finally, the marking of the progressive\textsuperscript{12} is consistent with the reciprocal construction being comprised of separate lexemes. That is, the final verb \textit{ta(i)} is marked progressive, not the combination of reciprocal verb and \textit{tai} (10.20b).\textsuperscript{13}

\begin{align*}
(10.20) & \quad \text{Ak} \quad \text{amkw-er} \quad \text{ta-fi}.
\text{RE} & \quad \text{back-3SGO:VTR[1|3SGS]} \quad \text{do-3DU}\S
\text{‘They ignored each other.’} & \quad \text{yarin-tumbuna}
\end{align*}

\begin{align*}
(b) & \quad \text{Ak} \quad \text{wusfa=y-a-ta-sa}.
\text{RE} & \quad \text{kiss=PROG[D-IMPF-do-3PLS:NZR}\S
\text{‘They are kissing each other.’} & \quad \text{bernard-reciprocals}
\end{align*}

\textit{singular number only. On the one hand, this shows that the default participant number reading of verbal number in Momu is not relevant or necessary in such a construction. I assume that such descriptions are being seen through the lens of event number (§6.6.1). That is, that the reciprocal act is considered a single event. If this is the case, then I expect that the plural form should be possible in order to indicate multiple reciprocal events taking place at roughly the same time. On the other hand, in the absence of a plural form, this may be the first indication of a syntactic constraint being placed upon verbal number as it occurs in Momu, in parallel to the way that nominal number is constrained for object cross-reference for high-transitive verbs in reciprocal constructions. Further work is necessary to confirm or refute either analysis.}\textsuperscript{12}\textsuperscript{The realis progressive is expressed by the combination of a distal/proximal prefix \textit{y-}/\textit{n-}, the imperfective \textit{a(i)}- and a nominalising suffix which is sometimes portmanteau with subject inflection (§7.4.2).}\textsuperscript{13}\textsuperscript{Establishing the inflectional/non-inflectional status of \textit{ta(i)} is particularly important in Momu as it is highly heterosemous. Consider the double use in \textit{ak fefeyta=tafi} ‘they played with each other’ in (10.18b). This involves a verb-forming suffix use (§6.3.1), and a periphrastic use of a free form. In addition to this, there is a stativising use \textit{-ta} (§7.5.3), and I am here arguing that this is not the relevant function function of \textit{ta} in reciprocal constructions.}
10.2.2.2 Lexical reciprocals

There is a nominal form *akfu* glossed as ‘reciprocate’ or ‘reciprocation’ in the examples below. *Akfu* is likely the combination of the reciprocal-emphatic particle *a*<sup>K</sup> and -fu, an inflection found in some kin nouns, and for indicating sister exchange marriage referents (§4.7).

*Akfu* is used to construct “weak”, “negated” and “non-simultaneous” reciprocal meanings (König and Gast, 2008). In particular, *akfu* is used in constructing multi-clausal reciprocal constructions (Evans, 2008), as discussed in the section following this one.

Some basic negative-reciprocal uses of *akfu* are given in (10.21). There are three negating strategies involving *akfu*. In (a) the lack-of-possession predicate *momu* (§4.6.2) is used.<sup>14</sup> In (b) the modal predicate *onfa* (§11.9) is used to negate an identificational use of *akfu*.<sup>15</sup> In (c) restrictive marking on *akfu* indicates that an action performed was done without reciprocation.

(10.21) (a) Akfu=ne  

reciprocate=FOC  NEG

‘There was no reciprocation. (lit. as for reciprocation, he didn’t have it)’

(b) Akfu=m  

reciprocate=OBL  NEG.MOD

‘That is not reciprocation.’

(c) Akfu=ti=s  

reciprocate=DIR=RSTR  1SG  see[1|3SGS]

‘I saw him, but he in turn did not see me.’

I have yet to discover other forms which lexicalise specific acts of reciprocation (e.g., English *kiss* or *marry*). The verb *seyen* ‘exchange marriage’ does appear to lexicalise a reciprocal event (or an event with the strong cultural expectation of reciprocation). Examples are discussed in the next section.

A curious example is given in (10.22) which roughly describes a reciprocal act, without the use of any of the markers described above. The verb *soi* ‘deal out / distribute’ is used to describe the (normally) non-reciprocal act

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<sup>14</sup> A positive counterpart to (10.21a) using a proprietive strategy (§11.5) would be *te akfu=bu* ‘I have reciprocation’.

<sup>15</sup> A positive counterpart to (10.21b) using an identificational strategy (§11.2.1) would be *anu akfu* ‘this is reciprocation.’
of a subject dealing out food or other items to a group of people. A simple example is given in (10.22a). The verb does not index T or G arguments, but I have analysed it as transitive where the O is the theme, given that the verb does not take object prefixes. In (b) the verb is transitivised to add a recipient (G), and the meaning shifts to that of exchange.

(10.22) (a) \(Esy_\) \(eru\) \(so-si.\)  
\(sago.jelly \) that \(deal-3PLS\)  
‘They dealt out the sago jelly.’

(b) \(Spears\) are marked with a unique pattern that indicates their owners and are used to identify who shot the prey in hunting. The shooter has rights over the prime cuts of meat. Exchanging spears before a hunt is a gesture of good will, as it might result in handing over these rights.

\(Muy_\) \(bar,\) \(muy\) \(tya\) \(yeswo\) \(tya\) \(yeb\) \(fufo\)  
\(cassowary\) with \(cassowary\) \(many\) \(pig\) \(many\) \(then\) \(spear\) \(eru,\) \(tye-so-fi-u=ne,\) \(yeb\)  
\(that\) \(\text{TRANS}>many\) \(deal-3DUS-NZ=FOC\) \(then\) \(tatyfi\) \(eru.\)  
\(shoot.many:3DUS\) \(that\)  
‘Cassowaries and Pigs. After swapping many spears they shot them.’

10.2.2.3 Multi-clausal reciprocals

\(Akfu\) can also signal a reciprocal action with looser temporal structure. Here I survey several uses of the form in multi-clausal constructions. \(Akfu\) means ‘in reciprocation, in turn’ in these constructions, and accompanies a one-way action embedded in a larger discourse containing reciprocation.

(10.23) starts by describing a basic event without reciprocation: \(yime_\) \(eru\) \(mu\) \(erum\) \(memam\) \(sakuyetuw\) ‘The man wipes the woman’s cheek.’ Subsequent reciprocal actions are then marked by \(akfu\) either clause-initially or preceding the predicate.

(10.23) \(Yime_\) \(eru\) \(mu\) \(eru=m\) \(mema=m\)  
\(man\) \(that\) \(woman\) \(that=OBL\) \(cheek=OBL\) \(sakuye-tuw.\) \(Akfu\) \(mu\) \(eru,\) \(yime\) \(eru\) \(wipe-come.down\) \(3sgS\)  
\(reciprocate\) \(woman\) \(that\) \(man\) \(that\) \(mema=m,\) \(mu\) \(eru,\) \(yime\) \(eru\) \(mema=m\) \(cheek=OBL\) \(woman\) \(that\) \(man\) \(that\) \(cheek=OBL\)
sakye-tuw.
wipe-come.down\3sgS
‘The man wipes the woman’s cheek. In reciprocation the woman (wipes) the man’s cheek, the man wipes the woman’s cheek.’

In (10.24) akfu is used in combination with a negated predicate to indicate the absence of reciprocated action.

(10.24) Tasol pi=yinu ian, baso tabu.
    but one.goes=laugh laugh[1|3SGS] child 1SG:COM:GEN
Baso tabu pi=yinu ian, baso
child 1SG:COM:GEN one.goes=laugh laugh[1|3SGS] child
tabu yinu akfu ia-momu.
1SG:COM:GEN laugh reciprocate laugh[1|3SGS]-NEG
‘But I went and smiled at my child. I smiled at my child and my child did not smile back at me.’

In (10.25), Yarin describes an event which naturally expects reciprocation: marriage exchange. The first act of giving a wife is described as a non-reciprocal event bamo yeb seyen ‘he gave his sister.’ To indicate that a reciprocal act was performed, Yarin says seyeba, akfu eru yeb seyen ‘when he (Wunku) gave her, he (Oimnefi) then gave back in reciprocation.’ Yarin finishes reiterating the content of these clauses by using the reciprocal construction involving the reciprocal-emphatic ak and the reciprocal use of ta ‘do’.

(10.25) Bamo yeb seyen, Oimnefi. Eru yeb
    sister then give.wife[1|3SGS] Oimnefi that then
seyen.  Seye=ba, akfu eru
give.wife[1|3SGS] give.wife[1|3SGS]=COM[ADV] reciprocate that
seyen.  Ak seye=ta-fi tupela.
then give.wife[1|3SGS] RE give.wife=do-3DUSS two
‘He (Wunku) gave his sister to Oimnefi. He gave her to him. When he gave her, he (Oimnefi) in turn then gave (his own sister). They gave (their sisters) to each other (as wives).’

(10.26) is a description of an event as a “chaining of relations” (König and Gast, 2008). People stand in a line and perform the same action (shaking hands) in turn going down the line. These kinds of events are not explicitly marked as reciprocal in Momu. As the activity moves down the chain, the fact that a different individual is brought into the overall event is flagged
with *afa* ‘(an)other/one.’ In the middle of (10.26), *akfu* does code a weak form of reciprocal action. Interestingly, *akfu* can be used to code a non-equivalent act performed in reciprocation. *Yime eru akfu yinu ian* ‘the man smiles back’ is used to indicate that the smile is made in response to a handshake.

(10.26) *Yime afa, yime afa=m key man another man another=OBL hand i-en. Yime eru akfu yinu pull-3SGO:VTR[1|3SGS] man that reciprocate laugh ian. Yime eru sisy mu afa=m key laugh[1|3SGS] man that also woman another=OBL hand i-en, yinu ian. Mu eru sisy, pull-3SGO:VTR[1|3SGS] laugh laugh[1|3SGS] woman that also mu afa=m key i-en, yinu woman another=OBL hand pull-3SGO:VTR[1|3SGS] laugh ian. laugh[1|3SGS]*

‘A man shakes another man’s hand. The man smiles back at him. That man too shakes another woman’s hand and smiles at her. The woman too shakes another woman’s hand and smiles at her.’

10.2.2.4 Parallel-reciprocal constructions

A second, looser strategy exists in coordination of clauses indicating parallel action (§14.2.6). Subjects are marked with *sisy* ‘also’ in this coordination type. The parallel actions, where directed at each other, can be interpreted as reciprocal.

(10.27) *Eru yime eru sisy, suf=fofyar wok sisy yime there man that also hold=kiss[1|3SGS] 3SG:RE also man fes eru e=m. enough that there=OBL ‘There the man holds and kisses him, and he too (does) the same again.’

In (10.28) the parallel action is two people coming separately, but at the same time. This is not interpreted as reciprocal.

(10.28) *Mu eru, bafu, wok sisy mesis woman that father:SG:POSS 3SG:RE too again y-ai-pwen-o. D-IMPF-come-3SGS:NZR*
Parallel clauses can also combine with explicit reciprocal constructions.

(10.29) Kefe wow amku=ti otota
  some go.across\3sgS back=dir many.sit
  y-a-sa, nik sisy, kwu ak
D-[impf]anim:be.at-3plS:nzr 3pl:re also food re
no y-a-ta-sa, yeb
give.one:3sgIO D-impf-do-3plS:nzr then
  y-a-kisya.
D-impf-consume:3plS:nzr

‘Some are sitting behind, and they too give food to each other, and
they are eating.’

10.2.3 Reflexive constructions

Reflexive constructions describe an activity where an agent or experiencer
collapse in reference with the patient of a clause (Kemmer, 1993). Conceptually,
a plural reflexive might appear similar to reciprocal constructions,
but the meaning here is self directed, not one of exchange or sharing. As
with reciprocal constructions in Momu, there are both lexical and clausal
reflexives. However, in contrast to reciprocal forms, reflexive forms are built
only around (different) pronominal marking.

10.2.3.1 Reflexive clauses

Reflexives involve a comitative pronoun (§4.1.1) as the object of a transitive
verb, or the subject of an intransitive verb. This is a necessary but not
sufficient condition for a reflexive. That is, comitative pronouns are otherwise
found both in object positions, or as intransitive subjects in constructions
that are not reflexive.

(10.30) gives examples of reflexives combining with transitive verbs. In
elicitation, oblique marking was used on the comitative pronoun, (a). But
in just about all examples in the section, the oblique marker is elided as the
referent is topically active. As the primary coding site of reflexive action,
the comitative pronoun cannot be elided and the example remains a reflexive
construction. The subject can also be expressed as a regular pronoun (a), but
is often elided. So called emphatic-reciprocal pronominal forms (§4.1.4) can
be used in the subject position ((b) and (c)), mostly as markers of surprise.
This reflexive meaning may extend beyond state intransitive verbs. (10.32) gives examples of an intransitive verb of motion (a), and a speech verb (b). In the case of (a), the comitative pronoun appears to indicate a similar pattern to examples above. In (b) it is clearer, the utterance is self-directed, but the intransitive verb is used for such cases, instead of the transitive verb.
(10.32) (a) \textit{Ab pi-f-mu.} \\
\textit{2SG:COM one.goes-2SGS-VOL.FUT} \\
‘You’ll take yourself (into town).’ \hspace{1cm} \textit{steven-luke} \\
(b) \textit{wob yenu-esen, eru pana=afkwar eru} \\
\textit{3SG:COM say\textbackslash3SGS-COMPL that get.one=boil[1\textvert3SGS] that ñebesy o, mwepe o, o nepu o? eru} \\
sweet.potato or taro or or meat or that \textit{fesa=absu oto=wu-mu} \\
again=wash.one\textbackslash3SGS put.one=INAN:there.be[3SGS]-VOL.FUT yeb. \\
then \\
‘She would first think to herself “get some (water) and boil it ñsweet potato, taro or meat perhaps?” that will be washed in preparation.’ \hspace{1cm} \textit{monica-customs} \\

10.2.3.2 Lexical reflexives

I am aware of just two verbs that are lexical reflexives (or body action middles (Kemmer, 1993)). These are the grooming verbs \textit{ofta} ‘decorate (self), and \textit{fwas} ‘bathe (self).’ For these verbs a comitative pronoun is unnecessary. For \textit{ofta} an alternation in verb-forming suffixes is used to create a non-reflexive form \textit{ofyer} ‘decorate someone.’ For \textit{fwas} there is a completely different lexical form (or rather pair of forms) \textit{absi/nebsi} ‘wash one/many.’

(10.33) (a) \textit{Mu anu=ne oton-u=ne} \\
\textit{woman this=FOC one.sits[1\textvert3SGS]-NZR=FOC ofta,} \\
decorate.self\textbackslash3SGS \\
‘As for this woman, having sat, she decorates herself.’ \hspace{1cm} \textit{picture-task-part1} \\
(b) \textit{Masu eru fyì fwas-esen.} \\
mother:SG:POSS that water bathe[1\textvert3SGS]-COMPL \\
‘(The child’s) mother will first bathe.’ \hspace{1cm} \textit{ma-childbirth} \\

10.2.3.3 The role of body parts in self-directed activities

Body or person parts in Momu serve as a proxy for the self and self-directed or -inflicted behaviours. This avoids coding reflexives because the agent or experiencer and patient are not coreferential. In Momu a body part can fill either the agent or experiencer role in a pseudo-reflexive. Such constructions appear to be more common when the outcome is perceived as negative for
the referent, but this is not the only situation where it is used. The posture
or position of body parts is also a common proxy for the outward expression
of emotion (§13.2.1.2).

In cases where an action performed produces an outcome where the non-
intended patient was the self, an alternate coding strategy exists in the form
of a body part or similar filling an argument role in the clause.

In (10.34a) the speaker describes someone cutting themselves. Instead of
using a reflexive construction, the knife becomes the agent-subject, and the
hand the patient-object. Similarly, in describing a kind of realised self-harm,
the speaker describes their thoughts talking, rather than self-directed speech
(as in (10.32b) on the facing page).

(10.34) (a)  
Akoi=m  
sisy-en-o=b  
cucumber=obl scrape-3SGO VTR-3SGS:NZR=COM[ADV]  
nene  key=m   tapwan.  
knife  hand=obl  cut[1|3SGS]  
‘When cutting through the cucumber, the knife cut her hand.’

(b)  
Bufo  wobu  ...  yenu  ...  ‘teb  nu  
‘thoughts  3SG:COM:GEN  say\3SGS  1SG:COM  just  oemni-tai.”
ruined-INCH[1SGS]  
‘He thought (of himself) “(through my own actions,) I’ve ruined
myself.”’

Many types of psychological expressions use Bufo ‘thought’ as either the sub-
ject or object. The self-directed component in such expressions is effectively
captured in thoughts being something done to the self and or arising in the
self. In the excerpt in (10.35), the speaker is describing the process of build-
ing a garden plot. Certain aspects of the process are described as (10.35a)
realisations or (b) remembering. These have a self-directed component in
their meanings. (10.35c) is provided for context only.

(10.35) (a)  
Abu,  Bufo  abu=m  on-f  
2SG:COM:GEN thought  2SG:COM:GEN=obl  see-2SGS  
emsi-ta=b,  eru  yeb  tetfy.  
good-INCH=COM that then  clear:2SGS  
‘You yourself know when it has gone well, and then you clear
(the garden plot).’
(b) \( Ab=m \) kamaf-ta=b, \( Bufo \) abu
\( 2SG:COM=OBL \) emerge-do=COM thought \( 2SG:COM:GEN \)
\( ab=m \) pyen.
\( 2SG:COM=OBL \) \( [one.]\)comes\[1|3SGS\]
‘When it comes to you, your thoughts come to you yourself.’

(c) \( Eru \) ere geb, \( tekuta-r-u=ne \), geb
and.so then clear-1PLS-NZR=FOC then
\( i=ta-r-u=m=se \).
plant=do-1PLS-NZR=OBL=RSTR
‘And then, having cleared the plot, we then plant it out.’

In the example below, Kana is inspired to get up to mischief. “He” doesn’t get an idea, but rather his thoughts do.

(10.36) \( Bufo \) wobu \( buf-ta. \)
though \( 3SG:COM:GEN \) thought-do\[3SGS\]
‘He became inspired. (lit. his thoughts thought)’

For looking at oneself, the target is usually expressed as one’s shadow, spirit \( (anefe) \), or as in (10.37a) a lie/trick. Or the target can again be a body part, as in \( koyibsbi \) ‘face’ in (b). Conceptually, one is not one’s spirit, rather, the spirit is something colocated with the self (c).

(10.37) (a) \( Te \) aseso tabu=m on.
\( 1SG \) lie \( 1SG:COM:GEN=OBL \) see.one[1|3SGS]
‘I see my reflection (lit. lie/trick).’

(b) \( Te \) koy-sibte tabu=m on.
\( 1SG \) eye-nose \( 1SG:COM:GEN=OBL \) see.one[1|3SGS]
‘I see my face.’

(c) \( Anefe \) teb=m ai-ta-wo.
spirit \( 1SG:COM=OBL \) [IMPF]ANIM:there.be-STVZR-3SGS:NZR
‘(My) spirit is within me.’

10.3 Speech act types

This section considers clauses not as propositions, but as acts for communicating in a social world (König and Siemund, 2007). That is, sentences can be used to achieve assertions of, or requests for information. They can be used for concessions or commands. In Momu these are mostly marked by a
small set of single-vowel, clause-final enclitics. Across speech act types some forms are identical. In these cases accompanying intonation, and sometimes sentence internal structure differentiate them.

10.3.1 Declarative

Declarative clauses are used to assert or report states of affairs. These include complaints, bragging, predicting and promising (König and Siemund, 2007).

Declaratives in Momu are the default, unmarked sentence type. There is no specific marking, however the emphatic markers -e and -a are possibly a component of certain sub-types of declarative speech-acts. Further investigation is necessary.

Declaratives generally take an (unmarked) rising-falling intonation contour over a simple clause type. However, as with every generalisation, there are exceptions. Complex clause types such as coordinated structures have more complex intonation patterns. In §10.3.2.4 I briefly review declaratives with parenthetical questions mixed in. There is also a marked post-posed participant strategy where the predicate has a terminal contour, and the post-posed element has a marked rising contour (§8.1.3).

10.3.2 Interrogative

Interrogative sentences are sentences typically intended as a request for information from an interlocutor. Interrogative sentences in Momu include polar questions, where the veracity of an assertion is being sought, and constituent questions where content relating to constituents are being sought. A reply to a polar question might be yo ‘yes’ or momu ‘no’, or something in between. A constituent question (§10.3.2.3) involves a question word (§3.5.3). A reply to such a question might minimally be the sought-after constituent, or may mirror portions of the question as well. The example below includes both a constituent and polar question. The first sentence

\[\text{349}\]
contains the interrogative pronoun bu ‘who’ and the question marker =a (§3.5.5.2, §10.3.2.3). This is a constituent question, where the information requested is the identity of an animal in a picture. The second sentence lacks an interrogative pronoun, and is marked with the polar question marker =fa. This is a polar question, where the speaker seeks to confirm (or deny) the identity of that animal as a dog.

(10.38) *Nepu anu bu=a? Esyu=fa?*

animal this who=Q dog=YNQ

‘Which animal is this? Is it a dog?’

10.3.2.1 Polar question marker =fa

One form of polar interrogative in Momu is formed by adding the marker =fa (§3.5.5.2) to a clause.

(10.39) (a) *M: Fasniye=fa? A: Mm, faskaney.*

one=YNQ yes one

‘M: (Is it) one? A: yes, (it’s) one’

(b) *M: Won go.upriver n-o-wo=fa? A: M m, fiiki yeko ... M: teete ere-ta*

no close true red like.that-do

*won-mu=fa? A: yow go.up[1][3SGS]-VOL.FUT=YNQ yes*

‘M: Is it upriver? A: No, it’s close to... M: The red one will, like that, go upriver? A: Yes.’

Note that the realis progressive form *nowo* ‘it is (here)’ is used in (10.39b) to question the precise location of an entity. In that exchange, Monica (M) knows that the questioned object is on the other side of a divide, she just doesn’t know exactly where, hence the proximal form can be used. More commonly, such a question would require the speaker to use an irrealis progressive form, like *afta* ‘you are (location unknown)’ shown below, which doesn’t use a deictic to (roughly) locate it.

(10.40) *Unetin, ay a-f-ta=fa?*

call.out[1][3SGS] 2SG [IMPF]ANIM:there.be-2SGS-STVZR=YNQ

‘He called out “Are you there?”’

---

18 In Momu, bu ‘who’ is used not just for human referents, but also for higher animates (pig, dogs, and cassowaries).
To the extent that Momu has an “alternative question” type construction
(König and Siemund, 2007), it is expressed by the juxtaposition of polar
question clauses, as in the example below. The answer to such a construction
is necessarily not “yes” or “no”, but encourages the hearer to select one of the
alternatives proposed by the speaker.

\[(10.41) \text{Ie}=fa, \text{ abko}=fa, \text{ byoku anu.} \]
\[\text{fish}=YNQ \hspace{1mm} \text{crab}=YNQ \hspace{1mm} \text{what this} \]
\[\text{‘Is this a fish or a crab?’} \]

### 10.3.2.2 Disjunctive interrogative

The disjunctive coordinator \(o\) (cf. TP \(o\) ‘or’) is used in sentences with in-
terrogative intonation, in much the same fashion as occurs in Tok Pisin. In
\((10.42a)\) it occurs after the clause, while far more commonly that clause is
first marked with the restrictive \(=s\), as in \((b)\).

\[(10.42) \]
\[(a) \text{ Ninya } o? \]
\[\text{tree.kangaroo or} \]
\[\text{‘(Is this) a tree kangaroo, or (something else)?’} \]
\[(b) \text{ M: Nu on-ef-e! Skab-ta}=s \hspace{1mm} o. \hspace{1mm} A:\]
\[\text{just see-2SGS-EMPH bad-INCH=RSTR or} \]
\[\text{Oimnita}=s \hspace{1mm} \text{on.} \]
\[\text{ruined-INCH=RSTR SEEMS} \]
\[\text{‘M: Look at it! Is it (just) no good? A: It seems ruined.’} \]

As with the polar interrogative marker \(=fa\) \((\S 10.3.2.1)\), the combination of
restrictive marking and the disjunctive marker can occur on clauses with a
variety of predication types.

\[(10.43) \]
\[(a) \text{ Anu te kaf}=tya=m \hspace{1mm} \text{bun}=cs \hspace{1mm} o? \]
\[\text{this 1SG cup}=RCO=OBL \hspace{1mm} \text{put.many[1|3SGS]=RSTR or} \]
\[\text{‘Is it where I put the cup etc, or (somewhere else)?’} \]
\[(b) \text{ Nukuw-ta}=ina-fi-mu=s \hspace{1mm} o? \]
\[\text{load\hspace{1mm}3SGS-STVZR=many.go-3DUS-VOL.FUT=RSTR or} \]
\[\text{‘They fill it and will go?’} \]
\[(c) \text{ Anu}=ne \hspace{1mm} \text{te oimnita} \]
\[\text{this=FOC 1SG ruined-INCH} \]
\[\text{a-bu-ta}=s \hspace{1mm} \text{o mo.} \]
\[\text{IMPF-put.many[1|3SGS]-STVZR=RSTR o yet} \]

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‘As for these, am I putting them in the wrong spot still?’

As with coordinated polar interrogative \( =fa \) clauses, disjunctive clauses can be coordinated to form “alternative questions”, but this time the disjunctive is used as a coordinator (§14.3). The disjunctive can be used either mono-syndetically (10.44a) or bi-syndetically (b), but for interrogative use, only the post-positive form is used.

\[(10.44) \begin{align*}
(a) \quad & Emsi-ta-u \quad o \quad skab-ta. \\
& \text{good-INCH-NZR or bad-INCH} \\
& \text{‘Is it okay, or bad?’}
\end{align*}\]

\[(b) \quad & Kusen \quad o \quad sen \quad ai \quad o? \\
& \text{be.lie\[3SGS\] or one.dies ANIM:there.be[1|3SGS] or} \\
& \text{‘Is he lying down or is he passed out?’}
\]

### 10.3.2.3 Constituent questions

Constituent questions are formed with a question word (§3.5.5.2) used “in-situ”—that is, in the position in the clause that the answer to the question would fill in a declarative form. The clause is then optionally marked with the question marker \( =a \). There are two sets of question words, based on their form, either starting with \( b \) (\( b \)-set) or \( m \) (\( m \)-set). The question words are distributed unevenly across the two sets. A subset of the question words can be used as modifiers to a nominal to form a selective sense (§3.5.3).

The question word \( byeku \) ‘what’ (or \( beku/b(y)oku \)) fills the constituent position, with the appropriate relational case, to question the identity of a referent. In (a) the subject is initial and unmarked. In (b), the theme-oblique is marked with the oblique case. In (c) the instrument-oblique is marked with the comitative case. (d) demonstrates a predicative use in an identificational clause (within a quotative).

\[(10.45) \begin{align*}
(a) \quad & M: \quad Boku \quad poonu=a? \quad B: \quad kap \quad poonu. \\
& \text{what \ be.broken=Q \ cup \ be.broken} \\
& \text{‘M: what broke? B: A cup broke.’}
\end{align*}\]

\[(b) \quad & Byeku=m \quad onw=a? \\
& \text{what=OBL \ see\[3SGS\]=Q} \\
& \text{‘What did he see?’}
\]
There are multiple means of questioning locations. A locative oblique is marked with the oblique case (10.46a, b), or the directional case (c).

(10.46) (a)  Byoko=m  pi-f-mu=a?
            what=OBL one.goes-2SGS-VOL.FUT=Q
   ‘Where will you go?’

(b)  Anu  boku  a=m  oton,  anu=a?
       this what here=OBL put.one[1|3SGS] this=Q
   ‘What is this placed here?’

(c)  M:  Kaf  boko=ti  wu-ta?
       cup what=DIR [IRR:PROG]INAN:there.be[3SGS]-STVZR
 B:  Tebol  niny  y-o-wo.
       table above [REAL:PROG]D-INAN:there.be-3SGS:NZR
   ‘M: Where is the cup? B: On the table.’

An alternate question form *mena* ‘where’ is dedicated to locations. This form can be case-marked in the same way as the general *byeku* ‘what’ form (a), but in predicative uses can be unmarked as a locational predicate (b). An approximative form *menanu* ‘about where’ is also available (c).

(19) (a)  Fékob  mena=m  pi-mu=a?
          place where=OBL one.goes[1|3SGS]-VOL.FUT=Q
   ‘What place can I go to?’

(b)  Fiky  yeko  mena=a?
       house true where=Q
   ‘Where is the real house?’

(c)  Baso=r  menanu=a?
       young.man=EMPH where.approx=Q
   ‘Whereabouts is the man?’

---

19 See parallel approximative demonstrative forms in §3.5.4.
To question the identity of a human, or higher animate referent (i.e., dogs, pigs and cassowaries), the form \(bu\) fills the appropriate position in the clause, with the appropriate case marking. (10.47) demonstrates predicative uses in identificational clauses.

\[
(10.47) \begin{align*}
(a) & \quad \text{"Mo yime eru } bu=a?" \\
& \quad \text{yet man that } who=Q \\
& \quad \text{‘(he said) “who is that man?”’} \\
(b) & \quad \text{Nepu anu } bu=a? \\
& \quad \text{animal this who=Q} \\
& \quad \text{‘What kind of animal is this?’}
\end{align*}
\]

Verbal forms are used to question manner or means. They occur in serialisation with the final verb or verb cluster. The transitivity of the form matches the verb that it modifies, either intransitive (10.48a) or transitive (b). A nominalised form is sometimes used in a fashion similar to the forms above (10.48c).

\[
(10.48) \begin{align*}
(a) & \quad \text{"Te nu meta=pi-mu=a?”} \\
& \quad \text{1SG just how.do=one.goes[1|3SG]-VOL.FUT=Q} \\
& \quad \text{‘(He said) “How will I go now?”’} \\
(b) & \quad \text{Meye=on-rai=a?} \\
& \quad \text{how:VTR=see.one-1DU=S=Q} \\
& \quad \text{‘How can we see it?’} \\
(c) & \quad \text{Ay meyer-u=m ki-f-mu=a?} \\
& \quad \text{2SG how:VTR=NZR=OBL consume-2SG-VOL.FUT=Q} \\
& \quad \text{‘How will you eat?’}
\end{align*}
\]

### 10.3.2.4 Parenthetical questions

Parenthetical questions might fall under the label of “supplements” within the framework on conventional implicatures by Potts (2005), or thethicals (Heine, Kaltenböck and Kuteva, 2016). This is an under-represented feature of sentence types in language descriptions, but at least a similar construction appears present in the Trans-New Guinea language Oksapmin (Loughnane, 2009, p401).\(^{20}\) See also Kayardild parenthetical assertions (Evans, 1995).

\(^{20}\)In example (11-39) in Loughnane (2009, p401), a referent is marked with the polar question in the same fashion as described below.
It is reasonably common for the speaker to question the reference of a participant in the middle of a declarative sentence. Both forms of polar interrogative are used parenthetically in Momu. In this use, a regular declarative clause is interrupted by a questioning of the identity of a given reference. The queried quantity is marked either with the polar interrogative $=fa$ or a combination of the restrictive $=s$ and disjunctive $o$. These are delivered, often without pause or change in regular declarative intonation. As such, the explicit marking of elements makes it clear that the overall statement is asserted, but specific sub-elements are still in question.

(10.49) (a) ¿Anu=$=fa/?
    this=$YNQ\ [one.]comes[1|3SGS]-EMPH
    '(This one)—is it this?—came.'
    bm-crow-jackal

(b) ¿Anu syi=$=fa/?
    this bird=$YNQ\ this\ grasp\ one\ 3SGS
    PX-[IMPF|ANIM:there.be-3SGS:NZR
    'He is here, holding (this bird)—is it a bird?.'

(c) ¿Yime=$=s\ o/?
    man=$RSTR\ or\ D-IMPF-[one.]comes-3SGS:NZR
    y-ai-pwen-o.
    '(A man)—is it a man?—is coming.'

(d) ¿Kwu=$=m\ ai-kuw-ta=$
    food=$OBL\ IMPF:consume\ 3SGS-STVZR=RSTR\ or
    eru=$ne,\ kwu\ yeko\ anu\ bun
    that[REL]=FOC\ food\ true\ this\ put\ many
    n-o-wo\ anu.
    PX-[IMPF|INAN:there.be-3SGS:NZR
    here
    '(As for (the place that) he’s eating),—is that what he’s
    doing?!—the food is placed here.'

In Kwomtari the form used for polar questions can appear finally or in second position (Honsberger et al., 2008, p168). This appears to be a different use however to that given here for Momu, but similar to the way in which the restrictive is used for subjunctive-like clauses. The Kwomtari form $pe$ as given is used for polar questions, hortatives, and more generally epistemic modality.

---

I have tried to represent this mixed sentence type in translation by placing a parenthesised question mark after the questionable element. Alternatively, a fully expanded translation for (10.49a) might be “This one—is it this?—came.” This doesn’t represent the degree of integration into the main clause, however.
10.3.3 Imperative

Imperatives in Momu are coded by inflection on verbs. I restrict the present analysis of imperatives to the traditional conception of the imperative as a category only applying to second person referents (König and Siemund, 2007). I do, however, briefly mention some other strategies at the end of this section (§10.3.3.2) for imperative-like meanings (many of which extend beyond second person referents). The negative imperative is treated separately in the context of modality and negation (§12.1.1.5).

10.3.3.1 Positive imperative

The positive imperative is marked by two variants, coding singular and plural imperative.

(10.50) gives examples of singular imperatives. The singular imperative is marked either by -e or -a.\(^{22}\)

(10.50) (a) Ay=ne, \(\text{pin-e!}\)
\[2\text{SG}=\text{FOC} \quad \text{one.goes-SG:IMP}\]
‘As for you, go!’

(b) Ken-a!
\[\text{extinguish-SG:IMP}\]
‘Shut up!’

(c) yine!
\[\text{come:SG:IMP}\]
‘Come!’

Yine ‘come SG:IMP’ in (c) is a suppletive form of \(\text{pwen} \) ‘one comes’.\(^{23}\)

(10.51) gives examples of the plural imperative. The plural imperative is marked by -am.

(10.51) (a) A=m \(\text{na-pwen-am!}\)
\[\text{here}=\text{OBL} \quad \text{many.-come-PL:IMP}\]
‘Come here!’

\(^{22}\)While not always consistent, and for some speakers, freely variable, the allophone -e appears to harmonise with a prior high vowel, and -a with non-high vowels.

\(^{23}\)I treat the whole form \(\text{yine}\) as suppletive rather than separating off the final vowel and treating the root as stem alternation because I have not found this root to be able to stand independently of the final vowel.
(b) *A-waktai-meta.*

\[
\text{IMPF-go-ahead}\{1SG\}-\text{EPI.FUT} \\
\text{Tyi=tye-pwen-am.}
\]

\begin{align*}
\text{carry.many=TRANS>many-come-PL:IMP} \\
\text{‘I will be going ahead. Carry the things (behind me).’}
\end{align*}

(c) *Mu eru, yenu “kiy-am!”*

\[
\text{woman that say}\{3SG\} \text{consume-PL:IMP}
\]

\begin{align*}
\text{‘The woman, she said ‘You drink!’’}
\end{align*}

Note that while subject inflection is inactive in imperatives, verbal number (§6.6) is preserved whether achieved derivationally ((10.51a) or (b)) or lexically ((10.50a) or (c)) above.

### 10.3.3.2 Related forms

Here I briefly survey some imperative-like meanings in Momu. I consider these as non-imperative as they can apply to more than second person referents.

In (10.52a), the main-clause use of a deverbal clause (§16.5.1) can be used alone to express deontic modality. In (b), the second dual subject form was given in elicitation for imperatives restricted to dual number. In some circumstances, the subject-inflected root is used for commands.

\begin{align*}
(10.52) & \quad \text{(a)} & \text{Wakeb ai-u.} \\
& & \text{continuously ANIM:there.be-NZ} \\
& & \text{‘You must stay a while.’} \\
& \quad \text{(b)} & \text{a=m na-pwe-mi!} \\
& & \text{here=OBL many.-come-2DU} \\
& & \text{‘You two come here!’}
\end{align*}

In (10.53a), a mutated form of the third plural subject (-si > -se) was given in elicitation for granting permission or exhortation directed at third person referents. In (10.53b), the combination of the volitional future with a first person plural or dual subject expresses a jussive. In (10.53c), second person (impersonal) subjunctive subordinate clauses can be deontic (§15.5.3).

\begin{align*}
(10.53) & \quad \text{(a)} & \text{Wok fe=ina-se!} \\
& & \text{3SG:RE INTENS=many.go-3PLS:EMPH} \\
& & \text{‘They must go!’}
\end{align*}
(b) \[ Vanimo=m ina-rai-mu-e. \]
\[ Vanimo=OBL many.go-1DUS-VOL.FUT-EMPH \]
‘Let’s go to Vanimo.’

(c) \[ Pun-af-u=ne imas pwen. \]
\[ get.many-COND:2SGS-NZR=FOC quickly [one.]comes[SG:IMP] \]
‘You should get it and (having done so) come back quickly.’

---

steven-luke
Chapter 11

Non-Verbal Predicates

In this section, I examine different types of non-verbal predications. This includes lexical non-verbal forms like nominals and adverbs and phrasal elements like noun phrases and adverbial clauses, all of which function as predicatives of clauses in Momu.

The major classes of non-verbal predications common cross-linguistically include those that express equation, attribution, location and possession (Dryer, 2007a; Payne, 1997; Stassen, 1997). All are expressed via non-verbal predicates in Momu, but attribution and location also have verbally predicated counterparts or can be linked by a copula (§11.12).

The juxtaposition of noun phrases is used to express equational meanings (§11.2.1). There are also a number of juxtapositions where the function of the predicate is indicated by adnominal case marking. There are two negating strategies (§11.9): a general negating strategy for negated equation (§11.9), attribution (§11.9.2) and location (§11.9.3), and another strategy for lack of possession (§11.10). Lexical negatives, verbal or non-verbal, are not common in Momu.

While the title of this chapter implies a division between verbal and non-verbal predicates, the reality is somewhat more of a cline. In the final subsection (§11.12), I look at instances where the predicate sits between nominal and verbal form. In this section I note where non-verbal predicates have verbal counterparts, and where there is no verbal counterpart.
11.1 Structural overview

Before examining each construction type individually, I discuss features common to them all.

A number of constructions in this section involve the combination of a single noun phrase (the subject), and a predicing element drawn from a word class outside of verbs, or a phrasal element. The word class or form of the phrasal element determines the nature of the predication, be it equa-tional, attributive, possessive, locational or purposive. Negation involves either a complement-taking predicate that takes an entire clause as its complement, a final negative particle, or a lexical negative.

Common to all are a subject NP (§11.1.1). In §11.1.1.1 I discuss discourse pragmatic factors that can make identifying the subject problematic. Also common to all is the manner in which adverbs modify the predicate. In §11.1.3 I discuss the position and nature of adverbial modification of non-verbal predicates.

11.1.1 Subjects and non-verbal predications

All non-verbal predications take a subject in Momu. Some predicates place predictable restrictions on the form or semantics of the subject. Some select for human (animate wholes), and some for non-human subjects. Amongst the many forms of possessive predicates (§11.4, §11.5) there is a specific possessive construction where the subject includes a possessive modifier (§11.4.2). Abstract predications like temporal adverbial clauses probably only allow a demonstrative pronoun as their subject (§11.8).

Complex subject NPs are possible, but the full extent of available forms has not been investigated at this stage. The status of embedded phrases, for instance, is unclear at the moment, but deverbal clauses can occur as the subject of an attributive:

\[(11.1) \textit{Fyi} \quad \textit{tity} \quad \textit{fwas-u} \quad \textit{emsu}.\]

\[
\begin{align*}
\text{water} & \quad \text{ahead} & \quad \text{bathe-NZr} & \quad \text{good} \\
\text{‘Bathing first is good.’} & & & \textit{2008.195}
\end{align*}
\]

It is unclear if complex subject NPs can occur with any other non-verbal predicates. See also the adverbial uses of the deverbal clause (§16.5.1, §15.7).

Zero-anaphora is extremely common in Momu, and perhaps more so in non-verbal predications. Because of this, the majority of the natural ex-
amples in my corpus have elided subjects. For instance, in (11.2), the subject of the first question is the subject of the second question, expressed via zero-anaphora. ‘Esyu fa?’ would equally be a valid utterance for a completely new referent in the discourse if accompanied by an appropriate gesture.

(11.2) Nepu anu bu=a? Esyu=fa?
    animal this who=Q dog=YNQ
    ‘What is this animal? (Is it) a dog?’

Where possible I give examples where the subject has not been elided. In many natural examples the subject is a demonstrative pronoun. For that reason, where a full noun phrase fills the subject slot, it is often an elicited example.1 In examples where elements are topical and elided, this is reflected by placing the translated equivalent between parentheses.

11.1.1.1 Topicalised subject

A topicalised element optionally precedes the subject.2 Generally speaking, this topic slot can be filled by many different elements, but for non-verbal predicates, the range of possible elements is restricted by the nature of the construction. Most commonly, the topicalised element is the subject NP or an adverb. With external possession type constructions, I argue that the topic slot is filled with an NP denoting the possessor (§10.2.1). When a subject is topicalised (i.e., placed in the topical position), the subject position is usually empty. It is possible but rare for the topic and subject slots to be both filled with coreferential NPs.

Relevant to the present discussion, subjects are frequently expressed as focussed3 by the focal marker =ne (§4.8.9). Many examples in this chapter include focussed subjects, as in the example below. Where possible within a free translation, I place the portion corresponding to the translation of the elided elements in parentheses.

---

1 I mention here the nature of the examples in this chapter as in many ways this is an unnatural skewing against the statistically most common form of usage of non-verbal predications in Momu.

2 By topic, I am referring to the discourse pragmatic notion of a grammatical element called the topic, as so labelled by, for instance, Lambrecht (1996). I am not talking about the broader extra-sentential notion of topic. For a proper elaboration of the notion of topic see §8.2.4.

3 By focus I am referring to a discourse pragmatic category. For a proper discussion and definition of this category see §8.2.4.
(11.3) *Na anu-ne fe-bufo nibu ere-a.*
and this=FOC INTENS=thought 3PL:COM:GEN like.that-EMPH
‘And as for this, (it) is their thoughts.’ (pointing at pictures of thought bubbles)

Topics not marked as focussed are usually distinguished via a pause and a corresponding disruption to the pitch contour, as indicated by the pause, and the parenthetic pronoun in (11.4a). The lack of a comma and parenthetical elements indicates no topicalised subject in (11.4b).

(11.4) (a) *Anu, fiky yeko anu.*
this house true here
‘This, (it) is a real house here.’

(b) *Anu fiky-a.*
this house-EMPH
‘This is a house.’

A third position where the subject of a non-verbal predication is frequently expressed is as a topical afterthought. This structure is usually for clarification of an otherwise assumed mutually accessible referent. The subject is moved from its usual position and instead appears after the predicate. I consider this to be an extra-clausal position, usually marked by a terminal intonation on the predicate, a pause and a rising intonation on the topical afterthought NP.

(11.5) *Klen afu=nu, mu eru.*
clan other=PL:GEN woman that
‘(She) is of another clan, that woman.’

Many natural examples in my texts include topical afterthoughts, but in the interests of simplifying presentation, I have largely avoided using this type of example in this chapter.

11.1.2 Predicate complements

Amongst non-verbal predicates, I am aware of only a single predicate that licenses a predicate complement. This is the similarity predicate *sukw* ‘be similar to’ (§11.2.2). This can be seen in the way that the predicate complement is unable to be modified by various discourse pragmatic operations (for instance, it cannot be elided, fronted or postposed as an afterthought). Predicate complements also occur with copulas (§11.12.3).
11.1.3 Adjuncts

The possibilities with regards to adjuncts in non-verbal predications remain unclear at this point in the analysis. Many examples throughout this chapter include them, and so here I briefly look at the range of adjuncts that do occur, where they occur, and what kind of meanings they express.

Relevant to the discussion here, adjuncts divide into temporal adjuncts (§4.5), and predicate modifying adverbs. For instance, there is the temporal *kubti kubti* in (11.6a), and the adverb *nu* ‘just/already’ in (11.6b).

\[(11.6) \ \begin{array}{l}
(a) \ \text{Yerebu} \ \text{kubti} \ \text{kubti} \ \text{momu-ya}.
\text{1SG:COM:GEN} \ \text{long.ago} \ \text{long.ago} \ \text{NEG-EMPH}
\text{‘Long ago, we didn’t have (it)’}
\text{kaspar-fire}

(b) \ \text{Mony} \ \text{peru} \ \text{nu} \ \text{okomaino} \ \text{eru}.
\text{talk} \ \text{small} \ \text{already} \ \text{short} \ \text{that}
\text{‘The small story is short.’}
\text{kaspar-kokomo}
\end{array}\]

The range of adjuncts appears far more restricted with non-verbal predicates than with verbal predicates. The most commonly occurring forms convey some form of psychological or social force. For instance, intensity\(^4\) of the overall predication, either of feelings or importance, is expressed commonly via forms such as *fe* ‘INTENS’, *nu* ‘just/already’ or *mo* ‘yet/still’. For instance, in (11.6b) above, *nu* codes that the speaker thinks the story has come to an end, perhaps counter to perceived expectations.

Adverbial modifiers demonstrative of manner (§9.3.2), as in *ere* ‘like that’ (11.7), are also common in non-verbal predications. These indicate that the predication is linked to the surrounding context.

\[(11.7) \ \text{Yime} \ \text{Mane bunyi=m} \ \text{owar}.
\text{Afa} \ \text{ere} \ \text{Muru}.
\text{man} \ \text{Mane bunyi=OBL} \ \text{name[1|3SGS]} \ \text{another} \ \text{like.that} \ \text{Muru}
\text{‘He named the man Mane bunyi. The other was thus Muru.’}
\text{flerwick-tunduna}
\]

The distribution of adjuncts in non-verbal predications is identical to that in verbal predications (§9.2). Temporal adjuncts express points in time, including a relatively distant past. These terms, such as *kubti kubti* ‘long ago’, *kab* ‘morning’ or *anub* ‘now’ occur between the subject and predicate. They can also be topically fronted (often with a pause, or overt focus marking

\(^{4}\)Note that for attributives expressed by predicative adjectives, reduplication is an alternative means of expressing intensification (§11.3.2).
with =ne). Adverbial modifiers, on the other hand, either pre- or post-modify the predicate, and cannot be fronted.

In all previous examples in this subsection, the adverb occurs between the subject and predicate. (11.8a) and (b) demonstrate post-modifying adverbs. (c) demonstrates the adverb mo ‘yet/still’, which, counter to the normal distribution of modifying adverbs usually occurs clause-initially.

(11.8) (a)  
\[ \text{Eru Tok Pisin}=\text{ne win ere.} \]
that Tok Pisin=FOC wind like.that
‘As for that in Tok Pisin, it’s “wind”.’

(b)  
\[ \text{Te}=\text{ne mu=bu nu.} \]
1SG=FOC woman=PROP already
‘I am married just now. (lit. I have a woman)’

(c)  
\[ \text{Mo teb sisy amku emsu=m onfa.} \]
still 1SG:COM also back good=OBL NEG.MOD
‘Me too, (my) back is no good.’

11.2 Equation

There are two basic structures expressing equation and proper inclusion: NP juxtaposition expresses equation (§11.2.1) while the transitive adjective sukw ‘like’ is used as a two-place predicate to express similarity (§11.2.2). A special construction exists for marriage exchange equivalents (§11.2.3). See also non-equation (§11.9).

11.2.1 Equation and proper inclusion

Both equation and proper inclusion are expressed by the juxtaposition of two noun phrases. Equation is where both NPs refer to the same entity while proper inclusion (or what Dryer (2007a) refers to as “true nominal predicates”) is where the reference of one can be thought of as being a member of the set expressed by the other (Payne, 1997, p114). In English the two

\footnote{Stassen (1997) refers to equational construction types as “identificational”. In doing so, he points out that assigning notions of argument and predicate to this sentence type is problematic. Grouping equation and proper inclusion together here is a decision based on equivalence of basic form. I recognise, however, that there are good grounds to treat them separately. A structural point of difference that is noted in this section is that juxtaposed elements in an identificational or equational construction in Momu can commute without altering the overall meaning, while the juxtaposed NPs expressing proper inclusion cannot.}

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can be differentiated by the use of a definite/indefinite article: *Stan is a rector* versus *Stan is the rector*. In Momu, no such differentiation is made, as shown in (11.9). Instead, the definiteness of the subject of the nominal predicate is inferred from context.

(11.9) *Stan rekta.*  
Stan rector  
‘Stan is the/a rector’

True equational or identificational constructions expressed by NP juxtaposition usually allow for transposition of equivalent NPs without a change in meaning. Most commonly this is observed in Momu with the use of demonstrative pronouns (or similar) in equational constructions.

(11.10) (a) *Fiky petu yeko anu.*  
house small true this  
‘The little house is this one.’ (pointing at picture)

(b) *Mufo wobu anu.*  
wife:SG:POSS 3SG:COM:GEN this  
‘His wife is here / this one.’ (pointing at picture)

(c) *Anu fiky petu nibu, mweke fiky.*  
this house small 3PL:COM:GEN garden house  
‘This is their little house, a garden house.’

(d) *Yeko eru ukumos to-r.*  
true that ancestor.story 1SG:GEN-EMPH  
‘This one is my ancestor story.’

### 11.2.2 Similarity

The adjective *sukw* ‘like’ functions as a two-place predicate ‘be similar to’, preceded by two NPs. Unlike verbal two-place predicates, the second argument is not marked by the oblique.

(11.11) gives some basic examples.

(11.11) (a) *Ebsi to muy sukw.*  
leg 1SG:GEN cassowary be.similar.to  
‘My legs are like a cassowary.’
An alternate analysis would be that the adjective is part of the second NP, modifying its head. However, that the adjective is functioning as a two place predicate can be shown when the second argument contains a relative clause, as in (11.12). Modifiers cannot follow relative clauses in an NP.

(11.12) /Koy sibti wobu/\[NP ey\] nose 3SG:COM:GEN man one.goes[1|3SGS] that[REL]
\[sukw. be.similar.to\]

‘His face is like the man that went.’

Compared to the non-verbal two-place predicate momu ‘not have’ (§11.10), the second argument of sukṣw is most likely a predicate complement. Unlike the two arguments to momu, the second argument to sukṣw cannot be elided if topical or postposed as an afterthought.

Complex constructions predicated by sukṣw can be formed with a sentential complement (§16.1.6). The form of the sentential complement is limited to deverbal (§16.5.1) clauses, which includes realis progressive (§7.4.2) shown below.

(11.13) /Baso peru/\[NP children small bird.sp\] [REAL.PROG|D-IMPF-perform-3PLS:NZR]
\[sukw. be.similar.to\]

‘(The) small children are like asir birds chattering away’

The combination of an adjective and sukṣw ‘be similar to’ expresses approximate attribution. I treat the adjective as a predicate complement to the predicate sukṣw, but an alternative analysis would be that the predicate is the adjective (emsu ‘good’) and it is being modified by sukṣw ‘like’.

(11.14) Kefe \[Anu=ne, emsu suksw. some this=FOC good like\]

‘As for these few, (they) are a little bit good.’
11.2.3 Marriage exchange equivalence

The marriage exchange marker -fu is used to mark a special relation of equivalence, whereby one referent is the marriage exchange counterpart to the other.

(11.15) \[ \text{Sabet-fu, \text{Justine}.} \]
\[ \text{Sabet-MARR.EXCH, \text{Justine}} \]

‘The one who was exchanged by marriage for Sabet is Justine.’

When two women are exchanged via marriage, the above construction expresses their equivalence according to this relationship. Parents or siblings use the form marked with -fu as a means of referring to an affinal relation as calculated by their consanguineal kin. In the example below, Yarin uses three different means to refer to the same person: akfu wobu ‘his reciprocation’, Awoi-fu ‘Awoi’s exchangee’ and the proper name Yefiye.

(11.16) \[ \text{Akfu, wobu-e, Awoi-fu, \text{ere,}} \]
\[ \text{reciprocation, 3SG:COM:GEN-EMPH, Awoi-MARR.EXCH, like.that} \]
\[ \mu \text{u, Yefiye, eru, te=m, a-narin} \]
\[ \text{woman, Yefiye that, 1SG=OBL, 1SGO-give.birth.to[1|3SGS]} \]
\[ \text{wu.} \]
\[ \text{STANCE[PFV]} \]

‘His reciprocated (bride), the one exchanged for (his sister) Awoi, the woman Yefiye, she gave birth to me.’

11.3 Attribution

Attribution is expressed by predication with an adjective, or a verbalised form of the adjective. The verbalised form may have an inchoative nuance, however. This mixed encoding is relatively uncommon in Australia and New Guinea, where it is more common for adjectival predicates alone to code attribution (Stassen, 2011a), although Stassen notes that coastal areas have greater variability (which would include Momu).

Further work is needed to confirm the pattern, but numerals and quantifiers can also function attributively. However, they appear most commonly in attributive possession constructions (§11.4.2).
11.3.1 Adjectival predicates

(11.17) gives some basic examples of adjectival predications expressing attribution.6

(11.17) (a)  
Te anow. Ay petu.  
1SG big 2SG small  
‘I am big. You are small.’  
2005.bf

(b)  
Ebsi ayu okomaino. Ebsi Miriam=u fafo.  
leg 2SG:GEN short leg Miriam=SG:GEN long  
‘Your legs are short. Miriam’s legs are long.’  
2005.bf

(c)  
Eru sapey.  
that good  
‘that is good.’  
picture-task-part2

(d)  
Wusy emsu.  
freshwater.lobster good  
‘Freshwater lobster are delicious.’  
2012.13

(e)  
Soi safu fafo.  
bird.sp tail long  
‘The tail of the Soi bird is long.’  
2012.14

The adjective usually stands alone as a predicate, but it can be intensified with the intensifier menyi (11.18), or reduplicated (§11.3.2).

(11.18) (a)  
Eru ere, stori nu peteku-menyi.  
that thus story already small-INTENS  
‘And so, the story is really short.’  
antonia-river

(b)  
Bamo to busku fafo-menyi.  
sister 1SG:GEN hair long-INTENS  
‘My sister’s hair is very long.’  
2005.bf

11.3.2 Reduplicated predicates

Reduplicated adjectival predicates produce an intensifying effect.7 It is not currently clear, but it may also indicate plural number not otherwise marked on most nominals.

---

6While there is no mono-clausal construction for expressing comparisons, (11.17a) and (b) are examples of how they are expressed.

7It should be noted that all well-formed examples, given in (11.19), came from the same speaker (Monica), making this potentially an idiosyncratic construction. I have only a few examples of other speakers using reduplication in this way, but for various reasons have not given them below.
(11.19) (a) *Fekob eru, fiky emsu~emsu.*

place that house good~INTENS

‘(At) that place, the houses are really good.’

(b) *morfa wobu fafo~fafo, kefe eru.*

ear 3SG:COM:GEN long~INTENS some that

‘His ears are really long, some of them.’

(c) *Kwo anow~anow, kefe.*
tree big~INTENS some

‘The trees are really big, some of them.’

(d) *Tokwai okomaino~okomaino.*
grass short~INTENS

‘The grass is really short.’

11.4 Possession

There are two forms of non-verbal predication that indicate a possessive relation. The first has the subject NP as possessor to predicating genitive NP (§11.4.1) or genitive pronoun. The second construction specifically relates to enumerated possession. In this construction, the first NP fully expresses possessor and possessed, and the predicating numeral expresses the number of the possessed (§11.4.2). The proprietive marker =bu can also be used to mark a possessive relation (§11.5), but it is complicated by the fact that the same marker is being used for attribution.

11.4.1 Genitive predicates

Genitive predicates are either genitive NPs or genitive pronouns. The subject of the construction is the possessed entity.

(11.20) gives some basic examples of genitive predicates. The number of the possessor is encoded in the form of the genitive marker. In (11.20a) it is singular, and in (11.20b) and (11.20c)\(^8\) it is plural.

(11.20) (a) *Mm, anues mafu anu=u.*

yes this:RSTR wife:SG:POSS this=SG:GEN

‘Yes, and this (other one) is his wife’s (speech).’

\(^8\)In (11.20c) the subject is expressed as an afterthought. Hence, the pause indicated by the comma.
A genitive pronoun may also fill the genitive NP slot as the predicating element.

11.4.2 Attributive number as possession

Predicate possession is often a construction with odd grammaticalisations cross-linguistically. Stassen (2011b, Section 3) refers to a process of adj ectivalisation which may in part be appropriate here, except that possession is in no way an inflectional component of the predicate.

There are two components to the construction. The predicating element is a quantifier (§3.3.3), numeral or numeral sequence (§3.3.2, §5.5). These function as attributive predicates (§11.3). These combine with a subject NP must in some way express possession.

The possessive NP which can be of different types. In (11.22a), (b) and (c) possession is expressed by genitive pronouns (§5.1.5), while in (d) it is a type of external possession (§10.2.1). In (e) the predicate is a quantifier.
Without the possessive NP subject, the construction is attributional.

\[(11.23)\] \textit{Wik anu nebem ef.} \\
\textit{week this two and another} \\
\textit{‘This week is the third.’}\textit{\quad bernard-christmas}

\subsection{11.5 Proprietary}

Possession of an alienable object is straightforwardly expressed by a proprietive-marked predicating NP, as is the case in \((11.24a)\). Possession of inalienable kin is also expressed in the same fashion (e.g., \((11.24b)\) and \((c)\)).

\[(11.24)\] (a) \textit{Te yeswo peteku motu=bu.} \\
\textit{1SG pig small black=PROP} \\
\textit{‘I have a little black pig.’}\textit{\quad simon-kana}

(b) \textit{Ay baso=bu=fa?} \\
\textit{2SG child=PROP=YNQ} \\
\textit{‘Do you have children?’}\textit{\quad 2005.bf}

(c) \textit{Te=ne mu=bu nu.} \\
\textit{1SG=FOC woman=PROP already} \\
\textit{‘I am married just now. (lit. I have a woman)’}\textit{\quad simon-kana}

The subject NP contributes to the interpretation as possessive. In \((11.24)\) the subjects are all human, while in \((11.25)\) the subjects are non-human making the interpretation more likely to be attributive. Additionally, in \((c)\) the proprietive-marked NP is a purposive use of nominalisation. \textit{U nu u ‘for}
beating sago’ is an abstract concept, and as such can only be interpreted as an attribute, not a possession.

(11.25) (a) Nanamui fekob, yime skabu=bu.
foreign place man bad=PROP
‘Town is full of bad men.’

(b) Syi mumu=bu.
bird wing=PROP
‘Birds have wings.’

(c) Bokai u nwu=bu.
sago.mallet sago shoot.one:NZR=PROP
‘A bokai is for beating sago.’

11.6 Location

Location is usually expressed by the existential verb (§11.12.4) which is discussed extensively by Blake (2007). With the existential verb, the NP expressing the ground is usually marked with oblique =m, as in (11.26).

(11.26) Mobke anu fiky a=m n-o-sa.
  coconut this house this=OBL PX-[IMP][NAN:be-at-3PLS:NZR
  ‘The coconuts are in/at this house.’

Finer spatial detail can be expressed via spatial nominals (§3.5.1) or the directional =ti case (§4.8.4). These are in complementary distribution with the oblique marker.

Locative constructions can also be formed without an existential verb, but the predicating element must clearly code a location. Apart from toponyms, a location could be a demonstrative, a spatial nominal, or be marked with either directional case or a spatial postposition. The relational oblique case, which elsewhere marks goals amongst other functions, is not a possible marker for these constructions.

(11.27) Na wune=s oku=ti=fa?
  and stone=RSTR bush=DIR=YNQ
  ‘And just the stone is in the direction towards the bush?’

Spatial motion verbs often procliticise to locative NPs to give spatial detail, without motion (§13.2.2).
11.6.1 Directional predicate

When functioning as part of a predicate, the directional =ti (§4.8.4) marks an approximate location in the direction of the marked entity.

(11.28) gives examples of a directional-marked NP functioning as a predicate. All of these examples could reasonably be followed by the existential verb.

(11.28) (a) Wok sisy fuku=ti.
3SG:RE also chest=DIR
'It too is at the front.'

(b) Kosy eru mobke afa famo=ti.
road that coconut another other.side=DIR
'That road is to the other side of a coconut.'

(c) Kefe anu=ti.
some this=DIR
'Some are over here.'

11.6.2 Habitual location predicate

The habitative marker marks a ground as being a habitual, enduring, or prototypical location for a figure (§4.8.7).

(11.29) (a) Ie fyi=mu.
fish water=HBT
'Fish are of the water.'

(b) Eru Jaklin, Jaklin nenwu=mu.
that Jaklin Jaklin belly=HBT
'Jacklin was in the womb.'

11.6.3 Spatial nominal Predicates

The small closed class of spatial nominals (§4.4) can function as locational predicates, often without further marking.

(11.30) (a) Bie, anu, anu=ne wob tity-e.
whatsit this this=FOC 3SG:COM before-EMPH
'Um, this, as for this, it goes before (the other).’ (sorting images)

(b) Mebke=ne fiiki.
star=FOC close
'Christmas is close.'
Alternatively an NP with a spatial nominal modified by a spatial postposition (§3.5.1) may constitute a predicative, as in (11.31).

(11.31) \( \text{Wo tinu tin eru.} \)
\[ \text{3SG hole inside there} \]
‘It/he is inside a hole there’

Some spatial nominals obligatorily combine with the directional. Predicative examples of these forms are given below. Many of these forms are body parts that also function as spatial nominals (particularly in combination with the directional =ti) (§4.4).

(11.32) (a) \( \text{Wok sisy, fuku=ti.} \)
\[ \text{3SG:RE also front=DIR} \]
‘This one too is to the front.’
(b) \( \text{Kosy eru, mobke afa famo=ti.} \)
\[ \text{road that coconut another other.side=DIR} \]
‘That road, a coconut is on the other side.’

11.7 Purpose

Purposive predications can be formed by marking a predicate NP with the singular genitive =u (§4.8.5.3), or by the predicating use of an adverbial purposive clause (§15.8).

11.7.1 Deverbal predicates

Deverbal predicates (§16.5.1) are composed of nominalised verbs (often with restricted subject inflection), and are frequently accompanied by a single non-oblique-marked object. The subject argument of the clause is usually dropped.

In (11.33) the subject is a headless relative clause, and the coordinated predicates are deverbal.

(11.33) \( \text{Sioko afa mamo=ti=e, fe ken-u,} \)
\[ \text{door another other.side=DIR=that[REL] faeces defecate-NZR} \]
\[ \text{tuk su-u. bladder urinate\( \backslash 3SGS-NZR} \]
‘(The thing) that is on the other side of the doorway is for defecating and urinating.’

11.7.2 Genitive predicates

(11.34) gives a basic example of a genitive purposive functioning as a predicate. See also purposive uses of embedded genitives in §4.8.5.3.

\[
\begin{align*}
\text{Emsi} & \quad \text{mobke}=u, \quad \text{yeko} \quad \text{eru} \quad \text{nu}. \\
\text{betelnut} & \quad \text{coconut}=\text{SG:GEN} \quad \text{true} \quad \text{that} \quad \text{already} \\
\text{‘That is for betelnuts and coconuts.’}
\end{align*}
\]

11.8 Other predications

In this section I briefly detail other lexical and phrasal predicate types that do not fall into the categories given above, or are too infrequent to provide a solid analysis.

Given that marked predicate NPs, such as those marked by spatial postpositions, the proprietive or genitive case, all constitute different categories of non-verbal predication, it is likely that the comitative can function to produce comitative or associative predications (Dryer, 2007a, p249). Currently, I have just one example from my corpus showing this:

\[
\begin{align*}
\text{Meno} & \quad \text{masu}=b. \\
\text{daughter} & \quad \text{mother}:\text{SG:POSS}=\text{COM} \\
\text{‘A daughter is with her mother.’}
\end{align*}
\]

The only phrasal marker not featured as part of non-verbal predications is the restrictive =s. The restrictive functions as a conditional marker on deverbal clauses and NPs (§15.6).

Another unexplored source of non-verbal predications are small closed classes of lexemes. We have seen that adjectives (§11.3.1), genitive pronouns (§11.4.1) and spatial nominals (§11.6.3) can all be predicative, with each producing a specific sub-class of non-verbal predication. It is likely that there are members of small closed word classes that can also function as predicates. For instance, adverbs have been relatively unexplored in this chapter. Adverbial modifiers such as \textit{ikob} ‘together’ are likely to be a further source of specific constructions.
(11.36) Nib eru ikob.

3PL:COM that together

‘They are all together.’

The state of knowing something can be expressed by the predicate nominal

(§4.3) kamefe/kamei ‘know,’ which has a lexical negative form kwobo ‘not

know.’ Kamefe/kamei can be verbalised, and all forms can take a nominal

or deverbal sentential complement as a second argument (§16.1.7).

(11.37) Okei yefu nu kamefe.

okay husband:SG:POSS already know

‘Okay, her husband knows.’

A third source of other non-verbal predications is subordinate clauses in-

cluding adverbial clauses and relative clauses. We saw above that purposive

clauses can function as predicates. Temporal adverbial clauses (§15.3) can

also function as predicates, as shown in (11.38a)\(^9\) to (c).\(^10\) In (d) the pre-

dicate is a relative clause.\(^11\)

(11.38) (a) Mo bofu emsu=m

yet thoughts good=OBL

ai-a-b yeko anu.

ANIM:there.be[COP]-1SGS:NZR=COM[ADV] true this

‘This one is when I was still good.’ (pointing at a

picture)

(b) Yeko eru, ukwan-o=b.

true that find:.one:VTR-3SGS:NZR=COM[ADV]

‘This one is when he finds it.’ (pointing at picture)

(c) Ating mas ñwik tyenebem o? eru=o kami

probably must.be week two or that=EMPH cloud

won=ebe.

go.up[1|3SGS]=COM[ADV]

‘It must have been ¿was it (after) two weeks? when the cloud

lifted.’

(d) Yeko eru, mu eru bufta eru.

true that woman that think\[3SGS that\[REL]

‘This one is where the woman thinks.’

\(^9\)(11.38a) includes a copula use of the existential verb (§11.12.3).

\(^10\)Predicative adverbial clauses are rare. The example in (11.38c) is not ideal because it is disrupted by a parenthetical question.

\(^11\)The examples in (11.38) are all identificational. Stassen (1997) argues that these are not predicative, or at least that they are not predicative in the sense applied to other predicates in this chapter.
Finally, there is a range of minor phrasal construction types that serve as non-verbal predicates. For instance, the phrase *fes eru* ‘that’s all’ is commonly used to indicate that a story is finished. Although the demonstrative *eru* ‘that’ can be identified, *fes* does not stand alone, and I have not encountered it in another scenario. In the example below it combines with the subject NP *mony to* ‘my story’.

(11.39) *Ating mony to nu fes eru.*

perhaps talk 1SG:GEN just the.end that

‘Perhaps my story has just come to an end.’

11.9 Negative equation, attribution and location

Negation is performed by two different negators in Momu regardless of whether the predicate is verbal or otherwise. The “modal negative”\(^\text{12}\) *onfa* is verb-like in that it takes a single oblique-marked complement. The other negator is the two-place predicate *momu* (§12.2). Because the modal negative takes a clause as its complement, the range of possible clause types that can be negated using it is broader. The negative predicate *momu*, on the other hand, only expresses negative possession.

11.9.1 Negative equation

Negative equation is expressed by embedding an equational clause (§11.2) as the complement to the modal negative *onfa*.

(11.40) (a) *Anu bofu=m onfa, anu=ne ebsi ma.*

this head=OBL NEG.MOD this=FOC leg sole

‘This is not a head, this is the sole of a foot.’

2005.bf

(b) *Yime=m onfa.*

man=OBL NEG.MOD

‘(That) is not a man.’

2008.396

11.9.2 Negative attribution

Negative attribution is formed by combining an adjectivally predicated clause with the modal negative *onfa*. Attributive clauses as expressed by the pro-

\(^{12}\)The label that I have given the modal negative is in recognition of its significant interaction with other modal markers. This is only the case with verbally predicated complements, however.
priective marker cannot be the complement to onfa.

(11.41) (a) *Mwe eru peteku=m onfa.*
    
    sea that small=OBL NEG.MOD
    
    ‘The sea was not small! (i.e., not calm)’
    
    (b) *Mo teb sisy amku emsu=m onfa.*
    
    still 1SG:COM also back good=OBL NEG.MOD
    
    ‘Me too, (my) back is no good.’
    
    (c) *Ay boku abu emsu=m onfa.*
    
    2SG heart 2SG:COM:GEN good=OBL NEG.MOD
    
    ‘You, your heart wouldn’t be good (if you had this happen to
    you).’

In the examples in (11.42), the same speaker in the same text uses the negator momu with a predicate adjective. The speaker (Flerwick) is middle aged, but is one of the younger speakers that I worked with. I include this here as a possible extension of the verbal negator momu as an attributive negator. But more conservative speakers would not consider this grammatical.

(11.42) (a) *yeko eru, ukumos to-r anow momu.*
    
    true that ancestor.story 1SG:GEN-EMPH big NEG
    
    ‘This one, my ancestor story is not huge.’
    
    (b) *Te=ne nyi to-r kwobo momu.*
    
    1SG=FOC ancestor 1SG:GEN-EMPH many NEG
    
    ‘As for me, I don’t have many ancestors.’

11.9.3 Negative location

Negative location is coded by embedding a locational clause (§11.6) without a copula as the complement to the modal negative onfa.

(11.43) *Fiiki=m onfa, maku-menyi!*
    
    close=OBL NEG.MOD far-INTENS
    
    ‘(It) isn’t close, (it’s) far away!’

11.10 Lack of possession

While possessive predications are formed via a variety of constructions, lack of possession is expressed by a single construction. The two-place predicate momu expresses lack. The initial subject NP codes the lacker and the object
NP preceding the predicate *momu* codes the possessum. *Momu* can also stand alone as a reply to a polar question.

(11.44) gives examples of lack.

(a) *Yery bokuboku anu momu.*

1PL things this NEG

‘We do not have these things.’

(b) *Ketia-si=ba, nu momu eru, kosy mesis won-u.*

leave-3PLS=COM[ADV] already NEG that road again go.up-NZR

‘When they let go (of the rope), (they) didn’t have (it)—a way to get back up again.’

(c) *Eru=ne mory momu.*

that=FOC yet NEG

‘As for that, (I) don’t yet have (it).’

(d) *Ey! Esy momu, te=ne.*

EXCLM sago.jelly NEG 1SG=FOC

‘Hey! I don’t have sago jelly!’

Note that when topical either argument (or both) can be elided. In (a) both are present. In (b) both are elided, and the second argument (possessum) is expressed as an afterthought: *kosy mesis wonu* ‘a road to go up again.’ In (c) the subject is focussed and the second argument elided. In (d) the subject is elided and then expressed as an afterthought.

11.11 Other negatives

The two negation strategies discussed above (§11.9, §11.10) do not form negative counterparts to all positive strategies. Here I briefly examine additional negating strategies and areas where negation is unclear or unavailable.

The status of negated purposive predicates is unclear, but (11.45) may be an example.13

(11.45) *God=u fekob fei-monwu momu. Fei momu.*

God=SG:GEN place fight-talk NEG fight NEG

‘God’s place is not for anger. There are no fights.’

---

13The singular genitive can at times be hard to distinguish on lexemes with a final /u/, as it will often come down to a subtle difference in vowel length. The translation is ambiguous in TP as well: *bilong* is both a marker of possession and purpose.
Attribution and possession predicates formed with the proprietive marker =bu cannot be negated. Instead, a different strategy altogether is pursued. For instance, the negative counterpart to (c11.24) tenemubu ‘I am married (lit. I have a woman)’ would be the verbally predicated form in (11.46).

(11.46) Te mu nai momu.

1SG woman marry[1SG] NEG

‘I haven’t married.’

As noted in (§11.8) there is a lexical negative counterpart to the predicate nominal kamefe/kamey ‘know,’ kwobo ‘not know.’ As with ‘know,’ this is a one- or two-place predicate (§16.1.10).

11.12 Non-verbal to verbal predicates

Modal and aspectual categories in Momu are categories of verbs. Thus, non-verbal predicates do not encode variation in these categories. The addition of adverbs (§11.1.3) allows a limited range of adjustment, but non-verbal predicates generally code an enduring state or relation that holds across a contextually recoverable span of time.

In the interests of making a first pass over these predicate types on the basis of form, I have withheld detail on how some of the predicate types have variable expression in Momu. In particular, there is a cline of more or less verb-like features that are available. Not all variation is available across each predicate type, however. Here I briefly review the variations that are available, and which non-verbals predicate types employ them.

The most broadly applicable pattern is to form a verbalised intransitive counterpart to many of the word classes discussed throughout this chapter. These intransitive verbs are formed with -ta(i) (§6.3.1), and a special case is inchoative verbs derived from adjectives.

Also considered in this section are constructions built around the heterosemy of the existential verbs. These verbs show varying degrees of grammaticalisation as a marker of stance (§11.12.2), as copulas (§11.12.3) and with a separate case frame for a basic locative construction (§11.12.3).

Finally, this section ends by noting instances of full lexical verb counterparts to non-verbal predicate types (§11.12.5).
11.12.1 Inchoative verbs

Adjectives employ -ta (from the verb ta(i) ‘do’) to form inchoative verbs (§3.1.1.2). Inchoative verbs are used to express inchoative states, focussing on either the transformation or the end point of transformation. So for instance, the adjective ku ‘dry’ has the inchoative counterpart kita ‘be(come) dry’ (see §2.5.2 for an explanation of the vowel change).

(11.47) Oko yebl ki-ta.
    ground then dry-INCH
    ‘The ground then dried.’ (after a flood)

These verbs have a fixed third person singular subject and can inflect for the epistemic future -meta (§12.1.1.2). The verbs (or at least verb-like forms) select for a single inanimate argument.

In the case of inalienably possessed (inanimate) parts of animate wholes, inchoative verbs are commonly used in an external possession type construction (§10.2.1). Even for states that are experienced fully by the animate whole, a body part is usually the subject of the verb. In §10.2.1 I argue for the first NP (the possessor) in this construction as filling a topic slot while the second is the grammatical subject.

(11.48) Mu au nu titi-ta.
    woman skin just pain-INCH
    ‘(Your) wife is in pain.’

In very rare cases, I have found other nominals used with -ta to form an inchoative sense. For instance:

(11.49) Stan prist, na anub nu rekta-ta.
    Stan priest and now just rector-INCH
    ‘Stan is a priest, and just now he has become the rector.’

Further work is needed to fully characterise this. I am as yet unaware of the full range of forms for which an inchoative sense applies, nor am I aware of any restrictions on subject marking. The verb ta(i) is highly heterosemous.

—

14 There are a few exceptions to the pattern of third person singular subject marking on inchoative verbs: angya ‘be(come) big’, emsita ‘be(come) good’ and skabta ‘be(come) bad.’ These verbs can inflect for the full range of subject values, but the ‘good’ and ‘bad’ forms are usually expressed with a body part as the argument, rather than a person. See §3.1.1.2 for more detail.
in Momu. Amongst other functions, -ta(i) is used as an intransitive verb-forming suffix that does not generate an inchoative sense (§6.3.1) and -ta is used as a stativiser of verbs (§7.5.3).

11.12.2 Stance marking

A construction type similar to the modal negative onfa (which takes a single, oblique-marked complement) is available in the form of the stance predicate wu (§16.1.2). The stance predicate is a grammaticalised form of the existential verb which is uninflectable for subject. Unlike onfa, it takes a small set of modal and aspectual inflections (the full range is not clear at this stage) which include:

- the volitional future wumu ‘it will be the case that...’
- the irrealis imperfective wuta ‘it might be that...’
- the perfective wu ‘it was the case that...’

By merit of carrying these aspectual and modal values, when a non-verbal predicate is a complement to this form, these modal and aspectual values are able to be specified for the non-verbal predicate:

(11.50) (a) Anu mas, anu laīt=m wu-ta.
      this must this light=OBL STANCE-STVZR
      ‘This must be a light.’

(b) Bofu abu muy ako suk wu-mu.
      head 2SG:COM:GEN cassowary egg be.similar.to
      STANCE[PVF]-VOL.FUT
      ‘Your head will be like a cassowary egg.’

(11.51)

See §12.1.2.1 and §16.1.2.2 for further discussion of stance marking.

11.12.3 Copulas

Both the animate existential ai ‘be / there is’ and the inanimate existential wu are used as copulas with attributional predicates. In these constructions, the copula is more verb-like in that the subject is cross-referenced on the
animate form of the existential verb. Limited modal and aspectual inflection is available as well.

Two possible codings are available when the existential verbs are used as copulas. The two verbs select for the animacy of their subject. The attributive adjective can then be positioned in the initial "subject" slot, as in (11.52b). The realis progressive form of the copula is used to indicate that the state of affairs currently holds but does not imply that it will be ongoing (or has previously been the case).

(11.52)

(a) Te emsu=m n-a-ya.
    1SG good=OBL PX-[IMPF]ANIM:there.be-1SGS:NZR
    'I am good/happy.'

(b) Emsu te=m n-o-wo.
    good 1SG=OBL PX-[IMPF]INAN:there.be-3SGS:NZR
    'I am good/lucky.'

When both subject and predicate are inanimate, argument order cannot be altered. The subject fills the subject position.

(11.53) Fyi meka=m y-o-wo.
    water cold=OBL D-[IMPF]INAN:there.be-3SGS:NZR
    'The water is cold.'

The above examples are imperfective, but a perfective copula is possible. Both examples in (11.54) use the perfective form to indicate that the attributive state previously held, and does not necessarily hold anymore.

(11.54) (a) Mo baso anu sisy peteku=m
    yet child this also small=OBL
    Ani:there.be[1][3SGS:PFV]
    'The child was still small.'

(b) Bufo wobu amsu=m
    thought 3SG:COM:GEN good=OBL
    Ani:there.be[1][3SGS:PFV]
    'His thoughts were good.'
There is a handful of nominal forms which express internal states. The use of these forms appears to be in decline. Of these, I encountered only two which were used predicatively: *kamefe/kamey* ‘know(ledge)’ and *kwobo* ‘ignorance’. These experiential nouns can also be used with a copula.

In (11.55a), *kamefe* ‘know(ledge)’ is used as a predicate. In (c), in combination with a copula, it is coded as the subject of the clause.

(11.55) (a)  *Masu*  
  *kamefe.*  
  ‘His mother knows.’

(b) *Bernard*  
  *kamefe=ɛm y-ai-wọ.*  
  Bernard knowledge=OBL D-[IMPF]ANIM:there.be-3SGS:NZR  
  ‘Bernard knows’

(c)  *Kamefe*  
  *Bernard=ɛm y-o-wọ.*  
  knowledge Bernard=OBL D-[IMPF]INAN:there.be-3SGS:NZR  
  ‘Bernard knows.’

Similarly, in (11.56) ‘sickness’ can be coded by a verbal strategy as in (11.56a) (here *efeke* ‘sick’ is an optional dummy object), but a nominal strategy employing the copula is possible as well as in (b). As in (11.55c), the experiencer is coded as the object in (11.56b).

(11.56) (a)  *Te*  
  *efeke a-sukni.*  
  1SG sick IMPF-be.sick[1SGS]  
  ‘I am sick.’

(b)  *Efeke*  
  *te=ɛm n-o-wọ.*  
  sick 1SG=OBL PX-[IMPF]INAN:there.be-3SGS:NZR  
  ‘I am sick. (lit. sickness is to/with me)’

The experiencer (*te* ‘me’ in (11.56b)) is often topicalised (fronted) as in (11.57). Note, however, that *efeke* cannot be oblique-marked, and that the verb is a form selecting for an inanimate subject.

(11.57)  *Te*  
  *efeke y-o-wọ.*  
  1SG sickness D-[IMPF]INAN:there.be-3SGS:NZR  
  ‘I am sick.’

15I am aware from Baron’s discussions of these experiential nouns (Baron, 1979, 1983a,b, 1984) that the nominal forms *sisu* ‘worry’ and *kafoku* ‘fear’ were or are in use in Western Momu. While Eastern Momu speakers recognise the forms when prompted, I only ever encountered these as verbs: *sista* ‘be worried’, *kafokta* ‘be afraid’ and *kafokyer* ‘afraid of’.
These constructions are reminiscent of “experiencer datives” as found in many languages around the world (e.g., Kannada (Amritavalli, 2004), Icelandic (Sigurdsson, 2004), Korean (Yoon, 2004), and Malayalam (Jayaseelan, 2004)). The scope of this construction type is extremely limited in Momu, however. Coding the subject as an oblique runs counter to the otherwise strong preference in Momu to code arguments with deference to the animacy hierarchy (Silverstein, 1976).

In Momu, animate, agentive subjects are strongly preferred to inanimate ones. Experiencer datives are the resolution of a tension between the ranking on animacy and agentivity. I believe these to be the remnants of a system that did formerly code experiencer datives. Hints of this are preserved in verbalised forms of the experiential nouns. That is, abstract experiential sources clearly used to have nominal forms, but are now commonly verbal.

I noted in §4.8.2 that the form (=m), function and distribution of the oblique marker are very similar to the Warisic languages. It is worth pointing out then that experiencer obliques are a little more common in these languages. In the nearby Imonda language (Seiler, 1985), experiencers are typically marked as a goal (i.e., oblique). This applies to a handful of (experiential) intransitive verbs for ‘die’, ‘fall’, ‘tremble’, ‘slip’ and ‘rot’ where the single argument to these verbs is oblique-marked.

In rough parallel to the forms above, however, Imonda does have goal marking of experiencers in bivalent constructions coding similarly experiential meanings. Some examples are given below:¹⁶

(11.58) **Imonda, taken from Seiler (1985, p147)**

(a) *Ue* ka-m *uesmosfe-n.*
   root 1-GL trip-PST
   ‘I tripped.’

(b) *Pon* ka-m *ha-ual-f.*
   hunger 1-GL affect-DU-PRS
   ‘We two are hungry.’

¹⁶Seiler (1985, pp81–86) describes marking of number in Imonda (as seen in the dual in (11.58b) which is remarkably similar to verbal number: “Most commonly, object dual is indicated by the suffix -ual, which...also marks subject dual.” (Seiler, 1985, p84). This marker is similar to the marking of plural subjects on some intransitive verbs, and also similar to the marking of plural objects of some transitive verbs. In addition to this, the habitual is expressed by plural marking (Seiler, 1985, pp178–179).
Unlike Momu where a limited range experiential sources are limited to coding with the inanimate existential verb functioning as a copula, these constructions make use of a broader range of verbs. Seiler (1985, p147) notes that fe ‘do’ is often a part of these constructions, as in (c), just as ta(i) ‘do’ is a common part of similar constructions in Momu—except that the “experience” is an object that has been incorporated.

Sources in Imonda can be inanimate and external like ue ‘root’ in (a), internal like pon ‘hunger’ in (b) or a body part like ta ‘head’ in (c). All are coded as the subject of the clause, and the experiencer is goal-marked.

External sources like ue ‘root’ in (11.58a) are simply not possible in Momu. As noted above, some internal sources are coded as nominal forms in Momu, but these forms more frequently occur as verbalised. For instance, the expression of hunger in Momu has drifted away from a nominal source strategy to either a verbalised form sieta ‘be hungry’ or siemsen ‘be hungry’.17 Similarly, I rarely encountered the nominal forms sisu ‘worry’ or kafoku ‘fear’, but did frequently encounter the verbalised forms sista ‘worry’ and kafokta ‘be afraid’.18

Body parts (as in the use of ta ‘head’ in (11.58c) in Imonda) are a common proxy for the discussion of emotions (cf Ponsonnet, 2014, and references therein) and other internal states (§13.2.1.1). But unlike Imonda these body parts are not the source but rather a proxy for the experiencer. There is quite a lot of idiosyncratic variation in these constructions, but the body parts can be external, or internal, or they can be abstract as in thoughts or desires.

Relevant to the discussion here, though, when used in attributive constructions like those at the beginning of this subsection, an alternation such that the attributive adjective is promoted to subject and the inanimate existential is used as a copula is not possible. Instead, the “experiencer” body part is coded as a subject both by lack of oblique marking, and subject

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17I assume that the common root sie to the two verbs sieta ‘be hungry’ and siemsen ‘be hungry’ was previously a nominal expression of hunger. Siemsen then decomposes into an oblique-marked sie=m and sen ‘die’.

18One of my main informants, Monica, commented that the nominal form sisu ‘worry’ was representative of the way that Western Momu speakers spoke (cf field notes 2008.201).
agreement. In addition to this, where relevant it is treated as animate. That is, the animate existential is used as the copula.

\[ (11.59) \text{Bufo wobu emsu=m ai thought 3SG:COM:GEN good=OBL ANIM:there.be[1|3SGS]} \]
\[ fyi eru kuw momu. water that consume\3SGS NEG \]
\[ ‘His thoughts are good—he didn’t drink beer.’ \]

11.12.4 Basic locative construction

The existential verbs \textit{ai}/wu ‘be (animate/inanimate)’ are also used for the prototypical expression of a location (“basic locative construction”) (Levinson and Wilkins, 2006a). This construction involves a subject NP (the figure) and locative NP (the ground). The locative NP can be marked by oblique (marking a basic or prototypical ground) or directional case, or by a spatial postposition. This construction type is covered in detail by Blake (2007).

\[ (11.60) (a) \text{Baso nenwu=m wu-sen, child belly=OBL INAN:be.at[3SGS]-COMPL} \]
\[ ‘Once a child is in the womb (i.e. once pregnant),...’ \]

\[ (b) \text{Oke, siesi afa niny n-o-wo, syesi okay wind one above PX-[IMPF]INAN:be.at-3SGS:NZR wind afa yanyi wor-o=ti one sun go.down-3SGS:NZR=DIR y-o-wo. D-[IMPF]INAN:be.at-3SGS:NZR} \]
\[ ‘Okay, there is a fan (lit. wind) above, and another fan is (on the side of the room where) the sun goes down.’ \]

In the context of the previous subsection, it is worth noting that there are no means of alternating the structural position of figure and ground. That is, the ground cannot be promoted to the subject position, and the figure coded as oblique.

Also, while a habitative-marked NP can function as a locative predicate (§11.6.2), such marking cannot be used relationally in a basic locative construction. The habitative is otherwise used as an adnominal case (§4.8.7).

See also §13.2.3.3 for a discussion of caused location, which is a significant revision of Blake (2007). This construction type shows similar alternations to the copula form in the previous subsection.
11.12.5 Full verbal counterparts

Many of the non-verbal predicates in this chapter can be verbalised (e.g., adjectives as inchoative verbs, §11.12.1, or nouns verbalised by a number of strategies, §6.3). But for the most part state intransitives have nominal coding, and do not have verbal counterparts.

Adnominal-case-marked predicates such as proprietives or habitatives do not have a generalised verbalised counterpart. As noted in §11.5, where there are verbal counterparts to more frequent uses of proprietive attribution, these tend to be entirely different lexical forms. For instance $mu=bu$ ‘have a woman / be married’ has an active verbal counterpart $nai$ ‘marry’. 
Chapter 12

Modality and Negation

“Modality is about alternatives—how we come to know and speak about the world, how the world came to be as it is, whether it might be other than it is, what needs to be done to the world to make it what we want.” Timberlake (2007)

This chapter is about the grammatical means of expression of alternatives. In this spirit, it includes the expression of negation (§12.2)—what Timberlake (2007, p316) characterises in a footnote as “a pure operator of modality”. Modality marking hints at alternatives, and by inverting a proposition, negation presents a possibility but asserts its opposite. While modality and negation are grouped together here in the one chapter, I do however treat them as separate topics, with significant points of overlap.

Modal categories relating to sentence types such as the imperative (§10.3.3) are treated separately in §10.3. A subset of adverbs indicate modal categories; these are briefly reviewed in §9.6. Some construction types involving these adverbs overlap in function with the modal categories discussed in this chapter.

12.1 Modality

Core modal categories are expressed across three loci in Momu: (a) a set of inflections on the right edge of the verb (§12.1.1), (b) a set of (partially) grammaticalised predicates that express mostly (inter-)subjective modal meanings
and (c) a handful of adverbial forms expressing modal meanings (§9.6).

The sites of modal marking are sketched in the templates given in (12.1).

A verb is first formed as laid out in §6.1. A single modal inflection (§12.1.1) is optionally marked. These inflections are the core of the modal system. The verb can further be embedded in a sentential complement to a modal predicate. These operations are more marginally modal, and most are oriented towards stance. Modal adverbial modifiers occur optionally before the verb (or predicate).

(12.1) (M.ADV) VERB (-M.INFL) (=M.PRED)

Not considered here, but potentially overlapping with modality, is the progressive (§7.4). The progressive in Momu is a multi-morphemic complex of categories. In addition to coding ongoing activity, the progressive codes a distinction between realis and irrealis. For the realis progressive, relative distance (proximal and distal) is also marked. This is the only position in Momu grammar where such a realis/irrealis distinction is made. That is, Momu is not a language like Amele (Roberts, 1990), or (closer to Momu) Kwomtari (Honsberger et al., 2008), where there is a clear, morphologically coded contrast between realis and irrealis (Foley and Van Valin Jr, 1984; Roberts, 1990). In this regard, Momu is similar to the Papuan languages Imonda (Seiler, 1985) or Mian (Fedden, 2011), where, if there is “irrealis”, then it is extremely limited, and is possibly of little explanatory use.

12.1.1 Modal inflections

Momu modal inflection distinguishes between what I term the volitional future (-mu) (§12.1.1.1), epistemic future (-meta) (§12.1.1.2), hypothetical future

1 The “modal predicates” in this chapter (§12.1.2) are revisited in §16.1 and re-examined in the context of other complement-taking predicates. The majority of the modal predicates in this chapter code (inter-)subjective modality.

2 Verbal inflection includes the aspectual categories (§7), and argument cross-reference (6.2), both of which occur closer to the verb stem than modal inflection.

3 An alternate analysis, as found in a number of languages of the Americas (cf Cristofaro, 2012, and references therein), is that a three-way deictic distinction is made: proximal, distal and unknown or unlocatable. In this case we can put aside the progressive for consideration here.

4 Fedden (2011) ultimately rejects “irrealis” as a useful category in Mian while Seiler (1985) argues for a lone irrealis marker constrained to the same environments as in Momu (questions, conditionals, some complement-taking predicates). It is clear in Imonda that there is not a pervasive distinction, however.
ture (-me) (§12.1.1.3), and apprehensive (-ma) (§12.1.1.4). Also considered here is a prohibitive form -mene. Notes on an older form -mamu which is no longer used in the area where I conducted fieldwork are provided in §C.2.5

The primary distinction is between the volitional future and the epistemic future in the declarative. The volitional future is used to describe human-mediated and motivated acts such as intentions, desires and obligations. Very rarely can this form apply to non-human agents. The epistemic future is used for what are seen as externally sourced assertions of possibility, including (human and non-human) capacity and potential.

(12.2) (a) Te kiy-mu.
  1SG consume-VOL.FUT
  ‘I will / want to eat.’

(b) Wo worsen-meta.
  3SG fall[1|3SG]-EPI.FUT
  ‘S/he might fall.’

The same contrast between desire, intention, or obligation and possibility, (human or non-human) capacity or potential is made by the volitional future and hypothetical future in the interrogative mood.

(12.3) (a)

(12.4) Ay syoko=m fu-f-mu=fa?
  2SG door=OBL open-2SGS-VOL.FUT=YNQ
  ‘Will you open the door?’

(b) Maw tuw-me=fa?
  rain come.down-HYP.FUT=YNQ
  ‘Will it rain?’

Note that the epistemic future -meta and hypothetical future -me are in complementary distribution across the different sentence types, while the volitional future -mu occurs in both.

The apprehensive -ma (§12.1.1.4) is used to make assertions to which a sense of apprehension on the part of the speaker are attached. The form is apparently in decline: many situations in which -ma (apprehensive) can be used are more commonly expressed with -meta.

5See also §16.3.2 for an explanation of how the common initial m segment for all these inflections likely relates to the development of modal markers from complement-taking predicates that employed the oblique marker -m as a complementiser.
(12.5) *Ay siemse-f-ma/-meta.*
2SG be.hungry-2SGS-APPR/-EPI.FUT
‘You might get hungry.’

The form -*mene* is mostly used for prohibition, but appears to extend to other situations discussed in §12.1.1.5. It is not limited to second person referents, however, and so I do not consider it a negative imperative.

The form -*mamu* (§C.2) is very rare. On the basis of older texts for which I do not have reliable translations, it appears to apply within subjunctive-like contexts.

The forms described above, and the sentence types that they occur in are summarised in Table 12.1.

<table>
<thead>
<tr>
<th>Type</th>
<th>Inflection</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>declarative</td>
<td>-<em>mu</em></td>
<td>desire, intention, obligation</td>
</tr>
<tr>
<td></td>
<td>-<em>meta</em></td>
<td>possibility, capacity, potential</td>
</tr>
<tr>
<td></td>
<td>-<em>ma</em></td>
<td>apprehension</td>
</tr>
<tr>
<td></td>
<td>-<em>mene</em></td>
<td>prohibition (and more, §12.1.1.5)</td>
</tr>
<tr>
<td>interrogative/</td>
<td>-<em>mu</em></td>
<td>desire, intention, obligation</td>
</tr>
<tr>
<td>subjunctive</td>
<td>-<em>me</em></td>
<td>possibility, capacity, potential</td>
</tr>
<tr>
<td></td>
<td>-<em>mamu</em></td>
<td>?? (§C.2)</td>
</tr>
</tbody>
</table>

Table 12.1: Modal inflections

In addition to contrasting over sentence types, these forms interact significantly with the person of the subject (Lehmann, 2009). The modal inflections are also heavily restricted in subordinating contexts. A restricted set of modal markers can combine with modal predicates. These are considered separately in the context of modal predicates (§12.1.2).

12.1.1.1 -*mu* Volitional future

The most commonly occurring modal inflection is -*mu* ‘volitional future.’ This inflection is used to indicate intentional or volitional action.

Some basic examples are given in (12.6). In combination with the aspectual adverb *nu* ‘just/already’ (§9.5.1) in (b), the intention to carry out

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6Given that the volitional future occurs in both declarative and non-declarative contexts, but the epistemic future and hypothetical future are instead limited to declarative and non-declarative contexts respectively, it is possible that -*mamu* is a remnant of a former contrast between the volitional future and -*mamu*, such that -*mamu* was used in non-declarative contexts, and the volitional future was formerly restricted to declarative contexts. Further investigation is necessary, but for this reason, -*mamu* is placed in the non-declarative section of Table 12.1.
the action is imminent.

(12.6) (a) \textit{Teb niy-mu.}\newline
\hspace{1em}1SG:COM shoot.one[1SG]-VOL.FUT\newline
‘I myself will shoot it.’

(b) \textit{Te nu ukumos momsen-mu.}\newline
\hspace{1em}1SG just ancestor.story talk.of[1|3SGS]-VOL.FUT\newline
‘I will tell an ancestral story now.’ (said at the start of a story)

In translating this form, speakers used both the Tok Pisin future marker \textit{bai} and the desiderative or inceptive \textit{laik} for phrases like the above. With first person subjects in particular, the form is clearly used to indicate intended or desired action.

When used with a third person subject, the speaker indicates that they believe that the agent wants or intends to carry out the action. In (12.7) two speakers are trying to build a narrative around a series of pictures. In this phase of the task, they do not yet know what the story is and are piecing together the story one picture at a time. In establishing what is happening, or what will happen, the volitional future form is used.

(12.7) Monica and Antonia discuss the content of speech bubbles in an image

\hspace{1em}M: \textit{Mu eru=ne,}\newline
\hspace{2em}woman that=FOC\newline
‘As for the woman...’

\hspace{1em}A: \textit{Yime=m no-mu.}\newline
\hspace{2em}man=OBL give.one:3SGIO\backslash3SGS-VOL.FUT\newline
‘She will give (it) to a man.’

\hspace{1em}M: \textit{Mm, yime=m no-mu,}\newline
\hspace{2em}mm[yes] man=OBL give.one:3SGIO\backslash3SGS-VOL.FUT\newline
\hspace{3em}bokuboku.\newline
\hspace{4em}something\newline
‘Yes, she will / intends to give a man something.’

With a second person subject, the volitional future -\textit{mu} is a mild imperative (§10.3.3.2). The speaker implores the addressee to do something. (12.8) is taken from a structured task where one speaker directs the other to place objects in specific locations. Throughout the task the person directing the
other used the volitional future rather than the stronger imperative form -e/-a (§10.3.3.1).

\[(12.8)\] \(Eru=m\) \(nu=pi=oto-f-mu,\) \(wune\) petu.

that=OBL just=GO.FUT=put.one-2SGS-VOL.FUT stone small

‘Go put the little stone there.’

A -mu marked clause is future-oriented with respect to a certain temporal origo, which is understood to be the time of utterance by default, though other readings are possible in context. There are no grammaticalised means in Momu for explicitly indicating the time of the predicated event or state relative to the moment of speech. Instead, that time is constructed, understood or inferred by the speaker from the context of the utterance. As such, in the right circumstances, the matrix-level clause marked with the volitional future can be understood to be indicating a past desire (fulfilled or otherwise).

In the exchange (constructed in elicitation) below, two people discuss shooting a captive pig. Speaker A establishes that someone has already done this. In their response, speaker B uses \(Teb\) niy\(mu\) ‘I wanted to shoot it.’ In the context, that is understood as a non-future reference time.

\[(12.9)\] *constructed exchange about missed opportunity* 2008.337

A: \(Wob\) \(nu=nuw,\)

3SG:COM just=shoot.one\(3SGS\)

‘He just shot it then.’

B: \(Wob\) \(nuw-mu=m\) \(wu-ta?\)

3SG:COM shoot.one\(3SGS\)-VOL.FUT=OBL STANCE-STVZR

\(Teb\) niy\(mu.\)

1SG:COM shoot.one\(1SGS\)-VOL.FUT

‘Did/does he want to shoot it? I wanted to shoot it.’

The volitional future is not generally used with non-human agents. Inferred future events triggered by non-human causes are generally expressed via the epistemic future -\(meta\). The one exception to this is meteorological events. These are sometimes marked as volitional acts, particularly in those cases where the outcome is unfortunate for someone.

\[(12.10)\] is drawn from a text where Antonia talks about how the river is constantly changing its path (to the point of causing mischief for the users
of the river. At times, Antonia tells this from the perspective of the river itself. Sometimes she uses the volitional future -mu for the whims of the personified river. At other times the epistemic future -meta is used. In the example, Antonia reverts to -meta after first using -mu.

\[(12.10)\] Mak-mes ai-mu eru
middle-ADV ANIM:there.be[1|3SGS]-VOL.FUT that
ai-meta,
ANIM:there.be[1|3SGS]-EPI.FUT 3SG:RE
eru
‘It will be in the middle, it will, upon itself.’

So far, all examples have been in the declarative mood (§10.3.1). The volitional future can also occur in the interrogative mood, in both (a) polar and (b) constituent questions:

\[(12.11)\] (a) Maky oto-ti-mu=fa?
middle put.one-come.down[1SGS]-VOL.FUT=YNQ
‘Shall I put it in the middle?’

(b) Ay meyero=m kifmwu=a?
2SG how=OBL consume:2SGS:VOL.FUT=Q
‘How can you eat it?’

Where sentential complements to complement-taking predicates permit a limited amount of modal inflection, the volitional future is the most common inflection allowed. Amongst predicates taking sentential complements, the modal complement-taking predicates are of particular interest when combined with the volitional future. The combination of the modal negative and volitional future expresses inability (§12.1.2.2). The combination of the stance predicate and volitional future expresses desire or necessity, while the stance predicate provides the overall modal and temporal frame (§12.1.2.1).

**12.1.1.2 -meta Epistemic future**

The “epistemic future” marker -meta indicates possible events, outside the control or intention of the agent, and outside the knowledge or control of the speaker. This includes events where something accidental might happen as in (12.12a), or where the outcome is out of the speaker’s hands (b).\(^7\)

---

\(^7\)The river in this text is also marked as animate by the form of the existential verb. The river watches the people washing in one location and then moves so that they have to move again to collect fresh water and wash.

\(^8\)In this example, the speakers have just finished a task, and one asks the other if they have performed the task correctly. (b) is the response.
(12.12) (a) Baso=m niyse-f-meta.
    child=OBL hit-2SGS-EPI.FUT
    ‘You might hit the child.’ (Woman holding child, says to man
    about to punch)

    (b) M=aysena. Nib on-fi-meta.
    yet=not.know 3PL.COM see.one-3DU-EPI.FUT
    ‘Who knows? They will look at / understand it.’

Offers to an interlocutor where the interlocutor can determine the outcome
are typically marked with the epistemic future. In this case, the outcome is
outside the speaker’s control, and the speaker is applying no force by making
the offer.

(12.13) (b) Very ek-wa-rai-meta.
    1PL help-1|2SGO:VTR-1DU-EPI.FUT
    ‘We could/might help you.’

    (c) Te kumasy siswu=m was-meta.
    1SG bow scrape:NZR=OBL 1|2SGO:show[1|3SGS]-EPI.FUT
    ‘I could/might show you how to shape a bow.’

Indeterminate future events controlled by inanimate forces (typically mete-
orological forces) are marked by -meta.

(12.14) (a) Fetebwe kwa tity bu-meta.
    ass hair go.first appear[1|3SGS]-EPI.FUT
    ‘(The bird’s) tail feathers will appear first.’

    (b) Oko maw tu-meta.
    ground rain come.down\3SGS-EPI.FUT
    ‘Rain might fall.’

The heterosemous free form meta(i) functions as a verb. Unlike the
bound inflection, this form takes inflectional categories, and it can be used
in serialisation, as in (12.15a). In this preverbal position it is often proclitic.
It can also stand alone as an inflected verb, as in (b) and (c).

(12.15) (a) Te metai pi-mu=a?
    1SG what.do[1SGS] one.goes[1|3SGS]-VOL.FUT=Q
    ‘How will I go?’

Diachronically, the form most likely comes from the fusion of the prefixing form of the
hypothetical future marker -me (§12.1.1.3) in combination with the verb tu(i) ‘do.’ In fact,
this may be a valid synchronic treatment of the free verb form. In Baron’s unpublished
grammar notes he records -meta as being optionally inflected for subjects (Baron, 1984).

A nominalised form of the verb is also used as an interrogative pronoun (§3.5.3)
(b) *Metai?*
what.do[1SGS]
‘How do I...?’ (speaker wondering what to do)

(c) *Aiyo, baso eru meta-ta?*
Oh child that what.do[3SGS-STVZR]
‘Oh! What has that child been doing?’

As a serial verb, it appears non-finally, which means that the combination
of a verb plus the inflection cannot be mistaken for serial verbs.

### 12.1.1.3 -me Hypothetical future

The modal inflection -me indicates a possible or potential future action in the
interrogative mood. I have tentatively labelled it the ‘hypothetical future.’
The analysis here is correspondingly tentative, in the absence of enough
examples to provide a proper analysis.

The form is quite rare. I found it either in the context of meteorologi-
cal events, or in questions of ability or potential. The hypothetical future
occurs only in interrogative mood and is the natural interrogative partner
to declarative uses of the epistemic future -meta (§12.1.1.2). Specifically, it
occurs in polar interrogative combinations. Most commonly this is the polar
question marker =fa (§10.3.2.1), but it also occurs in a few constructions
with subordinating uses of the restrictive marker =s (which in such contexts
often creates conditional clauses (§16.6.2)). For instance, it can occur with
the disjunctive o to create a kind of unfulfilled tag question ‘might it be or...
(not)’ (§10.3.2.2), or with the modal predicate =s on ‘might it seem that...’
(§16.1).\(^{11}\)

When in a question–answer pair the corresponding positive answer is
marked with the epistemic future -meta.

(12.16)

<table>
<thead>
<tr>
<th>Q:</th>
<th>Ay fi-f-me=fa?</th>
</tr>
</thead>
<tbody>
<tr>
<td>2SG</td>
<td>swim-2SGS-HYP.FUT--YNQ</td>
</tr>
<tr>
<td>‘Can you swim?’ 2008.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A:</th>
<th>Yo fi-meta.</th>
</tr>
</thead>
<tbody>
<tr>
<td>yes</td>
<td>swim[1</td>
</tr>
<tr>
<td>‘Yes, I can swim.’</td>
<td></td>
</tr>
</tbody>
</table>

\(^{11}\)The hypothetical future can also be used in sentential complements to a small range
of complement-taking predicates that accept irrealis or interrogative complements (§16.1).
In (12.17a) a hypothetical question is directed to a hornbill chick from its parents, wondering when the chick will first emerge from the nest. Ordinarily this would be a volitional act and the volitional future -mu might be used instead, but the modal flavour of this utterance is more that the parents are wondering when the chick will be able to emerge. In (b) from the same texts, tu=tyinume=fa? ‘will he fall?’ is not a question of ability, but rather of possibility. The two clauses in the utterance query contrasting possible outcomes.

(12.17) (a)  A-yey-e-fi-meta,  
IMPF-say.to-3SGO:VTR-3DU$EPI.UT 
nef-me=fa?  
come.across:2SGS-HYP.UT=YNQ  
‘They will be saying to it “will you come out?”’

(b)  Tu=tyinu-me=fa?  
come.down\3SGS=be.fall\3SGS-HYP.UT=YNQ  or  
pi=kwo  onton-me=fa?  
one.goes=tree  one.sits[1|3SGS]-HYP.UT=YNQ  
‘Will he fall? Or will he go sit on the tree?’ (Two Hornbills fly/crowd around their chick who is learning to fly)

Unlike the other modal inflections, -me can also optionally cooccur with a prefix me-:

(12.18) (a)  Mo on-e,  
maw  
yet see.one-SG:IMP rain  
me-tu-me=s  
HYP.UT=come.down\3SGS-HYP.UT=RSTR[COMP] SEEMS  
‘Have a look, see if it’s raining.’

(b)  Ay fyi  
me-kif-me=fa?  
2SG water HYP.UT-consume:2SGS-HYP.UT=YNQ  
‘Will you drink beer?’

(c)  Te  
me-niy-me=fa?  
1SG HYP.UT-shoot.one[1SGS]-HYP.UT=YNQ  
‘Will I be able to shoot it?’ (I ask myself)

It is not clear at this stage whether there is a difference in meaning with the double-marked form.
12.1.1.4 *-ma Apprehensive*

The apprehensive *-ma* is a mixed modal category combining epistemic uncertainty and an evaluative attitude on the part of the speaker of apprehension towards the predication (Lichtenberk, 1995). This is a category common amongst Australian languages (sometimes labelled as “lest”), for instance as found in Kayardild (Evans, 1995, pp264–265) or Diyari (Austin, 2013, pp229–233), but is also found in New Guinea languages like Tok Pisin (*tp nogut* ‘no good / lest’) (Verhaar, 1995, pp43–44), Iatmul (Jendraschek, 2012, pp 204–205), Duna (San Roque, 2008, pp296–297), and Kamasau (Sanders and Sanders, 1994, pp75–76).

I first encountered the form for Momu in unpublished notes from Baron (1984), but otherwise only encountered it unprompted on a few occasions. The main context I found this form used in was warnings of potential actions or states that are in some way undesirable to the speaker. In many cases, speakers would exchange the epistemic future *-meta* for the apprehensive, saying that either could be used. I also found that the epistemic future was commonly used in situations where the apprehensive was supposed to be acceptable.

(12.19) is a record of the occasions where the apprehensive was used unprompted. (12.19a) is a common usage, where the speaker is apprehensive about the actions of their interlocutor. (12.19b) was given on arrival at a house, where my host was worried that I might be hungry if I didn’t eat something before sleeping. In (12.19c), Monica is concerned that my actions may adversely affect me. In (12.19d) the speaker acknowledges that the child will remain hungry (adversely affecting everyone) until it chooses to eat.

(12.19) (a) A child is climbing a tree.

‘(I fear) you’ll fall!’ *Wor-se-f-ma!*

go.down-one.dies-2SGS-APPR

(b) After a long walk, I arrive at Steven’s house and he says:

*N* *ay* *siemsen-f-ma.*

and *2SG be.hungry-2SGS-APPR*

‘(I fear) you might be hungry.’

(c) I suggest making a pot of tea on a hot day, and Monica says:


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Busne ta-ma.
sweat do\_3SG\_APPR
‘(I fear) sweat might appear.’ 2010.218

d) A child refuses to eat.
Wob yeb kuw wu-ma.
3SG\_COM then consume\_3SG\_STANCE\_APPR
‘He’ll eat when he feels like it. (we can’t do anything)’ 2008.205

The only example that I have from a text is given below. In context, the ‘holding’ is understood to be undesirable to the referent of the object of the clause. For this particular example, it is unclear how this is disadvantageous to the reported speaker.

(12.20) “Ay=ne byenityi=nua-yaf-u, 2SG=FOC [one.] jumps=come.up\_COND:2SGS\_NZR 1SG wa-suf-ma.”
1\_2SG\_O\_hold\_1\_3SG\_S\_APPR
(The child says to the frog in a jar) “Should you jump out, I might hold/grab you.”

The remaining examples are all elicited. (12.21) is an example of -ma used in a sentential complement.\(^\text{12}\) (12.21b) shows that the apprehensive can be used by the speaker when apprehensive about an outcome determined by the addressee. The implication of the utterance is that the speaker will be adversely affected.

(12.21)

(a) Flerwick and I are discussing whether either of us have the ability to shoot a wild pig.

Te Flerwick=m yey-en “te
1SG Flerwick=OBL say.to-3SG\_O\_VTR[1\_3SG\_S] 1SG
niy-ma.”
shoot.one[1SG\_S\_APPR
‘I said to Flerwick I will shoot it.’ (I have a strong but uncertain feeling towards me be able to shoot it) 2010.134

(b) Te Flerwick=m yey-en, “ay
1SG Flerwick=OBL say.to-3SG\_O\_VTR[1\_3SG\_S] 2SG
nifysen-f-ma=fa?”
hit:2SG\_2SG\_APPR=YNQ

\(^\text{12}\)The apprehensive can be used in sentential complements to experiential verbs like on ‘see’, bufāi ‘think’, and kafōktāi ‘be afraid’ (§16.1).
‘I said to Flerwick “Will you hit him?” (I fear so)’

In (12.22) the apprehensive is used in the apodosis to two conditional constructions (§15.10.2.6).

\[(12.22) (a) \text{Ay } eru=m \text{ kigon-afua, } fe=yesy \]
\[2\text{sg that}=\text{obl taste-cond:2sgS intens}=\text{only} \]
\[kif-ma! \text{consume:2sgS-appr} \]
‘If you try that, you’ll eat that alone!’

\[(b) \text{Fiminya } i\text{-wan-u } a-f-ma. \]
\[\text{flood pull-1|2sgO:vtr-nzr anim:there.be-2sgS-appr} \]
‘If the flood holds you back, you’ll have to stay.’ (i.e., you’ll be stuck on the other side of the river)

(12.23) was given in the context of discussion around (12.19d), and similarly appears to indicate lack of control of circumstances.

(12.23)

\[(12.24) \text{Meye-mu, } wob \text{ yeb} \]
\[\text{how.do.to[1|3sgS]-vol.fut 3sg:com then pwe-ma.}\]
\[\text{[one.|comes[1|3sgS]-appr} \]
‘What can we do? He himself will come.’

12.1.1.5 -mene Prohibitive

The inflection -mene is used mainly as a prohibitive form. The meaning spans denial of permission through to (negative) exhortative uses.

\[(12.25) (a) \text{Kefe } erey-e-si ay yesy} \]
\[\text{some say.to-3sgO:vtr-3pls 2sg just a-f-mu} \]
\[\text{anim:there.be-2sgs-vol.fut fight do-2sgs-proh} \]
‘Some said to him “Just stay—you can’t fight!”’

\[(b) \text{Ye-nin-m-mene!} \]
\[\text{say-3plO:vtr-2plS-proh} \]
‘Don’t talk (i.e., be quiet)!’ (said to chattering children)

\[(c) \text{Ay sisy sen-u=m kafokta-f-mene!} \]
\[\text{ssg also one.dies-nzr=obl be.afraid-2sgs-proh} \]
‘You too can’t/shouldn’t fear death!’
There is some semantic overlap with the ‘non-permission’ adverb *bie* (§9.6.4), which can optionally combine with the prohibitive marker or stand alone.

(12.26) (a) *Ay bie kif-mene.*

\[
\text{2SG INAB consume:2SGS-PROH}
\]

‘You cannot eat!’

(b) *Ay=m bie wa-nuws-wa-mene*

\[
\text{2SG=OBL INAB 1|2SGO-hit-1|2SGO:VTR[1|3SGS]-PROH}
\]

‘He cannot hit you!’

As (12.26b) shows, prohibitive marking can apply to third person subjects. It can also apply to first person subjects, (12.27). This differentiates the inflection from an imperative (§10.3.3).

(12.27) *Te koyfitai-mene.*

\[
\text{1SG cry[1SGS]-PROH}
\]

‘I can/should not cry.’

Finally, I have a small collection of non-standard uses of the inflection. These uses indicate that there is an additional use of the prohibitive which is more like a hypothetical (non-negative) exhortative. Further investigation is needed to confirm this pattern, however.

(12.28) (a) *Watch eru gey-en=be,*

\[
\text{watch that talk.to-3SGO:VTR[1|3SGS]=COM[ADV]}
\]

*fukona no-mene.*

\[
\text{take.off:3SGS give.one:3SGO\3SGS-PROH}
\]

‘When (he) spoke (to her) of the watch, he should take / took it off for her.’

(b) *Yefu wob tity wor-mene*

\[
\text{father:SG:POS3 SG:COM be.first go.down[1|3SGS]-PROH?}
\]

*(oko o!) kwo tinu a=m.*

\[
\text{ground oops tree hole here=OBL}
\]

‘Its father should/might go down first into the tree hole.’

12.1.2 Modal predicates

Modal predicates express a variety of modal qualities that operate over the entire clause. All forms are more or less complement-taking predicates (Noonan, 2007), some of which have fused or reduced. All show a degree of
grammaticalisation (§16.3.2), either by a reduction in form or a reduction in inflectional possibilities.

The components of these constructions in Momu are a sentence-like complement, a complementiser, and a complement-taking predicate (henceforth the modal predicate). All three have variable forms across the construction types discussed below.

12.1.2.1  

\[ \text{–m wu Stance predicate} \]

The inanimate existential verb \(w u\) has grammaticalised as a form of epistemic stance marking which I label (and gloss) the ‘stance predicate.’ The form encodes the speaker’s subjective assessment of the state-of-affairs described by the complement, relative to a temporal offset established by inflection on the predicate.

Stance is a broad and varied topic across the literature (see Engelbretson (2007) for an overview of different approaches), but here I am singling out just one component of stance. Following Engelbretson (2007) I take stance to be a subjective, observable, interactional, indexical and consequential phenomenon. As such, many examples of the stance predicate occur in dialogic, natural and unscripted interactions between speakers, especially in tasks like the social cognition picture task (San Roque et al., 2012), where the speakers in one phase of the task are jointly attending to constructing a narrative based on a series of images. Amongst possible instantiations of stance, here the stance predicate codes mainly epistemic stance. Stance can also code emotional attitudes and judgements of a given proposition. Such meanings are coded by other complement-taking predicates in Momu, and are examined elsewhere (§16.1).

In the simple exchange below, two speakers are working towards identifying the unknown elements in an image. Monica signals her tentative position with the stance predicate in (d).

(12.29)  

**Monica and Antonia identify objects in a picture**

(a)  

\[
\text{M: Yeko anu, oton n-o-wo}
\text{true this put.one PX-[IMP]INAN:there.be-3SGS:NZR}
\]

\[\text{13 In the exchange in (12.29) Monica first signals that she is guessing at identifying the object in (a), using a parenthetical question \textit{kwu} o? (§10.3.2.4). Antonia responds without progressing the identification by simply parroting it back in (b) and (c).}\]
anu, kwu kefe, kwu=s o? bun
here food some food=rstr or put many
n-o-wo anu
PX-[IMP|NAN:there.be-3SGS:NZR here
‘M: This one, the one placed here, some food, (Is it) food or...? (those) placed here.’
(b) A: kwu=s o? M: mmm
food=rstr or yes
‘A: (Is it) food or...? M: yes’
(c) A: Kwu wobu=s o?
food 3SG:COM:GEN=rstr or
‘A: (Is it) his food or...’
(d) M: kwu wobu=m wu-ta
food 3SG:COM:GEN=obl STANCE-STVZR
‘M: (That) might be his food.’ (epistemic assertion)

(12.29d) is an identificational clause (§11.2.1) with a topically elided subject
(the referent having been clearly established at this point). Identificational
clauses lack aspectual or modal distinctions, but embedded within the com-
plement to the irrealis progressive form of the stance predicate it can be un-
derstood to be a currently held state of affairs which the speaker considers
likely to continue to hold. In making the utterance in this form, Monica
establishes her subjective opinion in this turn of the discourse. This triggers
a progression in the dialogue: they move on to a new topic immediately.14

The stance predicate takes a limited range of aspectual and modal in-
fection. The meaning expressed by the stance predicate can be roughly
paraphrased as “(it is / was / might be) the case that ...”, which correspond
to forms of the predicate marked irrealis progressive (wuta), perfective (wu)
and volitional future (wumu) respectively.

The predicate is fixed upon the third person singular subject form. The
complement to the stance predicate is marked with the oblique case. The
complement itself may be perfective (§7.2), volitional future (§12.1.1.1) or
take realis progressive (§7.4.2), if verbal. The complement can also contain a
non-verbal predicate (§11) as in the example above, which expresses universal

14The stance predicate does not signal the end of a topic. There are many more factors
at play here, but I do not discuss them further as this section is mainly about the epistemic
value of the stance predicate.
Variations in modal and aspectual marking shift the meaning of the stance predicate. Arguably this is the main meaning component of the stance predicate, but this can be differentiated from the same marking on the complement as a matrix clause in that it explicitly signals the speaker’s assertion of the contents of the complement as an (inter-)subjective position. In use, it is clear that the speaker offers it up in the discourse for evaluation.

The perfective form *wu* expresses an assertion on the part of the speaker that some past state of affairs did in fact hold. In (12.30), the speaker makes an assertion that a past state of affairs held at the reference time. The default interpretation is that the state of affairs no longer holds, but this is defeasible. In both (a) and (b) the speaker immediately follows up the statement with an assertion of the new state of affairs.

(12.30) (a) *Kubbi-ne bufo ereru-m*  
before=FOC thought do.like.that\3SGS=OBL[COMP]  
*wu,*  
STANCE[Pfv] but now=FOC 1PL just leave-1PLS  
‘Before, it was the case that we thought that way, but now we have left it behind.’

(b) *Kubbi-ne, wok fe=wok pin fyi*  
before=FOC 3SG:RE INTENS=3SG:RE one.goes[1\3SGS] river  
*benya menyi e=m pwenin wu,*  
join INTENS that=OBL [one.|stands[1\3SGS] STANCE[PfV]  
*anu nu y-ai-pwen-o yime=m*  
this just D-IMPF-[one.|comes-3SGS man=OBL  
*wu-ta-we.*  
STANCE-STVZR-EMPH  
‘Before, it was the case that he went and stood at the join of the river, and now he’s coming, it must be the man.’

With volitional future marking on the stance predicate (*wumu*), the speaker expresses a (subjective) assertion that a state of affairs will come to be. Interestingly, it is the volitional future that is used to mark the future form, when the outcome is a matter of epistemicity. Compare (12.31a) and (b). In (a) the volitional future stance predicate combines with the predicate adjective form of the similarity construction. In (b), the verbalised form of the adjective is inchoative, and this can be inflected for the epistemic future.

\(^{15}\)For non-verbal predicates, some small degree of modal or aspectual modification can be made with adverbs (§11.1.3).
In either case, the situation is externally mediated and out of control of the speaker, but the epistemic future is used only with the matrix level form of the similarity construction. The volitional-future-marked form of the stance predicate in (a) indicates the speaker’s subjective opinion of the future state of affairs.

(12.31) (a) Bofu abu muy ako sukwa
    head 2SG:COM:GEN cassowary egg be.similar.to
    wu-mu.
    STANCE-VOL.FUT
    ‘Your head will be like a cassowary egg.’
    (2005-bf)

(b) Ay gime anow sukwa-f-meta.
    ssg man big similar-INC2SGS-EPI.FUT
    ‘You will become a big man.’
    (2012.19)

As we saw in (12.29) on page 403, the irrealis imperfective form of the stance predicate indicates that the speaker asserts something as possible. This is the most common use of the stance predicate, and is particularly the case in examples like (12.32b) where the identity of an object is being questioned.

(12.32) (a) Eru-r ating, gime anow on
    that-EMPH perhaps man big see.one[1|3SGS]
    wu-ta.
    STANCE-STVZR
    ‘It might be that the big man (God) saw it.’
    steven-tumbuna

(b) Anu lat=m wu-ta?
    this light=OBL STANCE-STVZR
    ‘This must be a light?’
    picture-task-part1

Where the complement is predicated by a verb, inflection on the complement can vary as well. Complements can inflect for the volitional future, or a subset of perfective or imperfective marking. (12.33) gives examples of the combination of a volitional future complement of an imperfective stance predicate. In this combination the sense conveyed is more of desire or intention than of a future act. This layering of outer epistemic modality with inner dynamic marking is similar to that found in stance marking in Abui (Kra- tochvil, 2011) where demonstrative adverbs have grammaticalised as varying modal markers (including epistemic stance).
(12.33) (a) *Nepu eru fe=y-a-nepri-wo*
  animal that {INTENS=D-IMPF-take.3SGS:NZR
  nepru
  take.3SGS
  netyi=wor-mu=m
  throw.1SG-vol.fut支柱=OBL
  wu-ta,  $f_{yi}=m$.
  STANCE-STVZR  water=OBL
  ‘Perhaps the animal wants to / will take him and throw him in
  the river.’

(b) *Tyi=tyepri-fi-mu=m*
  carry.many=take.many-3SGS-vol.fut支柱=OBL
  wu-ta,  $f_{iy}=m$.
  STANCE-STVZR  house=OBL
  ‘Perhaps they will take it to the house.’

(c) *Te kamei ay pi-f-mu=m*
  1SG understand 2SG one.goes-3SGS-vol.fut支柱=OBL
  wu-ta.
  STANCE-STVZR
  ‘I know (that) you want to go.’

Imperfective marking is possible with the stance predicate as well. The
realis–irrealis distinction in the progressive (§7.4) is layered with the pro-
gressive form of the stance predicate. Only the realis form can be used for
the sentential complement, and only the irrealis form is used for the stance
predicate.

The realis progressive form in the complement in (12.34a) is used when
the speaker subjectively asserts a current and ongoing state of affairs as
probable. The imperfective in (b) expresses past imperfective, and this is
given a modal flavour by the irrealis form of the stance predicate. The irrealis
progressive (*ai- V -ta*) and the stative form (*V -ta*) cannot be used in the
complement.

(12.34) (a) *Baso eru y-ai-pwen-o=m*
  child that D-IMPF-one.comes-3SGS:NZR支柱=OBL
  wu-ta.
  STANCE-STVZR
  ‘The child must be coming now.’

(b) *Baso eru ai-pwen=m*
  child that IMPF-one.comes[1SGS支柱=OBL
  STANCE-STVZR
  ‘The child must have been coming.’
Core aspectual distinctions like directional inflection appear to be unrestricted in the complement, but further investigation is needed.  

Finally, I tentatively include some additional examples here that may fall under stance.  

A negated form of the stance predicate is shown in (12.35). Further investigation is necessary, including comparison to an extremely similar use of the modal negative (§12.1.2.2). The repetition of momu in (12.35b) is clearer as a stance-like usage. The speaker weakens his conviction as the two participants argue over identifying elements in a picture they are looking at.

(12.35) (a) Mo kub=ti erenu wu=momu.  
yet before=DIR do.like.that STANCE=NEG  
‘Long ago, it was not the case that things were done that way.’  
yarin-tumbeuna

(b) Ketya momu. Ketya wu=momu.  
lose\3SGS NEG lose\3SGS STANCE=NEG  
‘He didn’t drop it. It is not the case that he dropped it.’  
bm-crow-jackal

The examples in (12.36) demonstrate marking of the stance predicate with the rare apprehensive marker -ma (12.36a). 17 (12.36b) demonstrates a potential stance predicate in the realis progressive, but this is possibly just a non-grammaticalised use of the inanimate existential. If it is stance, then this is a confident assertion on the part of the speaker, but one that is being put forward as an opinion nonetheless.

(12.36) (a) Wob yeb kuw wu-ma.  
3SG:COM then consume\3SGS STANCE-APPR  
‘He’ll eat when he feels like it. (we can’t do anything)’  
2008.205

(b) Nepu yeko eru bofu=s  
animal true that head=RSTR  
y-o-wo.  
d-[IMP][STANCE][INAN]:there.be-NZR  
‘The animal there is just a head.’  
ma-frog-story

---

16 Natural occurrences of the stance predicate are rare across my corpus as there is a limited amount of natural discourse. Elicitation of variation in form has so far been problematic as it can be difficult to set up the right context for some forms. Again, further investigation is necessary. The social cognition picture task was especially helpful in unearthing identificational examples of stance as the pictures are deliberately inconsistent so as to force negotiation of identity between speakers (San Roque et al., 2012).

17 See §12.1.1.4 for discussion of the apprehensive.
As these are the only examples of such TAM marking, and because there are non-grammaticalised readings of the inanimate existential, further work is necessary to clarify if these are actual examples of variation in the stance predicate.

12.1.2.2 \textit{=m onfa} Modal negative predicate

The modal negative is a fixed form which takes no inflection.\textsuperscript{18} Variation in the form of the sentential complement to the modal negative contributes to the modal value. The complement to \textit{onfa} may be a non-verbal predicate, in which case the predicate type determines the nature of the negation (§11.9).\textsuperscript{19} The complement may also be a verbal predicate, in which case it can be inflected for the imperfective, perfective, realis progressive, or volitional future (§12.1.2.3).

A plain unmarked (perfective) verbal stem with \textit{onfa} conveys a meaning roughly equivalent to a negation of the stance predicate (§12.1.2.1).\textsuperscript{20} That is, the speaker uses the construction to indicate their stance on the matter as being opposite (or different) to the sentential predicate. Thus, the difference between the form in (12.37) and a negative particle equivalent (\textit{fienu momu} ‘It is not a lie’) is that the particle version is a statement of fact: it is not a lie. The speaker knows or believes nothing of alternative possibilities. The utterance in (12.37) is a response to disbelief.\textsuperscript{21}

(12.37) \begin{align*}
Mony=e & wob & na-pwen & eru.
\text{talk=that} & 3SG:COM & \text{TRANS:one-come[1|3SGS]} & \text{REL}
\end{align*}

\begin{align*}
\text{Fienu}=m & \text{ onfa.} \\
\text{be.lie}=\text{OBL} & \text{ NEG.MOD}
\end{align*}

‘That is the news that he himself brought (i.e. it is not a rumour). It is not a lie.’

A verbal predicate of a complement to the modal negative can combine with

\textsuperscript{18}The shape of \textit{onfa} does not obviously indicate a verbal past but the marking of the complement with the oblique \textit{=m} does. \textit{Onfa} may be related to the verb \textit{on} ‘see’ with the polar question marker \textit{=fa}, but there is no compelling evidence for this.

\textsuperscript{19}In fact, for non-verbal predicates, \textit{onfa} is the main form of negation.

\textsuperscript{20}In §12.1.2.1, I tentatively conclude that the stance predicate has a negated form \textit{wu=momu} ‘it is not the case that...’ The subtle meaning difference between this construction and use of \textit{onfa} is certainly in need of further investigation, especially because of the complementary stance qualities of \textit{onfa}.

\textsuperscript{21}The context for (12.37) is that the speaker has just been told that his mother has died. The example is a third party insisting that it is true.’
aspectual markers including the imperfective. The realis progressive can also be used, as in (12.38).

(12.38) *Mu afa eru, y-ai-wo=m woman another that D-[IMP[ANIM:there.be-3SGS:NZR=OBL
\textit{onfa}.)
\textit{NEG.MOD}

‘The other woman, she’s not there.’ (i.e., she’s presently out of the frame in the video)\textsuperscript{22}

Note that this is not the irrealis form of the progressive—it cannot be combined with the modal negative. Given that negation describes a “non real” situation, the usual expectation might be that an irrealis or subjunctive should be used (Payne, 1985), especially in the context of a formally subordinate clause (Palmer, 2001).\textsuperscript{22} Palmer (2001) argues that the role of the subjunctive in a negated context is of expressing doubt on the part of the speaker. It may be that because the speaker is asserting a stance or position counter to another, the realis here indicates surety on the part of the speaker. If the speaker instead wanted to express doubt, the irrealis progressive form of the stance predicate would be used instead (§12.1.2.1).

12.1.2.3 Negative permission or potential

The sentential complement to the modal negative \textit{onfa} can only be marked for the volitional future. No other modal inflection can be used. The meaning conveyed by this combination is one of (12.39a) negative permission or (b) lack of potential.

(12.39) (a) *Ne a-naakni
and 1SGO-be.accompany.by.one
\textit{kisya-nu=m consume:3PLS-VOL.FUT=OBL[COMP] \textit{onfa}.)
\textit{NEG.MOD}

‘And they cannot eat with me.’

(b) *Kwa eru yirmas pu-nu=m
feathers that quickly emerge-VOL.FUT=OBL[COMP] \textit{onfa}. \textit{NEG.MOD}

\textsuperscript{22}The context for the utterance in (12.38) is of Bernard describing a woman who in the course of a video clip enters from outside the frame. The video plays, and stops, and freezes on the first frame with the woman out of frame. Bernard then makes the utterance (12.38). The woman is known to both of us, and in a sense is “present”—just not visible.
‘Those feathers cannot grow quickly.’

The modal adverb *biom* ‘inability’ conveys a similar meaning, and can either mark it independently, or occur alongside the volitional future and modal negative combination (§9.6.3).

### 12.1.2.4 *=meni* Inceptive, Desiderative

*Meni* is at best a marginal predicate, sitting part way between a free form and a modal inflection. The form originates from a fusion of the oblique *=m* (functioning as a complementiser) with *yeni* ‘say to’.²³

*Meni* retains some verb-like features in that it still inflects for agreement with the shared subject of the sentential complement. It cannot inflect for aspectual or modal categories, however, and nor can the complement itself. In the absence of any further modal marking either on the final verb of the complement or on *=meni* itself, the form is in complementary distribution with the other modal inflections (§12.1.1).²⁴ However, unlike other modal inflections, the inceptive can occur in subordinate clauses that require deverbal complements, and in this case are the host of the nominaliser.

The examples below demonstrate the inceptive sense of *=meni*. All these examples involve some form of connection with a subsequent clause which details the completion of the full event. In (12.40a) two clauses are linked by a sequential adverb *yeb* ‘then’, while in (b) and (c), the inceptive is embedded within a temporal adverbial clause. In all examples, subject marking occurs on both the inceptive marker *=meni* and the verb to which it is attached.

(12.40) (a)  
Fisbu   peru   ney=*meni*   yeb,  
river.name   small   come.across[1SGS]=INCEP[1SGS] then  
anabun   kwo   wuki   u   eru  
3SGO:hear[1|3SGS] tree Wuki fruit that  
toonu.  
be.pass.through\3SGS  
‘I was about to come across Fisbu then I heard a Wuki fruit fall.’

(b)  
na  
and

²³The older and separate form *=m yeni* is recorded by Baron (1984).

²⁴The distribution of *=meni* with respect to other modal inflections can be taken as an indicator both of the direction of grammaticalisation of the inceptive, but also of the development of other modal inflections in Momu (§16.3.2).
‘And when the sun was about to rise, ...’

(c) *Eru*  a=m
that  here=OBL
pi=oto=menu-o=b,
one.goes=one.sits[1][3SGS]=INCEP\3SGS-3SGS:NZR=COM[ADV]
tyemonebweb.
bark
‘When that one\(x\) was about to sit down here, he\(y\)
barked.’

This form most commonly codes an inceptive sense, but it has been difficult to exclude the possibility that a desiderative sense may be being expressed by the same form.\(^{25}\) In notes by Baron (1984, p44), he gives both desiderative and inceptive senses for the same construction (*-m yeni*) in Western Momu. Note in (12.40b) that the inceptive sense is the only meaningful reading with inanimate subjects.

In the examples below, differentiating inceptive from desiderative is more problematic. Both readings are possible from the context, and from the Tok Pisin translation. In particular, (c) is most likely to be desiderative.

(12.41) (a) *Orait, efeke=m yeb usyi=meni-si*
okay  song=OBL then  sing;3PLS=INCEP-3PLS
*oye=m yeb usyi-mu.*
song.name=OBL then  sing;3PLS-VOL.FUT
‘Okay, then they wanted to / began to sing a song, and they
sung an Oye.’

(b) *Yeb na-pwe-fi anta na-pwe-fi*
then  many.-come-3DU\(S\) do.like.this many.-come-3DU\(S\)
kefyi  ina-fi=meni-fi.
come.across:3DU\(S\) many.go-3DU\(S\)=INCEP-3DU\(S\)
‘Then they come, like this they come, come downriver, and they
are about to / want to go. (But, instead they sleep and turn to
stone).’

(c) *Baso peru eru suf=menu anu,*
child  small that  hold=DESID\3SGS  this

\(^{25}\) In Tok Pisin, both immediate future and desiderative senses are expressed by the one form *laik* (Verhaar, 1995, pp327–329). For instance, *mi laik go nau* ‘I want to / am about to go now.’ This polysemy has made it difficult to determine what the precise sense or senses are in Momu, and indeed, it may be that this polysemy has fed back into Momu.
y-a-on-o nepu eru e=m.
D-IMPF-see.one-3SGS:NZR animal that there=OBL

‘The child wants to / is about to hold this one, he’s looking at the animal there.’

The form may occur in sentential complements to some complement-taking predicates, but only in postposed complements. In terms of grammaticalisation towards an inflection, this is an intermediate point between a modal inflection and a separate complement-taking predicate. Preposed complements show the highest degree of syntactic integration in Momu while postposed ones can often be taken to be paratactic (§16.6).

(12.42) (a) *Bufo* wobu emse, *a-bufwar*

thoughts 3SG:COM:GEN like:that IMPF-think::one:VTR

pana=menu fe=wafkwar.

get.one\3SGS=DESID\3SGS INTENS=strong:VTR[1][3SGS]

‘Her thoughts were: she was thinking she strongly wanted to get him.’

(b) *Flerwick* anebun *yeswo mweke=m*

Flerwick 3SGO:hear[1][3SGS] pig garden=OBL

kuw=menu.

consume\3SGS=INCEP\3SGS

‘Flerwick heard a pig start/wanting to eat in his garden.’

12.2 Negation

As noted in the opening of this chapter, negation can be thought of in terms of alternatives as the ultimate alternative: the opposite. Negation is a universal feature of language, with coding being via a verb (or predicate), particle or adverb (Payne, 1985). In Momu, negation is primarily coded via a particle *momu* (§12.2.1) or a negating predicate *onfa* (§12.2.2). There are few alternatives available for coding negation in Momu (§12.2.3).

12.2.1 *momu* Negative

*Momu* is a simple negator when applied to verbal predicates. The form of the negated verb is limited to perfective (unmarked) or imperfective-marked stems. No additional modal marking can occur. *Momu* cannot be used with progressive-marked forms or non-verbal predicates.
(12.43) (a) *Ie eru netyi=momu.*
   fish that throw.[one][1|3SGS]=NEG
   ‘He did not throw the fish.’

   (b) *Bikos kwu eru, ai-kuw=momu*
   because food that IMPF-consume\3SGS=NEG
   esy=e.
   sago.jelly=EMPH
   ‘Because he did/did not eat that food, the sago jelly.’

In addition to its function as a sentential negator, *Momu* is the negative reply to a polar question (§10.3.2.1, §10.3.2.2). Clause-initially, it can indicate that one disagrees with with someone else’s assertion, or to invert the assertion of a prior utterance, as in (b). If the polarity of the clause is already negative, though, the negative does not invert the assertion of a prior clause, but rather reiterates it, as in (c).

   here=DIR Buafo=DIR=YNQ NEG
   ‘M: This way, towards the rive Buafo? A: No.’

   (b) *Yimas yeyiskon-mu — Momu! mo peteku.*
   quickly cry.out[1|3SGS]-VOL.FUT NEG yet small
   ‘It (the chick) will quickly cry out—No it won’t! It’s still small.’

   (c) *Mu koy-nin-si-mu=m onfa.*
   women see.many-3PLO:VTR-3PLS-VOL.FUT=OBL NEG.MOD
   *Momu.*
   NEG
   ‘Women cannot look at them. No (they cannot).’

*Momu* can also function as an emotional element, or exclamation. For instance, it can flag displeasure, as in (a), or surprise, as in (b). In these uses, they do not invert assertions, but rather signal something about the speaker’s position.

(12.45) (a) *Mo ay yesy na-fie~na-fie, momu!*
   yet 2SG just TRANS>one-be.lie~ITER NEG
   ‘You’re just mucking about... enough already!’

   (12.46) *Mo ay yesy na-fie~na-fie, momu!*
   yet 2SG just TRANS>one-be.lie~ITER NEG
   ‘You’re just mucking about... enough already!’
Momu also functions as a two-place predicate for “not having” (§11.10).

In notes by Baron (1984, p25) on Western Momu, the verb is nominalised (or linked according to his glossing). This appears to indicate that originally, or independently for Western Momu, negation was or is treated as a complement-taking predicate with a deverbal complement.

(12.47) excerpted from Baron (1984, p25) with glossing preserved

(12.48) Te pin-u momu.
I go-link.V verb.neg
‘I did not go’

12.2.2 onfa Modal negative

As a complement-taking predicate (§16) onfa takes a sentence-like complement with a broader range of inflectional possibilities than the negative particle momu (§12.2.1). Sentential complements to the predicate are usually marked by the oblique, functioning as a complementiser.

Onfa is used with non-verbal predicates (§11.9). Depending on the class of predicate of the sentential complement, combined they can express non-equivalence (§11.9.1), negative attribution (§11.9.2) or negative location (§11.9.3). Negative possession is expressed by the negative particle momu functioning as a two place predicate (§11.10).

Momu lacks a means of negating specific entities within a clause such as adverbs, quantifiers, or constituents (Payne, 1985). Nor are there lexical negatives to achieve this. Instead, this is usually achieved over multiple clauses, with the relevant entity expressed as a predicate, and it is the predicate that is negated.

So, for instance, a single clause translation of (roughly, as this is not possible in English either) “I will tell a non-big story” or similar, is not possible in Momu. Instead, such information must be spread over multiple clauses, as in (12.49).

(12.49) Te nu momsen-mu ... Anow=m onfa.
1sg just talk[1|3sgS]-VOL.FUT big=obl neg.mod
Okomaino, mony=e.
short story=that
'I'll tell (it) now ... (It's) not long, (It's) short, the story.'

12.2.3 Other sites of negation

Negatives are rarely expressed lexically in Momu. There are a handful of complement-taking predicate that incorporate negation into their semantics (§16.1.10). For instance, efiyeni ‘not want’ (§16.1.4.2), kwobo ‘not know / be ignorant of’ (§16.1.7), and titwer ‘forget’ (§16.1.7) all lexicalise negations of positive counterparts (and bear no resemblance to them).

The prohibitive inflection (§12.1.1.5) is used to indicate disallowed actions.

Three modal adverbs code negation. Biom ‘inability’ (§9.6.3) and bie ‘non-permission’ (§9.6.4) code negated modal values. A negated reciprocal clause can be coded by a specially marked form of akfu ‘reciprocation’. The directional and restrictive combine to form akfu=ti=s ‘unreciprocated’ (§10.2.2.3).
Chapter 13

Serial Verb Constructions

Serial verb constructions (SVCs) are a commonly identified feature of many Papuan languages (Foley, 1986; Senft, 2008), but have also been identified in many languages all over the world (Aikhenvald and Dixon, 2006; Durie, 1997). The precise definition of an SVC varies upon consideration of the finer details, but is generally characterised as two or more verbs occurring in a single clause, which together describe a ‘single event’ (Aikhenvald, 2006).

Consider a gradual process of grammaticalisation that begins with the coordination of several clauses predicated by a relatively open set of verbs. Frequently repeated combinations of clauses, perhaps involving restricted classes of verbs, gradually reduce in form over time. In a sequence of clauses where the subject is held constant, subsequent clauses with zero anaphora tend towards being just a verb, or object and verb (or verb phrase, if one prefers). In verb-final languages like Momu, this reduction produces a stack of verbs at the right edge of the clause with a minimal amount of material occurring between verbs. The extreme form of this reduction is a tight and possibly synchronically inseparable complex of verb-like morphs that comprise a single lexeme. Existing accounts of SVCs include examples of apparent loose coordination through to tight compounding, making this a somewhat diffuse topic at times.

Momu is a language with many construction types represented across the spectrum described above, but I do not refer to all of these constructions as SVCs. In particular, see §7.5.2 for an example of grammaticalised or partly grammaticalised aspectual inflections of the kind that have elsewhere been described as SVCs. See also §14 for a more general consideration of
compounding and coordination, which I consider outside of SVCs in Momu.

A common approach in the analysis of SVCs is to consider the overall valence of the construction. SVCs are often analysed as cumulatively adding participants to an event’s frame, with multiple participants taken to attain argument-like status (e.g. Aikhenvald, 2006; Durie, 1997). However, I follow others (e.g. Ameka, 2009; Hellwig, 2006), in considering SVCs in Momu to be the expression of separate case frames. For discussion of participants in SVCs see §13.3.3.

After laying out the basics to identify SVCs in Momu in §13.1, I look at specific SVC types in §13.2. Having identified many of the SVC types, I look more broadly at both features that are common to all SVCs in Momu, as well as themes that run through subsets (§13.3).

All examples of SVCs throughout this chapter are in bold. Many SVCs show final-segment deletion (§2.5.3) consistent with integration as a single phonological word. These will be marked as proclitic, with an equals sign (=). Because this can result in dense morphological detail, I will at times break these apart with a space. But to be clear, this is not an indicator of a pause or break. At other times SVCs in Momu show fewer signs of integration as a single phonological word, but are nevertheless delivered rapidly and without pause. I have no medial orthographic categories for marking this, and so these are written as separate forms, and the bolding of SVCs indicate that these are what I consider to be SVCs.

13.1 Identifying SVCs

Relevant diagnostic and classificatory criteria for SVCs in Momu include
(1) concordant or shared subject marking and TAM marking; (2) the absence of marking of coordination or subordination, and the absence of sequence marking particles or expressions; (3) lexic status; (4) the absence of participants (especially non-subject participants); and (5) the ordering of participants such that they precede verbs that do not license them.

Shared subject marking on the final verb indicates that the verbs or verb phrases are not coordinated. This criterion is shared with compound forms, and so is necessary but not sufficient. The primary indicators of coordination or subordination in Momu are clause-level uses of relational case (§14.2, §15) and nominalisation (§16.5). However, Momu is a language which includes
intonational coordination (§14.2.1) as a coordinative strategy. That is, there is no overt marking of coordination in some cases. However, combined with subject marking, these two features serve to identify many SVCs in Momu.

At the more integrated end of the spectrum, I take loss of semantic content in lexemes in a multi-verb construction as an indicator of grammaticalisation. This is not a clear cut category, rather a gradable one. The more productive and semantically opaque a verb is within one of these constructions, the more likely I treat it not as an SVC, but rather something else. For instance, the order in which the aspecual suffixes are presented in §7.5.2 is analogous to the degree to which I consider them grammaticalised. Forms like *pan* ‘do until sunrise’ (§7.5.2.6) or *ketyai* ‘incompletive’ (§7.5.2.7) could reasonably be considered an SVC that has more recently begun the path to grammaticalisation.

There is a general restriction on the number of overt participants that can be included within, or accompany an SVC. Multiple participants preceding a verb is an indicator that the verb is not in serialisation with the verbs that follow it. Restriction or absence of relational-case marking on participants is indicative of serialisation (§13.3.3). In some cases, a participant is separated from the verb that licenses it, and the verbs in serialisation form a contiguous unit (per Aikhenvald, 2006). Momu has both contiguous and non-contiguous SVCs. Where an argument is separated from the verb that licenses it by a prior verb or verbs in a contiguous collection of verbs, I take this as a strong indicator that this is in fact an SVC.

In (13.1), (13.2) and (13.3) below are some basic examples of SVCs in Momu, which demonstrate all of these defining criteria.

In (13.1a) we see a marginal type of cause-effect SVC (§13.2.3). The two verbs in serialisation are *kaani* ‘cook’ and *kiy* ‘consume’. The verbs are tightly bound together as a single phonological word. The subject is marked once, on the final verb. There is no marking to indicate that the material preceding *kisyi* is subordinate to the final verb. Compare this to the adverbial clause (§15.3) in (13.1b), where the subordinate relationship is indicated by the comitative.\(^1\) TAM marking, where present, only occurs on the final verb in a SVC. The presence of TAM marking on both verbs in

\(1\)Subordinate clauses are always overtly marked in Momu, but note that coordinate clauses are not. See §14.2.1.3 for more detail on intonational coordination of clauses. So, while the presence of subordinate marking differentiates subordination from SVCs, the absence of marking alone does not differentiate coordinated clauses from SVCs.
(13.1c) indicates that they are coordinated.

(13.1)  (a)  *Momu obi momu yesy kwo=m*
        NEG saucepan NEG just fire=OBL
        *kuani=kisyi*
        cook=consume:3PLS
        ‘No, without a saucepan, they would just roast it on the fire and eat it (i.e., eat it roasted)’

(b)  *Kamafta=ba, yeb kita.*
        appear=COM[ADV] then dry-INCH
        ‘When (the ground) appeared, it became dry.’

(c)  *Te y-a-tu-ya*
        1SG D-IMPF-give:many:3SGIO\3SGO-1SGS:NZR
        y-ai-kwue.
        D-IMPF-consume:3SGS:NZR
        ‘I was giving those to her, and she was eating them.’

In (13.2a) three verbs combine in an SVC. Again, these verbs are tightly bound. The first two verbs *pwe(n) ‘come’* and *pana(i) ‘get one’* show a degree of predictable truncation (§2.5.3). As a further indication of the tightness of the combining verbs, the argument (*fyi ‘water’) common to the second verb *pana(i) ‘get one’* and third verb *kiy ‘consume’* occurs before the first verb *pwe(n) ‘come’*. In (b) on the other hand, despite the shared subject, these are better considered coordinated clauses as reflected by the pause, the lack of truncation of *pi(n)* and to a lesser degree the position of the object argument adjacent to the verb that licenses it.

(13.2)  (a)  *Fyi pwe=pana=kiye.*
        water [one.]comes=get.one=consume:SG:IMP
        ‘Come drink a beer!’

(b)  *Te pin, abe panai.*
        1SG one.goes[1\3SGS] axe get.one[1SGS]
        ‘I went and got the axe.’

In (13.2a) above we saw the object of a later verb occurring before an earlier verb in a tight SVC. Alternatively, participants in a clause can break up a contiguous sequence of verbs creating a “looser” type of SVC in Momu. The motion serialisation (§13.2.2) shown in (13.3) places the locative NP *fekob Sumui ‘the place Sumui’* between two motion verbs. Arguably it stands as a shared oblique to both verbs, serving as an end-point for *napwe(n) ‘come’* and start-point for *natapke(n) ‘depart’.*
In this section I review some of the more common SVC types. The sections here are organised around the semantic or functional type of the construction.

A major difference between types here is the “headedness” of the construction. All types here can be organised around which verb in a pairwise comparison defines the overall construction type. Most types here are of the kind where the first verb defines the type of the construction (forming a right-headed construction). Only in cause-effect SVCs (§13.2.3) do we see the second verb defining the type. In parallel to this, right-headed SVCs tend to exhibit equal or increasing transitivity, while left-headed constructions (i.e., cause-effect SVCs) exhibit decreasing (or more rarely equal) transitivity.

13.2.1 Manner

Manner SVCs are the most frequent type of serialisation in Momu. One or more manner verbs occur before a final activity verb. The final verb is the action performed and the verb or verbs preceding it describe the manner in which it was performed. Where the manner verb is transitive it may introduce an additional participant into the SVC whose role may be later expanded upon (§13.3.3).

13.2.1.1 Posture

There are several postural verbs which can be further divided into basic and frequently used types, complex or highly domain-specific forms, and those incorporating a body part in the characterisation of the posture. Some intransitive postural verbs are shown in Table 13.1. Most of these verbs can occur as mono-verbal predicates, but more commonly occur in serialisation
with a relatively open set of final verbs.\(^3\)

<table>
<thead>
<tr>
<th>Core</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>otokata</td>
<td>‘one sits / many sit’</td>
</tr>
<tr>
<td>napwenin</td>
<td>‘one stands / many stand’</td>
</tr>
<tr>
<td>nakisen</td>
<td>‘one lies / many lie’</td>
</tr>
<tr>
<td>mwikna</td>
<td>‘be balled up (of human)’</td>
</tr>
<tr>
<td>fwafnu</td>
<td>‘be curled up (of dog)’</td>
</tr>
<tr>
<td>fukonu</td>
<td>‘be prone’</td>
</tr>
</tbody>
</table>

Table 13.1: Postural verbs

Some of the core postural verbs are demonstrated in (13.4) showing (a) standing, (b) sitting, or (c) more specific and complex postures like *fwafnu* ‘be balled up’.

(13.4) (a) *Aty nebsu pwenin*

\[\text{banana}\ \text{hold.one} [\text{one.}] \text{stands} [1|3SGS]\]
\[y-ai-wo.\]
\[D-[\text{IMP}]{\text{ANIM}}:\text{there.be-3SGS:NZR}\]
‘There he is, standing, holding a banana.’

(b) *Opwa-pin-u=ne, yeb nebsu*

\[\text{open:one:VTR-EXH}[1|3SGS]-\text{NZR}=\text{FOC} \text{ then hold.one} [3SGS]\]
\[\text{oto}=\text{ai}.\]
\[\text{one.sits}=\text{ANIM}:\text{there.be}[1|3SGS]\]
‘After removing it, he was there, sitting, holding it.’

(c) *Ezyu eru wobu afki fwafnu*

\[\text{dog that 3SG:COM:GEN beside be.curled.up} [3SGS]\]
\[y-ai-ku-wo.\]
\[D-[\text{IMP}]{\text{sleep}}:3SGS-3SGS:NZR\]
‘His dog slept curled up close to him.’

13.2.1.2 Body-part posture or emotion

Several variant postural forms involve a body part, generally not marked as possessed by a genitive pronoun. The body part usually immediately precedes the verb and cannot be marked with oblique case. For these con-

\(^3\)The set of core posture verbs show full subject cross-reference and code verbal number, while other intransitive posture verbs tend to exhibit defective subject marking. In some cases I have no attested uses of such verbs outside of serialisation. It may be that some are, in fact, no longer full verbs. Further investigation of the rarer forms is necessary.
structions, the body part is an object which is not usually involved in, or central to, subsequent sub-events in the SVC.\(^4\)

Forms vary between those that select for a specific body part and indicate a specific posture, and those that are more metaphorical. All indicate something about the internal emotional state of the subject. Example verbs or expressions are given in Table 13.2.

<table>
<thead>
<tr>
<th>Verb</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>munta</td>
<td>‘be crossed (of arms)’</td>
</tr>
<tr>
<td>ofufwar</td>
<td>‘be clenched (of fist)’</td>
</tr>
<tr>
<td>tyepoonu</td>
<td>‘be open (of eyes)’</td>
</tr>
<tr>
<td>sibtiti</td>
<td>‘be dispassionate (lit. nose is dry)’</td>
</tr>
<tr>
<td>boku skabta</td>
<td>‘be cranky (lit. liver is bad)’</td>
</tr>
</tbody>
</table>

Table 13.2: Body-part posture

(13.5) demonstrates more literal body part positions, which secondarily indicate emotional states.

(a) Yefu=ne key munta pwenin
    husband:sg:poss=foe hand fold.arms\3sgS stand[1\3sgS]
    ai yesy.
    ANIM:there.be[1\3sgS] just
    ‘As for her husband, there he was, just arms folded, standing.’

(b) Koy ufta pwenin
    eye closed\3sgS [one.]stands[1\3sgS]
    y-a-bufta-wo.
    d-impf-think-3sgs:nZR
    ‘He is standing, eyes closed, thinking.’

(c) Wok koy yesy mobo=s pwenin-ta
    3sg:re eye only base=rstr [one.]stands-stvzr\3sgS
    koy-nin, mu tyenebem
    see.many-3plo woman two
    n-a-fi-u.
    px-[impf]anim:there.be-3duS-nZR
    ‘He saw them in the corner of his eye—there were two women.’

(13.6) demonstrates more metaphorical uses.

\(^4\)The body part can be recruited as a participant by subsequent verbs in an SVC. Most commonly, this would be as an instrument (§13.3.3).
13.2.1.3 Holding or carrying

There are verbs relating to the manner in which an object is held or carried. Secondarily, these verbs indicate immediate possession. Example forms are given in Table 13.3.

<table>
<thead>
<tr>
<th>Sibti ki-ta pwenin</th>
<th>nose dry-INCH</th>
<th>one.stands</th>
</tr>
</thead>
<tbody>
<tr>
<td>y-ai-wo, mufu sisy</td>
<td>D-[IMPF]ANIM:there.be-3SGS:NZR wife:SG:POSS also</td>
<td></td>
</tr>
</tbody>
</table>

‘There is his wife too, standing, stony faced.’

(b) Nenwu tabu nu, skab-ta fei=m belly 1SG:COM:GEN already bad-INCH fight=OBL tai-mu. Key
do[1SG]-VOL.FUT hand ofefwa=oto=y-a-ya. clenched.fist=one.sits=D-[IMPF]ANIM:there.be-1SGS:NZR ‘I am upset, wanting to fight. There I am, sitting, fist clenched.’

<table>
<thead>
<tr>
<th>Table 13.3: Verbs of holding or carrying</th>
</tr>
</thead>
<tbody>
<tr>
<td>nebsi/tyebsi ‘grasp one / grasp many’</td>
</tr>
<tr>
<td>narin/tyin ‘carry one / carry many’</td>
</tr>
<tr>
<td>nameky ‘carry in mouth’</td>
</tr>
<tr>
<td>nafokki ‘carry on shoulder’</td>
</tr>
<tr>
<td>nasnawor ‘carry slung over shoulder’</td>
</tr>
</tbody>
</table>

Many of these holding or carrying verbs bear the remnants of the fused transitivising prefixes na-/tye- (§6.5.2) but are no longer synchronically separable. Some alternate for number.

(13.7) (a) Sufy= nebsu= y-ai-wo
detain= grasp.one\3SGS= D-[IMPF]ANIM:there.be-3SGS:NZR eru.
that ‘There he is holding it.’

(b) Pana yeb nari=nepru.
get.one\3SGS then carry.one=take.away.one\3SGS ‘He got it and then carried it away.’

These verbs do not alone imply transposition of a carried object, but frequently combine with a transitivised motion verb (§13.2.3.2), as in (b) above.
When not serialising with a transitivised motion verb, they can also function to introduce arguments to the SVC (§13.3.3).

### 13.2.1.4 Pairwise number

The verbalised form of the numeral *(tye)nebem* ‘two’ is *(tye)nebe(m)ta*. This verbalised form functions both to introduce an argument to an SVC but also to specify its number precisely. This method of specifying dual number for a participant is in fact more common than the use of the numeral form as a modifier.

In (13.8) the pairwise verb combines with plural verbs. This does more than specify that exactly two objects are involved. In (a), I am discussing the plural verb *kuknintai* with my language consultants, and the example calls for both sugarcane stalks to be held together before being broken. In the case of (b) both objects (here identical betel nuts being arranged on a sheet of cardboard) are to be placed together.

(13.8) (a) **Siiki nebe-ta kuknintai.**

sugarcane two-do pull.break:many:vtr[1SG]

‘I snapped off two sugarcane stalks.’

(b) **Tyenebem-ta bu-f-mu.**

two-do put.many-2SGS-VOL.FUT

‘Put them both (there).’

### 13.2.1.5 Others

There are a handful of manner verbs with both transitive and intransitive counterparts. These align with the transitivity of the verb that follows it in serialisation.

The intransitive *ikakta* ‘be done well’ and transitive *ikakar* ‘do it well’ can function as manner verbs in an SVC.

(13.9) **Te nu i-en-mu ikak-ar painyi.**

1SG already pull-3SGO:vtr[1|3SGS]:VOL.FUT do.well-.one:vtr pin.down[1SGS]

‘I will pull it, having pinned it down well.’

There is a corresponding form *oimnita* ‘be done badly’ and transitive *oimnyer* ‘do it badly’.
Anu=ne te oemni-ta
this=FOC 1SG ruined-INCH

a-bu-ta=so mo?
IMPF-put.many-STVZR=RSTR[COMP] yet
‘As for this one, I put it incorrectly perhaps?’

Verbalised forms of the demonstrative manner adverbs anu ‘like this’ and ere ‘like that’ are frequently used in manner SVCs.5

(13.11) (a) Ereta=kisyi-mu eru nu fes
do.like=that=consume:3PLS-VOL.FUT that already enough
eru.
that
‘They would eat like that and that’s enough.’

(b) Any-er pana
do.it.like=this-3SGO-VTR get.one\3SGS
on-u=ne ‘oo’.
see.one[1\3SGS]-NZR=FOC EXCLM
‘After he got it and looked at it like this, (he said)
“oh”.’

13.2.2 Motion

Motion serialisation involves intransitive motion verbs preceding other verbs. These verbs can be used to build a complex path of motion, or to anchor the event in space relative to the deictic centre, or relative to the river or elevation via the deictic centre. Because SVCs in Momu limit the number of participants per verb to at most one (§13.3.3), motion verbs are often used to introduce a location or locations to a complex event, without necessarily implying motion.

“Motion verbs” in Momu are divided into “basic motion verbs” that alternate for number of subject (§13.2.2.1), and “spatial motion verbs” coding orientation to the river, elevation and transversal motion (§13.2.2.2). In SVCs, these two types have quite different functions.

The example below demonstrates both spatial (and basic) motion serialisation, and also directional inflection. The speaker is describing the static location of a dog which has climbed up onto a jar with a frog inside. With

5The fact that transitivity matches for the pair of verbs in serialisation and the broad applicability of the demonstrative manner verbs makes them a good quick test of transitivity.
regards to the general orientation of the subject, *won* ‘go up(river)’ first gives a broad vector for the direction in which the dog is facing. The body-part-postural (§13.2.1.2) *keyu tiktau* ‘his hands hanging down’ is inflected with the directional aspect *tu* ‘come down’ which both gives finer specification to the directional component of the posture, and derives situational aspect (§7.5.2).

(13.12) *Eru esyu eru sisy, pi=won key=u*

that dog that also one.goes=go.up hand=SG:GEN

*pi=tikta-tu, kontena ning.*

one.goes=be.hang-come.down\3SGS container above

‘In that one, the dog is on top, with his paw hanging down on the container.’

Even more complex motion can be expressed via serialisation of motion compounds (§14.1.3).

SVC languages like Ewe (Ameka, 2006) or Mwotlap (François, 2006) often use intransitive motion verbs to build caused motion. In Momu, there are a set of transitivised motion verbs that can optionally (but extremely frequently) combine with a verb of collecting, carrying or holding. These transitivised motion verbs can act in non-final position within caused-motion constructions (§13.2.3.2), a sub type of cause-effect SVCs (§13.2.3). See also the grammaticalised use of motion verbs as directional inflection (§7.5.2.1).

### 13.2.2.1 Basic verbs of motion

The basic motion verbs *pin/ina* ‘one/many go’ and *pwen/napwen* ‘one/many come’ add a simple motion component to the overall event. These verbs code verbal number, and thus flag the number of the subject early in an SVC (§13.3.4).

(a) *Mo pi=kosy=m a-bu-si-ta, kwu anu.*

yet GO.FUT=road=OBL IMPF-put.many-3PLS-STVZR food this

‘They must have put them on the road, this food.’

(b) *Ereta=pwe=Aitafe=m peeni.*

do.like:that=[one.|comes=Aitape=OBL [one.|arrives][1SGS]

‘I came to Aitape like that.’

(c) *Mu nebem na-wakta-fi, na-pwe=otota-fi.*

women two many.-be.ahead-3DUS many.-come=many.sit-3DUS

‘The two women were ahead, and came and sat.’
The singular form *pin* ‘go’ has grammaticalised as an exhaustive inflection, and as a proclitic, may be grammaticalising into a future or modal marker (§7.5.2.3).

### 13.2.2.2 Riverine, transversal and elevational motion verbs

As with the basic motion verbs, the riverine, transversal and elevational motion verbs (collectively referred to as “spatial motion verbs” in contrast to the basic forms) function in serialisation to add further spatial clarity to a clause. In the context of an SVC, these spatial motion verbs tend to specify an end-point oriented location (or Fillmorean ‘Goal’ (1997)), but like basic motion verbs, can also describe a path for the whole event or for the subject of the SVC.

Perhaps the most interesting spatial motion verb serialisation is the use of the transversal motion verbs *ney/woy* ‘comes/goes across.’ These verbs express motion along a path across some kind of boundary—typically one that impedes vision—relative to a deictic centre (§3.6.2.1). Most commonly in serialisation, these verbs then express that an event and its subject occurs at the goal (inside or outside relative to the deictic centre), or that the path of motion has taken the subject into view or out of view. In other words, these verbs are used in a relative fashion to express that the subject or event is inside or outside. Often there is no motion at all.

In (13.13) *wow* ‘he goes across’ is used to indicate that the subject is inside relative to the deictic centre.

(13.13) *This utterance is in response to seeing an image of a man sleeping inside a room. As we sat looking at the image we were then outside that location. If we had been sitting inside and the speaker wanted to describe someone outside the room, the same verb *wow* ‘go across’ would apply.*

```
Yime anu oko nu pyinu, tyako=m wow
man this ground already be.dark sleep=OBL go.across\3SGS
n-ai-ku-wo.
PX-IMPF-sleep\3SGS-3SGS:NZR
```

---

6In parallel to the basic verbs of motion, spatial verbs have also grammaticalised as directional suffixes (§7.5.2.1) and have also lexicalised in many compound forms (§14.1.3).
‘This man, nighttime fell and he is sleeping inside.’

In (13.14) the speaker uses now ‘she comes across’ to indicate that the subject became visible.?

(13.14) The speaker describes a person in a video. Before being played, the screen shows a white backdrop. When the video starts playing, the video immediately jumps to a point where the person is visible. The person instantly appears on the screen in a standing position.

\[ Mu \text{ eru pyen, now} \]
woman that [one.]comes[1|3SGS] come.across\3SGS \[ pwenin. \]
[one.]stands[1|3SGS]
‘The woman comes, comes into view and stands.’

Riverine and elevational motion verbs\(^8\) behave in a similar fashion to transversal motion verbs. In serialisation they express a complex path related to the flow of a given river or relative elevation, and sometimes a goal oriented location.

(13.15) (a) Yefeke y-ai-kowe eru.
Yefeke D-IMPF-come.downriver\3SGS:NZR that
Kow Fine eru.
come.downriver\3SGS Fine come.upriver\3SGS
‘He was coming down the river Yefeke. He came downriver and went up the river Fine.’

(b) Nua skul na-peeni-t.
come.upriver school many.-arrive-1PLS
‘We came upriver and arrived at the school.’

(c) Tuw on=mmenu
come.down\3SGS see.one[1|3SGS]=DESID\3SGS
yefu=m.
husband:SG:POSS=OBL
‘She wanted to come down and see her husband.’

\(^7\)(13.14) is a common start to a description of short video clips. The task was designed to elicit reciprocal constructions, but stylistically, these descriptions would have to first anchor the protagonists in a location. To be clear, the person in this clip did not walk into frame, rather it was that they suddenly appeared on the screen of the computer when I started to play the clip.

\(^8\)There are some collapses in the system of riverine and elevational verbs. See §3.6.2.1 for more, but briefly, the riverine verbs are often used as elevationals, particularly when considering upwards motion.
In parallel to the goal oriented use of the transversal verbs, \textit{won} ‘go up’ is often used in SVCs to express “above” or “on top” without motion.

(13.16) (a) \textit{Won puenin} \textit{ai-wo}. \textit{go.up} \textit{one.} stands \text{ANIM:there.be-3SGS:NZR} ‘He stood on top.’

(b) \textit{Nepu} \textit{anu} \textit{bu=a? Esyu=fa?} \textit{Won} \textit{animal this who=Q dog=YNQ go.up n-ai-wo} \textit{anu-a.} \text{PX-[IMPF]ANIM:there.be-3SGS:NZR this[REL]-EMPH} ‘What animal is this? A dog? (The one) here, up (in the tree).’

13.2.3 Cause-effect

In cause-effect type serialisation, an event decomposes into two (or more) sub-events, where some agent-driven activity results in some kind of effect upon an undergoer. A prototypical (or perhaps, just typical (following Durie, 1997, pp331–333)) cause-effect SVC involves a transitive cause, and intransitive effect. The object of the cause verb aligns with the subject or single argument of the effect verb. This is quite a departure from other SVC types in that the subject “switches”, rather than being maintained.

In some languages, cause-effect SVCs are strictly (or strictly defined by) switch-function (e.g. François, 2006; Hajek, 2006), or “pivot SVC” (e.g. Jarkey, 2010, p118), but cause-effect SVCs can occur outside this strict formal criterion (Durie, 1997). Momu is a language with considerable variation in the form of cause-effect SVCs. Multiple combinations of valence are possible, and the alignment of arguments between \(V_1\) and \(V_2\) is variable as well.

For instance, in (13.17a) the subject of the transitive \(uw\) ‘bite’ acts upon the object, which in turn aligns with the single argument to the final intransitive \textit{nasuknu} ‘feel pain.’ While the same pattern of transitivity holds in (b), the alignment of \(V_1\) object to \(V_2\) subject does not. It is instead the subject argument of the transitive cause \(V_1\) \textit{sista} ‘worry about’ that aligns with the sole argument of the effect \(V_2\) \textit{petyin} ‘run away’.

(13.17) (a) \textit{Yeko eru, uw=y-a-nasuknu-wo} \textit{true that} \textit{bit\3SGS=\text{D-IMPF-feel.pain}\3SGS-3SGS:NZR eru. that}
‘In this one (points to a picture), it (a bug) bit him (the dog) and he is feeling pain.’

(b) Nepu=m sista=petyin.
animal=OBL worry=one.runs.away[3SG]
‘He ran away due to fear of an animal.’

It is not just alignments of arguments that can differ in cause-effect serialisation: so too do combinations of transitivity. In the above examples the combination is transitive V1 with intransitive V2. Two transitive verbs are also possible, as are two intransitive verbs.

The examples in (13.18) serialise (a) two transitive verbs and (b) two transitive verbs and one ditransitive verb. These show cause-effect SVCs of the kind where there is “ongoing control over subsequent sub-events” (Durie, 1997, p332). That is, preceding events must have occurred in order for subsequent events to be possible. Note, however, that such examples are not usually analysed as cause-effect. These may alternatively be considered sequenced actions per Aikhenvald (2006, p26). In these examples the object (which happens to be kuwu ‘food’ in both examples) is shared between all verbs in serialisation (and as the theme/patient object of the give verb in (b)).

(13.18) (a) Kuwu=m kaani=kiryai-mu.
food=OBL cook=consume:1DU-VOL.FUT
‘We two will cook and eat food.’

(b) Yery aitiko=b kuwu=m
1PL father?=COM food=OBL
ukna=te-pwe=tua=ar-rai-meta.
search=TRANS:many-come=give:many:2SG=do.to-1DU-EPI.FUT
‘We will be going, finding, and bringing food for you.’

(13.19) involves two intransitive verbs in a cause-effect SVC. So far, I am only aware of this being possible with causes relating to intransitive motion verbs. In (a) falling tuw is the cause for the branch being broken kaanu. The order of the verbs can be reversed, as in (b). In this decomposition of the event the cause is breaking, not striking, and this results in the effect of falling down. (c) is a common utterance to young children climbing trees. Again, the cause is falling, and the effect is death.
(13.19) (a) *Kwo foku kaanu... Kwo foku, tuw*  
       tree branch be.broken tree branch come.down 3SGS  
       kaanu,  
       be.broken 3SGS  
       'The tree branch is broken... A tree branch fell and broke.'

(b) *In response to a video where a stick is struck once with a hammer. The force of the blow throws half of the stick up into the air and off the table onto the ground.*

       Nuwse=b, geb *kaanu=tuw,*  
       hit=COM[ADV] then be.broken=come.down 3SGS  
       oko=m.  
       ground=OBL  
       'When he struck it, it then broke and fell to the ground.'

(c) *Wor=se-f-ma!*
       go.down=one.dies 2SGS-APPR  
       '(Careful!) You might fall and die!'

Although this is not typically put forward as a cause-effect type SVC, I would argue that a general-state-of-affairs phrase like *oko pyinu* 'be(come) nighttime' can provide a cause to an effect like sleeping. In this serialisation, V₁ is intransitive and no argument aligns between V₁ and V₂. The causal link between these two events is weak however, in that V₁ is not necessary for V₂ to occur. If this is to be included as a bona fide cause-effect SVC, then it is quite novel in not taking the undergoer as an argument to the first verb. Most likely this is a rare type, not just cross-linguistically, but also in Momu.⁹

(13.20) (a) *Oko pyinu koy ufta ai*  
       ground be.dark eye be.closed ANIM:there.be[1]3SGS or  
       o?  
       'It’s nighttime and he is there, eyes closed or (not)?'  

⁹Note that (13.20a) is a three part SVC, combining *oko pyinu* ‘become dark’ with a more common manner serialisation *koy ufta ai* ‘be there with eyes shut’. Note also that in (b), marking of the volitional future indicates the last verb in the SVC.

Relevant in the context of extensions of ‘become dark’, the verb for ‘be(come) dawn’ *pan* has grammaticalised as an aspectual inflection -*pan* ‘to perform an action until the sun rises,’ e.g., *kirpan* ‘sleep until dawn.’ A number of suffixing aspectual inflections have grammaticalised from V₂ verbs in serialisation (§7.5.2), but it is possible that this ordering of events, makes it less likely that a V₁ would grammaticalise in this way.
In addition to external agents, the subject may be the agent of change acting upon himself/herself in some cause-effect type SVCs. In (13.21),\textsuperscript{10} the subject/agent of \textit{kuw} ‘consume’ produces an effect upon himself/herself as the sole argument to the V\textsubscript{2} \textit{mereketa} ‘be(come) weak (i.e., drunk).’

(13.21) (a) \textit{Pi=fyi=m kuw nu mereke-ta.}
\begin{itemize}
\item one.goes=water=OBL consume\3SGS already weak-INCH
\end{itemize}
‘He drank himself drunk.’

(b) \textit{Nu Fyi=m kuw mereke-ta fei=m}
\begin{itemize}
\item already water=OBL consume\3SGS weak-INCH fight=OBL
\end{itemize}
‘He drank beer (until) drunk, and will fight now.’

13.2.3.1 Preparative

In the preparative construction a placement verb follows a verb or verbs describing an activity that is performed as part of getting a physical object ready in some way. Japanese has a similar grammaticalisation of the verb \textit{oku} ‘to put down/keep’ (Ono, 1992), albeit one that is more broadly applicable.\textsuperscript{11}

In Momu, the usage is strictly preparative and appears to be limited to the preparation of physical objects. Here, \textit{oton/bun} ‘put one/many’ expresses that in performing the action, the object is prepared for some kind of intentional use. Most typically, this would apply to food preparation—for instance collecting or chopping up food—but it can apply to other activities where there is some physical product.\textsuperscript{12}

\textsuperscript{10}(13.21b) directly follows (13.21a) in the source as an expansion of the first utterance.

\textsuperscript{11}The Japanese preparative construction is not limited to physical objects (i.e., things that can be \textit{put down}) but can also be combined with more abstract targets such as psychological ones: e.g., \textit{sono mondai-wo kangae-te-oi-ta} ‘I have thought about the problem’ (Ono, 1992, p374). The construction is limited to perfective aspect, while in Momu, a broader range of modal and aspectual marking is possible.

\textsuperscript{12}The Momu preparative is not used with an activity like cutting grass, where the goal is clearing out the space, rather than using the cut grass in some way. The end result must be a manipulable object or objects.
In (13.22a) and (b) the preparation of the object is transportation, while in (c) and (d) the object is modified in some way. In (a) the preparation is collecting the objects, while in (b) it is a more complex chain of events. (c) and (d) are also more complex sequences, but this time the preparative is not the final verb.

(13.22) (a) Anu kuwu tya nibu,
       this food many 3PL:COM:GEN
   popra=bu-ta-fi.
   get.many=put.many-STVZR-3DU:S
‘Here is their food, gathered up.’

(b) Tepwa=na-pwe=oton.
   cut=TRANS>one-come=put.one[1|3SGS]
‘He cut off (some vine) and brought it.’

(c) Nu just
   tita=oto=wu-ta-m=fa?
   tie.up:one:VTR=put.one=INAN:there.be-STVZR-2PLS=YNQ
‘Is it there all prepared (bundled up)?’

(d) ¿Mwepe o, nepu o? eru
taro or meat or that
   fesi=absu=oto=wu-mu
   again=wash.one\3SGS=put.one=INAN:there.be[3SGS]-VOL.FUT
   yeb.
then
‘(would it be taro or meat or something else?) (regardless) it will be there, boiled/washed (and ready).’

(13.22c) and (d) are preparative SVCs within caused-location type SVCs (§13.2.3.3) as signalled by the final inanimate existential verb.

13.2.3.2 Caused motion

The basic and spatial verbs of motion (§13.2.2) all have transitivised counterparts, formed by adding the transitivising prefixes na-/tye- (§6.5.2). In caused motion SVCs, the transitivised motion verb is the non-final verb in serialisation. In relating these to cause-effect type SVCs, I am again depending on Durie’s notion of “on-going control over subsequent sub-events” (Durie, 1997, p332) allowing a consideration of cause and effect in this sequencing. The assumption is that in order to bring about a change in an
object, it must be brought into the scene. Or the reverse can apply as well, as we shall see: we can only bring some things having first altered them in some way.

Being a kind of “intermediary” process in a complex event, the status of a caused motion SVC is often unclear, as the particular V₂ it occurs with may instead define the SVC type.

(13.23) shows some basic examples of caused motion. In (a) the V₂ is the preparative *oton/bun* ‘put one/many.’ In (b) and (c) the V₂ does not head a specific SVC type, but rather together these express sequenced events.

(13.23) (a) *Mu eru, nebesy,* 
   woman that sweet.potato
   *ti-now*  
   trans>many-come.across\3SGS  put.many[1SGS]\3SGS
   ‘The woman brings and puts sweet potatoes, and...’
   *(cut-and-break-part1)*

   (b) *Tye-pwe=kaani-si.*
   trans>many-come=cook-3PLS
   ‘They brought and cooked them.’
   *(yarin-tumbuna)*

   (c) *Fyi=m tebri=nebsi, mumu.*
   water=obl take.many=wash.many[1SGS] aupa
   ‘I take and wash them at the river, the aupa.’
   *(monica-garden)*

Transitive motion verbs often occur with a manner of carrying or holding verb as V₁ (§13.2.1.3). In fact, transitive motion verbs rarely occur without a manner of carrying or holding verb.¹³ These are often contiguous, as in (13.24a) *tyi=ti-now* ‘carry many across.’ The manner verb is V₁ while the motion verb is V₂. Transitive motion verbs can occur outside of serialisation, especially when the manner is already clear from broader context, or from a prior clause, as demonstrated by the prior adverbial clause in (b).

(13.24) (a) *Mu eru, kaf nebeta*
   woman that cup two-do
   *tyi=ti-now.*
   carry.many=trans>many-come.across\3SGS
   ‘The woman carries out two cups.’
   *(cut-and-break-part1)*

   (b) *Te Mabki nari=ba, mesi=fekob*
   1SG Mabki carry.one=com[ADV] again=place
   *na-pwe-t.*
   trans>one-come-1PLS

¹³Manner is not specified in any of the examples in (13.23), but this is rare.
'As I carry Mabki, we bring her back to the village.'

Note that nepri ‘take (away) one’ has also grammaticalised as (suffixed) extended aspect marking (§7.5.2.2).

Mafoka—DIR road that clear-3PLS clear-EXT-3PLS
‘They cleared the road to Mafoka. They cleared it all the way.’

13.2.3.3 Caused location

Caused location constructions in Momu express the location of an inanimate object, as brought about by an agentive force. The construction involves one or more verbs describing an activity where an agent makes some change in the location, posture or position of an inanimate object, and combines with a final inanimate existential verb. These constructions are odd in that the agent must be coded as the grammatical subject, but they are “about” locating the object of the clause.14

Table 13.4 gives a small sample of the kinds of verbs that are used to express a caused position or posture.

<table>
<thead>
<tr>
<th>oton/bun</th>
<th>put one/many (§13.2.3.1)</th>
<th>tyiti/tikta</th>
<th>hang one/many</th>
</tr>
</thead>
<tbody>
<tr>
<td>otonoy/bunoy</td>
<td>lean one/many</td>
<td>ekeni</td>
<td>hang</td>
</tr>
<tr>
<td>otonor/bunor</td>
<td>put one/many inside</td>
<td>titan/titnin</td>
<td>tie one/many</td>
</tr>
<tr>
<td>nawoky, nanokwer</td>
<td>put inside</td>
<td>etyeni</td>
<td>tie</td>
</tr>
<tr>
<td>napwenin/tyepwenin</td>
<td>stand one/many</td>
<td>ien/inin</td>
<td>pull one/many</td>
</tr>
<tr>
<td>nafowen</td>
<td>cover one</td>
<td>babar</td>
<td>heap/pile together</td>
</tr>
</tbody>
</table>

Table 13.4: Example caused location verbs

Some of these verbs are transitive or transitivised counterparts to intransitive postural verbs, while others are activity verbs without intransitive counterparts. The range of possible verbs that can occur in this construction is quite large, and includes many verbs that code verbal number (§6.6).

There are two existential verbs which each select for an inanimate or animate subject, or in this context, are better thought of as paralleling the absolutive pattern found in verbal number (Durie, 1986). In a caused-location

14 An interesting side effect of the necessary coding of an agent in these constructions is that, where known, the human source of an unnatural position for an object should be coded in these constructions.
construction, the subject shared between the activity and existential verbs is marked on the existential verb, but the selectional preference as reflected in stem choice between existential verbs aligns with the object of the activity verb. This departure from alignment of selectional requirements and cross-reference in the existential verb most is striking when first or second person subject is the agent of caused position. In ordinary uses of the existential verb, a first or second person subject cannot be marked for an inanimate existential verb.

In (13.26a), the speaker describes the location of an umbrella, in response to a query for its location. Roughly the same thing is coded by the basic locative construction in (b), while (c) gives a clause describing the activity that brings about the location or posture described in (a).

(13.26) (a) Syoko kosy=m otonoy
door path=OBL lean.one.against
y-o-ya.
D-[IMPf]INAN:there.be-1SGS:NZR
‘(The umbrella) is there leant against the doorway (I leant it).’

(b) Ambrela syoko kosy=m y-o-wo.
umbrella door path=OBL D-[IMPf]INAN:there.be-3SGS:NZR
‘The umbrella is in/at the doorway.’

(c) Te ambrela syoko kosy=m otonoy.
1SG umbrella door path=OBL lean one.against[1|3SGS]
‘I lent the umbrella against the doorway.’

The awkward, parenthetical translation in (13.26a) is an attempt to capture that this construction is used to describe the location of the object via the activity that brought it about, while it necessarily codes the agent as the subject. There is no passive construction in Momu, but the closest approximation is the use of an impersonal third plural subject with no overt subject NP, as demonstrated below.

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15 Although rare in Momu, the departure between the selectional requirements for intransitive verbs and subject marking of intransitive verbs that code verbal number is seen in other cause-effect-type SVCs. For instance, combining niy/taty ‘shoot one/many’ with sen/ten ‘one/many die’ to produce ‘shot dead’, the subject marking on sen/ten aligns with the subject of niy/taty, but the chosen verb aligns with the number of the object of niy/taty.

16 An alternative and more literal translation of (13.26) might be ‘I leaned the umbrella against the doorway—it is there’, but I believe this doesn’t capture the intention of the utterance, which is primarily about the location of the grammatical object.
There is some variation between speakers in the locus of subject marking, which makes the construction more or less SVC-like. (13.27) shows variation in the marking of impersonal subjects. In (a) subject marking occurs on the final verb alone in a prototypical SVC fashion, while (b) is better considered a coordinated structure given that subject marking occurs on both verbs. (c) is quite different to all SVCs seen so far in this chapter: subject marking is not hosted by the final verb, again making this more like coordinated clauses.

(13.27) (a) $Boks=m\ tita=y-o-sa.$
   box=OBL tie:one:VTR=D-[IMP]+INAN:there.be-3PLS:NZR
   ‘It (the string) is tied to the box (they did it).’
   topological-relations

(b) $Siiki\ tebol\ niny\ bu-si\ y-o-sa.$
   sugarcane table above put.many-3PLS
   D-[IMP]+INAN:there.be-3PLS:NZR
   ‘The sugarcane is on the table, put there by them.’
   cut-and-break-part2:shammer

(c) $Okei\ te\ nu\ yeb\ on\ finyina\ anow.$
   okay 1SG already then see.one[1|3SGS] mirror big
   tyiti-si $y-o-wo.$
   one.be.hang-3PLS D-[IMP]+INAN:there.be-3SGS:NZR
   ‘Okay, I then see there is a big mirror that is hung up.’
   steven-hotel

13.2.4 Agent partitioning

The accompanitive (§13.2.4.1) and assistive constructions (§13.2.4.2) divide the agents in a joint task into primary (accompanied/assisted) and secondary (accompanier/assister) agents in the activity. These constructions allow the speaker to differentiate the referents of a syntactic subject over a clause or multiple clauses, from other referents who are co-agents in some or all events.

13.2.4.1 Accompanitive

$Naakni/tyekni$ ‘accompanied by one/many’ combines with a following activity verb or verbs to bring in one or more accompanying human participants to partake in the overall event.\(^{17}\) This is a common type of SVC, for instance, occurring in Paamese (Crowley, 1987), Cantonese (Matthews, 2006),

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\(^{17}\)There is some variability amongst speakers as to whether the combined referents of the subject and object of the accompanitive can be cross-referenced on the final verb in the SVC. Most commonly they are kept separate.
Mwotlap (François, 2006) and the nearby Imonda (Seiler, 1985) amongst many others. See §C.5 for further discussion of the accompanitive as an areal feature. See §6.4.3.4 for more details on the irregular paradigm for the verb.

Some basic examples of accompanitive SVCs are given in (13.28), with the accompanitive underlined. Note in (13.28d) that events described by verbs or clauses prior to accompanitive are not partaken in by the accompaniers.

(13.28) (a) Key tyenebem **naakni=ki**.

```
   arm  two  be.accompany.by.one=sleep[1SG]
```

'I travelled with him for two days.'

(b) **Anu=ne te nu yesy**

```
   this=FOC 1SG already only
   tyek-ma=ai-mu.
   be.accompany.by.many-1[2PLO:VTR=ANIM:there.be][1|3SG]-VOL.FUT
```

'From now on, I will only be with both of you.'

(c) **Na a-naakni=**

```
   and 1SG-be.accompany.by.one=
   kisyi-mu=m onfa.
   consume:3PLS-VOL.FUT=OBL[COMP] NEG.MOD
```

'And they would not be able to eat with me.'

(d) **Mu eru nebe-ta pun-si, yime eru. Mu**

```
   woman that two-do get.many-3PLS man that woman
   nebem.  Pun-si-u=ne
two  get.many-3PLS-NZR=FOC
   tyekni=y-a-kisya.
   be.accompany.by.many=IMPF-consume:3PLS:NZR
```

'They got the two women, those men. Two women. They got them and they drank together with them.'

In Momu, the verbs *naakni/*tyekni are rarely used as stand alone predicates. They more commonly appear in their specialised function within an SVC. As stand-alone verbs (or as the final verb in serialisation), they mean 'collect / gather together (of people)'.

(13.29) (a) **Mu Yofo tyeknu.**

```
   woman  Yofo collect.many\3SGS
```

'The woman Yofo gathered them (her sisters).'

(b) **Wiki yefu, Wiki wob, Yasu, Karol.**

```
   Wiki husband:SG:POSS  Wiki 3SG:COM Yasu Karol
```

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Ere-ta-tyeknu-wu=ne,
like.that-do=collect.many\3SGS-NZR=FOC already
nu
one.goes[1\3SGS]
‘Wiki’s husband, Wiki herself, Yasu and Karol. Having gathered
them like that, I went.’

(c) ... fyi=m y-a-kisya mu nehem
water=OBL D-IMPF-consume:3PLS:NZR women two
anu tyekne-fi.
this collect.many-3DU:S
‘...they (the men) are drinking and they two (men) rounded up
these two women.’

13.2.4.2 Assistive

The assistive adds a participant (assistee) who is assisted in performing the
activity further specified in the SVC.

In (13.30) the assistive combines with various activity verbs. The person
and number of the assistee are cross-referenced in the form of the verb.

(13.30) (a) Ek-ye=siksikta eru.
help-3SGO:VTR=bundle.up\3SGS that
‘He helped him bundle it up.’

(b) yery 1PL
ek-wa=tyi=tyebri-rai-mu.
help-1\2SGO:VTR=carry.many=take.many-1DU:S-VOL.FUT
‘We two will help you take them.’

Mandarin Chinese uses a ‘help’ verb to express a benefactive sense in serial-
isation (Matthews, 2006), as in the example below:

(13.31) ngo⁵ bong¹ lei⁵ daa² din⁶-waa²
I help you make phone-call
‘I’ll make a phone call for you.’

This construction adds a non-subject assistee that partakes in the activity.
In the construction above, the assister performs the activity instead of the
assistee, while in Momu it is a matter of interpretation as to whether the
assistee is included in the activity or not.
Unlike the accompanitive, the verb *ekyen* ‘help him/her’ frequently occurs in a mono-verbal predication as in (13.32a). However, like the accompanitive, it may occur in final position in an SVC, without being agent partitioning, as in *napwe=ekninsi* ‘they came and helped’ in (b).

(13.32) (a) Yery *ek-wan-rai-meta.*
1PL help-1[2sgO]:VTR-1DU$E-EP1:FUT
‘We two might help you.’

(b) *Mumuru=ne, Savamui=ne*
Mumuru=FOC Savamui=FOC
na-pwe=ek-nin-si ere nepu ku
many.-come=help-3PLO:VTR-3PLS like.that meat dry
ib na-pwe-ta-si Mori=m
together TRANS->many-come-STVZR-3PLS Mori=OBL
ek-nin-si y-a-ta-sa.
help-3PLO:VTR-3PLS D-IMPF-do-3PLS:NZR
‘Mumuru village, and Savamui village, many came and helped, (and) they brought dried meat and were helping Mori village repeatedly.’

13.2.5 Benefactive

The benefactive construction is the use of a ‘give’ verb in SVC-final position to introduce a beneficiary into the overall event. The beneficiary may be coded by an overt NP introduced immediately before the give verb, as in *mu* ‘woman’ in (13.33a), or may be elided. It cannot occur before the other verbs that it forms an SVC with, and in this way appears to be a “looser” SVC than some of the other types discussed in this chapter. To my knowledge, the beneficial act must result in a concrete object that is transferred to the beneficiary directly. It is not clear at this stage that this construction can apply to indirect or abstract beneficial actions.

(13.33) (a) *Kwan=te-pwe=mu*
snap.many.off=TRANS->many-come=women
tino-sen,
... give.many:3PLIO\3SGS-COMPL
‘Once he collected (pitpit) for her, ...’

(b) *Anye=netyi-pin no y-a-ar-o ere.*
do.it.like.this:VTR=throw-EXH[1]\3SGS\ give.one:3SGIO\3SGS
D-IMPF-do.to-3SGS:NZR like.that
'He he was throwing it to her like this.' (the man secretly feeds food to his sister, who is hidden)

(c) **Yime wob nibe no-wo**

man 3SG:COM penis.gourd give:one:3SGIO-3SGS:NZR

eru, eru wob

that[REL] that 3SG:COM

**nari=ne-pi=no-mu**

carry:one=TRANS>one-one.goes=give:one:3SGIO\3SGS-VOL.FUT

eru, mufu wo=u nepu.

that[REL] wife:SG:POSS 3SG=SG:GEN meat

‘The man that gave him a penis gourd, he will himself carry the meat and give it to his wife.’

For non-transference of the theme object, the verb as ‘show/demonstrate to’ is used in the same position. The verb introduces a beneficiary, cross-referenced in its form. Note that while ‘give’ selects for the number of the theme, ‘show’ does not. At the present stage of analysis, I have little data on this verb (see §6.4.3.2 for paradigmatic details for this irregular form).

(13.34) (a) **Pana nis eru=m, ni**

get:one\3SGS 3PLO:show[1|3SGS] that[REL]=OBL 3PL

eru on-fi-u=ne pana-fi fesis,

that see:one-3DUS-NZR=FOC get:one-3DUS again

no-fi fesis.

give:one:3SGIO-3DUS again

‘What he brought out for them, they first looked at, took it and gave it back.’

(b) **Na-pwe=was-e!**

TRANS>one-come=1|2SGO:show-SG:IMP

‘Bring it out for us!’

**13.2.6 Coordination of objects**

In §14.2.2 we see that comitative marking is used for coordination of NPs, but is limited to subjects. Coordinated object NPs are formed using the verb **bar**. Use of this verb sits somewhere between a grammaticalised coordinator and a loose SVC. **Bar** cannot be used as a stand-alone verb, but may be related to **babar** ‘gather’, which can.

(13.35) shows **bar** in use, and some of the variability in its form. In (a), the coordinated objects are packed close together. Although not forming a single phonological word, the verbs have stem-final consonant deletion
consistent with procliticisation (§2.5.3). Subject marking occurs only on the final verb in serialisation. In (b), the verb phrases are less tightly packed together. I take (c) to be a coordinated use of bar. Note that outside of serialisation, bar can be subject-marked (which I take as evidence that this is a verb), and can be separated intonationally.

(13.35) (a) *Nuku ba= naina ba=*

vine with knife with

tibsi=ti-nowu=ne,

hold.many=TRANS>many-come.across:3SGS:NZR=FOC

‘He brought a rope and a knife.’

(b) *Maw anow ai-tuw, oko monwu bar*

rain big IMPF-come.down\3SGS ground thunder with

oko ketwu bar

ground lightning with

‘A huge rain was falling, with thunder and lightning.’

(c) *Tuk bar-si, fe bar-si,*

bladder with-3PLS faeces with-3PLS

erey-er-si

do.like.that-3SGO:vtr-3PLS

tanim-ar-feno-si-u=b,

turn-vtr-incmp-3PLS-NZR=COM[ADV]

‘All the faeces and urine, they left it all mixed up (with sago) for him,’

Although provided as an afterthought, (13.36) is an uncoordinated example which adds to the referent set of the object of the clause. This is the only example I have in my corpus where the object of bar is human, and it is the only example where a single bar is used.

(13.36) *Fyi=m kiy, pwe=ay=m*

water=OBL consume[1SGS] [one.]comes=2SG=OBL

wa-pupw-war baso bar.

2SGO-beat-2SGO:vtr[1][3SGS] child with

‘I drank water, and came and beat you, and the child.’

13.3 Structural features of Momu SVCs

In this section I take up some common themes that emerge across multiple SVCs.
13.3.1 High- and low-transitive verbs

An important distinction in SVCs in Momu is between what I label “high” and “low” transitive verbs (§8.1.4). Transitive verbs in Momu divide into those that include object cross-reference in their form (“high”), via verb-forming suffixes (§6.3.3.1), and all other transitive verbs (“low”). Alternatively, this division can be characterised semantically as a division between those transitive verbs that typically select for human referent objects (“high”), and those that do not (“low”).

Examples of high-transitive verbs that we have seen above include those that form agent-partitioning (§13.2.4) or benefactive constructions (§13.2.5). High-transitive verbs have the specific function in Momu SVCs of adding a human participant in a specific role to the overall event. High-transitive verbs are not common in SVCs in Momu. Generally speaking, if they occur in a multi-verb construction, it is mostly likely that they will be complement-taking predicates and that other verbs will be in a clearly subordinate relationship to them.

Low-transitive verbs are far more common in SVCs in Momu. Low-transitive verbs typically introduce non-human referents or share them with the overall event. These are very commonly verb pairs that alternate to select for the number of the object, but also include verbs that neither alternate for number nor are formed by object cross-referencing suffixes. Examples of low-transitive verbs in SVCs in Momu include all transitive manner verbs including manners of holding or carrying (§13.2.1.3) amongst others (§13.2.1.5), and transitive “cause” verbs in cause-effect SVCs (§13.2.3).

The form and position of participant NPs combines with these transitivity distinctions to inform non-subject participant sharing discussed in the next section, but regardless it should be noted that objects of high- and low-transitive verbs are not shared. The form and position of participant NPs is highly relevant for low-transitive verbs (§13.3.3), but irrelevant for combinations of high- and low-transitive verbs as they are not shared. This means that objects to these verb types can be topically elided, but still be understood to not be shared.
13.3.2 Object prefixing

A key difference between high- and low-transitive verbs is in the form of object cross-reference. Object cross reference is a part of a set of verb-forming suffixes used to build high-transitive verbs (§6.3.3.1). For low-transitive verbs that allow human objects, first and second person objects are instead marked by a set of prefixes (§6.2.2.2). Recall that for subjects, marking (via suffixation) in Momu SVCs is usually restricted to the final verb. For object prefixing on low-transitive verbs, the prefixes are added to all verbs that share that object.

(13.37) Nukubu eru a-pupwer=a-nepri-si anu.
      police that 1sGO-beat 1sGO-take.1pLS this
       ‘The police beat/dragged me away here.’

In some cases I have encountered the object prefix occurring on both verbs.18 In (13.38a), multiple speakers were adamant that prefixing should only occur on the final verb (in parallel to how subjects are usually marked once on the final verb in Momu SVCs). In the textual example in (13.38b), the looser SVC has the object marked once on the first verb.

(13.38) (a) Te=m pana=wa-nepri-si.
       1sg=obl get.1pLS=1|2sgO-take.1pLS
       ‘They took me away.’

(b) Nukubu yeb wa-pana-si nepri-si fiky
       police then 1|2sgO-get.1pLS take.1pLS house
       e=m wa-i-wa-si fiky skabu.
       there=obl 1|2sgO-pull-1|2sgO:vtr-3pLS house bad
       ‘The police then took me away to the house... dragged me to jail.’

Further work is needed to clarify the situation, but it appears that the marking of local objects is quite variable in Momu SVCs.

13.3.3 Non-subject participants

The realisation of non-subject participants in SVCs is more constrained than in basic clauses (§8.2.2, §8.2.3). After an initial shared subject, the total

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18Natural cases of first or second person objects marked on low-transitive verbs in SVCs are extremely scarce in the materials that I have collected. Further work is needed to confirm the patterns described here.
number of arguments that can accompany each verb within an SVC is one at most. The limitation of either one object or oblique per verb means that intransitive verbs may introduce an oblique, and that a transitive verb may introduce either, but not both at the same time. In contrast to basic clauses, this necessitates different strategies to bring them “on stage” in an SVC.

The rapid-fire delivery of SVCs tends to pack most detail into combinations that either form a single phonological word, or something close to this. Participant NPs are often topically active or contextually salient and hence omitted. Shared participants, if overtly expressed by an NP, are never repeated in Momu SVCs.

In the example below are two coordinated clauses (each marked with the volitional future). The first clause establishes two of three participants in the second clause containing the benefactive SVC tepwe=tu ‘bring them for her’. Establishing referents in the clauses before an SVC is quite common in Momu.

(13.39) Mu kefe eru ere kuwu=m a-kaani-si-mu
women some and.so food=OBL IMPF-cook-3PLS-VOL.FUT

te-pwe=tu
TRANS>many-come=give.many:3SGIO\3SGS

ai-ar-si-mu.
IMPF-do.to-3PLS-VOL.FUT

‘And so, some women would be cooking food and repeatedly bringing it for her.’

When an NP argument occurs in an SVC, relational case is restricted to the oblique marker =m. In basic clauses the oblique marker =m (marking objects and obliques, §8.1.2) alternates with the comitative marker =b which indicates (amongst other things) an instrumental oblique (§4.8.3.2), and the directional marker =ti which indicates a locative oblique (§4.8.4). Participants tend to be brought on stage earlier, as in the example above, and their role in the overall event is inferred from context. Note that the oblique case is frequently omitted when the referent is topical (§4.8.2).

In (13.40) mwekem ‘garden’ is the goal of the motion verb pin ‘one goes’ in the SVC pi=tety ‘go clear’, and the object of the second verb tety ‘clear’. The participant is understood to be an instrument in the activity which is introduced by the prior clause.

There are many possible strategies for introducing participants, including left dislocation, subordinate and coordinate clauses, parentheticals, or simply separate clauses.
Te nene panai. Nu mweke=m

1SG knife get.one[1SG] already garden=OBL

pi=tet-mu.
one.goes=cut[1][3SGS]-VOL.FUT
‘I get a knife. I will go clear the garden’

The limitation of a single non-subject participant for each verb not only leads to prior establishment of participants, it also gives rise to SVC types which introduce participants. Verbs of obtaining such as panai ‘get one’, pun ‘get many’ and poprai ‘get many’, verbs of holding or carrying (§13.2.1.3) or even transitive motion verbs (§13.2.3.2) can be used as a kind of support verb to introduce participants within SVCs. The semantics of these verbs are often bleached in such cases, as introducing the participant appears to be their primary function.

For instance, the verb pair noi/tui ‘give one/many’ cross-references the recipient-object and alternates for the number of the theme-object. In order to express a first or second person theme-object, a supporting ‘get’ verb is used to introduce that referent:

(13.41) wa-pana=noi-mu

1|2SGO-get.one=give.one:3SGIO[1SGS]-VOL.FUT

ma-pun=tui-mu

1|2PLO-get.many=give.many:3SGIO[1SGS]-VOL.FUT
‘I will give you (sg.) to him / I will give you (pl.) to him’

The verb as ‘show to’ cross-references a recipient-object like ‘give’, but as does not alternate for the number of theme-oblique. I have tentatively analysed this verb as accompanying another verb in serialisation to introduce a beneficiary (§13.2.5).

(13.42) Pana nis eru=m, ni eru

get.one\3SGS 3PLO:show[1|3SGS] that[REL]=OBL 3PL that

on-fi-u=ne pana-fi fesis,
see.one-3DU=NZT=FOC get.one-3DU again

no-fi fesis.
give.one:3SGIO-3DU again
‘What brought out for them, they first looked at, took it and gave it back again.’

An overt NP argument usually occurs directly before the verb it applies to, but some SVCs in Momu have a contiguous realisation such that another verb
separates an object or oblique from the verb that licenses it. In (13.43a), syi eru ‘those birds’ is not an argument of naakni ‘be accompanied by’, but of the second verb kiy ‘consume’. In (b) kwu eru ‘that food’ is the object of pun ‘get them’.

(13.43) (a) Beku beku
    things
tyi=ti-now-u=ne,
carry.many=TRANS>many-come.across\3SGS-NZR=FOC
bun-u=ne eru si eru
put.many-NZR=FOC that bird that
naakni=kifyi-u=ne be.accompanied.by.one=consume:3DU-S-NZR=FOC
‘Having brought the things outside, and having prepared them, and having together eaten the birds, ...’
yarin-tombsuna

(b) Kwu eru ina=pun-fi.
    food that many.go=get.many-3DUS
‘They went and got the food.’

In both cases above, it is not just pragmatics that identify the role of the participant. In the case of (13.43a) “high” and “low” transitive verbs combine, making it clear that the non-human participant applies to the “low” transitive kiy ‘consume’. In (13.43b) the combination of the intransitive verb, and the unsuitability of ‘food’ as a locative oblique make it clear that it applies to pun ‘get them’.

Locative obliques appear to be the only participant type in Momu SVCs that can be placed between serialised verbs which share the same argument. In (13.44) the locative oblique between serialised verbs is shared with all verbs.

(13.44) (a) Nua skul na-peeni-t.
    come.upriver school many.-arrive-1PLS
‘We came upriver and arrived at the school.’
julie-teresa

(b) Pi=fiky siebo=m ai.
    one.goes=house white=OBL ANIM:be.at[1|3SGS]
‘He went and stayed at the jail (lit. white house).’
julie-teresa

13.3.4 Verbal number

Separately, SVCs and verbal number (§6.6) are interesting phenomena, but while there is a considerable literature on SVCs, verbal number is less well
known. Unsurprisingly then, I have failed to find much literature on the intersection of the two.

The overlap between verbal number and SVCs in !Xun is particularly striking (König, 2009, 2010). 18 verbal number pairs head almost all major SVC types. Another language with overlap between the two is Goemai (Hellwig, 2006). This case is less striking, however, as the total number of verbs coding verbal number is higher at about 10% of the verbal lexicon (Hellwig, 2011, p173). Momu is similar to Goemai in having overlap between the two, owing also to a high count of verbal number pairs in the lexicon (§6.6). Relative to the proportion of verbs coding verbal number in the Momu verbal lexicon, verbal number is over-represented in Momu SVCs. Most SVC types (§13.2) include at least one verb that codes verbal number (posture §13.2.1.1, manner §13.2.1.3, motion §13.2.2.1, preparation §13.2.3.1, caused motion §13.2.3.2, caused location §13.2.3.3, accompanying §13.2.4.1, benefaction §13.2.5).

Perhaps the most interesting aspect of the interaction between verbal number and SVCs in Momu is that verbal number behaves like a secondary system of agreement. We saw in the previous section that a selection of verbs are used to introduce participants into an SVC. The majority, and certainly the most frequently occurring of these code verbal number. “Support” verbs, especially *pana/pun* ‘get one/many’ frequently stand in place of an argument in a function that approaches a pronominal.20 Compare the SVC in (13.45a) with the single verb clause in (b). The transitive motion verb *napwe(n)* ‘bring it’ in (a) performs a similar function to the demonstrative pronoun in (b), except that it additionally indexes the number, and codes the theme of the macro event as an object, rather than the oblique form in (b).

(13.45) (a)  **Na-pwe=was-e!**  
TRANS>one-come=1|2SGO:show-SG:IMP  
‘Bring it out for me!’

(b)  **Eru=m was-e!**  
that=OBL 1|2SGO:show-SG:IMP  
‘Show me that!’

On the other hand, (13.46) demonstrates that verbal number choice is not bound to an overtly coded referent. In this example, *otonok* selects for the
single spoon but the preparative verb *bun* selects for the spoon and the referent of the ignorative (a cloth) that it is placed under.

(13.46) *Spun boku tin otonok bu-si*  
spoon what inside put.one:down put.many-3PLS  
*wu-tu.*  
inAN:there.be-STVZR\_3SGS  
‘The spoon is placed under what? (they being prepared as such)’

Verbal number amongst intransitive verbs in SVCs is limited to basic and manner of motion verbs, and core posture verbs. These have a secondary effect of flagging subject number early within complex SVCs.

### 13.3.4.1 Transformation of number

In most cases of shared objects in an SVC, the number of a participant is not updated within the macro event. In those quite specific cases where number is updated, verbal number reflects that updated number.\(^\text{21}\)

In a preparative SVC (§13.2.3.1) the preparative verb encodes the number of the prepared object. If the preparative action involves transformation of number, then individual verbs may share the same argument, but select for a different number value. This can be taken as an indication that verbal number in Momu is not an agreement phenomenon, as there is no overarching morphosyntactic constraint that the verbs sharing an argument must agree in number.\(^\text{22}\)

(13.47) demonstrates a complex event involving transformation in number.\(^\text{23}\) A single sweet potato is chopped up, and the placement verb indicates that that at completion it is plural. No (pro)nominal is used to reflect this change in number.

\(^{21}\)Compare this updating of number to that of subject marking in agent partitioning constructions (§13.2.4). Semantically, the number is understood to be updated, but this is not reflected in the number of the subject.

\(^{22}\)Consider “I chop up a carrot and put it / the pieces / *them on the table". In English the pronoun in the second clause must agree in number with the first, or be replaced by a new NP. In Momu, a second NP overtly coding the updated number of the shared referent is not given. Instead, the verb updates.

\(^{23}\)For those familiar with the video stimulus, the carrots in the video are identified as sweet potatoes. Also, because of his long hair, the person in the video is identified as a woman.
(13.47) (13.48) _Mu eru, nebesy._

woman that sweet.potato

_Abe_

trans>many-come.across\3SGS=put.many[1\3SGS] axe

_peteku pana, nebesy afa=m pana,_

small get.one\3SGS sweet.potato another=OBL get.one

_tekopwa~tekopwa=ta bu-feno._

cut~ITER=do put.many-incmp\3SGS

‘The woman brings in sweet potatoes. She gets a small axe and a single sweet potato, and chops it up, (leaving the pieces lying around there).’

A similar transformation of number is shown in (13.49), except that the verb _kiripnin_ ‘chop finely’ encodes plural number in its form. The object is initially singular (as shown by the form of _napwen_ ‘bring it’) but is considered plural once transformed.

(13.49) _Nebes=m na-pwe=kirip-nin_

sweet.potato=OBL trans>one-come=chop-many:VTR

_peteku-mes~peteku-mes-ta bun._

small-ADV~ITER-do\3SGS put.many[1\3SGS]

‘(The man) brings a sweet potato and cuts it up into little bits and puts (them).’

13.3.4.2 Scope of verbal number

Frequent topical elision of NP arguments often means that identifying the role of participants in an SVC can be difficult. Verbal number, not being bound by grammatical constraints, can contribute to the identification of referents in some specific combinations in SVCS. In this section, I focus on the verb _nuki_ to demonstrate this.

_Nuki_ ‘load’ is a verb of containment which can be considered number sensitive in that the speaker can make a choice between making a reference to a contained plural entity, or reduce it to a singular one by referring to the container (of course singular contained entities and plural containers are possible—but not together). _Nuki_ ‘load’, like in English, has two case frames differentiated by word order where either the contained or container is coded as an object, and the other as an oblique. _Nuki_ does not code verbal number, but within other SVC types such as a preparative (§13.2.3.1), the verb following it can select for the number of either the container or contained entities.
Most commonly, both the contained and container NPs are topically elided. In combination with the context of the utterance, the verbal number value of the following verb helps to differentiate which is being referred to—either (a) the contained entities, or (b) the container.

\[(13.50)\]
(a) **Nukuw** bun *y-o-wo.*

\[
\text{load}_{3\text{SGS}} \quad \text{put.many} \quad \text{D-[IMP]\text{INAN:there-be-3SGS:NZR}}
\]

‘It (food) is there, loaded (into a basket, by him).’

(b) **Nukuw** nebsu *pwenin*

\[
\text{load}_{3\text{SGS}} \quad \text{grasp.one}_{3\text{SGS}} \quad [\text{one.}]\text{stands y-ai-wo.}
\]

\[
\text{D-[IMP]\text{ANIM:there-be-3SGS:NZR}}
\]

‘he (the child) is there, standing holding (the bucket) loaded up (with things).’

When an overt NP codes an argument to the placement verb, the verbal number choice of the following verb is fixed upon that reference.

\[(13.51)\]
(a) **Bike** nuki=oto-si.

\[
\text{bucket} \quad \text{load=put.one-3PLS}
\]

‘They loaded the bucket (with fish).’

(b) **Kwu** food rco that get.many bag that=OBL load\(\text{3SGS}\)

\[
\text{narin,} \quad \text{okay yime anu}
\]

\[
\text{carry.one[1]|3SGS]} \quad \text{okay man this oto=y-ai-wo.}
\]

\[
\text{one.sits=D-[IMP]\text{ANIM:there-be-3SGS:NZR}}
\]

‘She collected the food (etc.) and carries the loaded bag, and okay, this man is sitting.’
Chapter 14

Compounds and Coordination

Coordination is the combining of multiple units (coordinands) of the same type (or similar type) such that combined they still fulfil the same role as a single occurrence of that unit. In Momu, lexemes, phrases, and clauses can all be coordinated. The means of marking the coordination varies depending on the relationship between coordinands, and the type of the coordinands (Haspelmath, 2007a).

Variation in length of coordinated elements, in the marking of coordination, and in the semantic features of the coordination such as overlap and symmetry, all combine to indicate what Wälchli (2005) calls the “tightness” of a given coordination. The tightest coordinations tend towards compounds.

Coordination is marked quite variably in the area. Imonda uses special clitics for coordination of phrasal units but juxtaposes clauses without marking (Seiler, 1985). Kwomtari is similar to Momu, in mainly using juxtaposition, but also uses the comitative as a coordinator (Honsberger et al., 2008). Waris has a rich array of coordinators including a marker of alternatives (disjunctive) not deriving from TP o (Brown, 1990). Barupu has a conjunctive coordinator and an adversative coordinator (Corris, 2008).

In this chapter, I discuss mainly nominal compounds (§14.1) before moving on to coordination. Coordinative types considered include conjunctive (§14.2), disjunctive (§14.3), and adversative coordination (§14.4). There are a few different means of expressing conditional constructions in Momu, and the form linked with the restrictive marker =s is ambiguous with respect to its subordinate or coordinate status (§15.6). For now, it is grouped alongside other subordinate conditional types (§15.10.2.6).
14.1 Compounds and nominal sequences

There is a spectrum of nominal-nominal sequences in Momu which range from compounds to juxtaposition. At one end some compounds are more fixed and lexical. At the other, there are productive patterns of combinations of lexemes. Beyond this, straightforward juxtaposition becomes coordination in Momu (§14).

There is no hard boundary between compounds and nominal sequences in Momu, as there is some inter-speaker variation in form. I take phonological integration, including loss of segments, and semantic opaqueness as indicators of compounding, and productivity as an indicator of sequencing. Many combinations discussed here show both phonological integration and productivity. The primary indicator of phonological integration is the lack of lengthening (§2.4) on word-final vowels for the first form in a compound.

The most lexicalised of compounds in Momu are co-compounds1 (Wälchli, 2005). There are a handful of these in Momu, most of which are kin compounds expressing natural pairings (§4.6.2). In co-compounds, the two components contribute equally to produce a new unitary concept, such that neither element alone expresses a degree of the same meaning. For this reason, these co-compounds are exocentric (Aikhenvald, 2007).

“Sub-compounds”2 are compounds where the relationship between components is uneven, and possibly hierarchical. One nominal in some way determines the reference of the other. In Momu a range of different types of relationships between nouns is expressed by sub-compounds. These different types of relationship are determined partially by the word-class of the nouns forming the compound, and partially by the semantics of the individual nouns. As sub-compounds tend to be more productive constructions, phonological integration drops away, and these are better considered nominal sequences rather than compounds.

In this section, I begin with the most restricted combinations of nouns (which result in the most phonologically integrated words) and proceed to the most productive combinations (which are clearly sequences of separate phonological words). Integrated phonological words are represented ortho-

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1 Co-compounds are also known as dvandva compounds, pair words, or copulative compounds (Wälchli, 2005).
2 “Sub-compound” is set up as a deliberate contrast with the term “co-compound.”
14.1.1 Co-compounds

In Momu, co-compounds (or coordinative compounds) are uncommon and are certainly not productive like many sub-compounds. The forms are all single phonological words. This is evident from a number of phonological conditioning effects. Most notably, lengthening of the vowel in any open final syllable (§2.1.1) is limited to the second lexeme.

Almost all of the coordinative compounds discovered so far relate to pairs or groups of people. Note that the order of nouns in these compounds is fixed. For instance, (14.1a) gives the proper ordering of nouns, while the reverse ordering in (b) is unattested.

(14.1) (a)  
mu-yime
women-men
‘people’
(b)  *yime-mu

The above compound demonstrates phonological integration in two ways. First, as an open mono-syllabic form, mu ‘woman’ would ordinarily be obligatorily lengthened (§2.4.1), but it remains shortened in the compound form. The vowel in mu is also raised (§2.5.4), by coming into contact with the initial glide in yime ‘man’.

The most common co-compounds involve possessed kin nouns, all of which are listed at the end of §4.6.2. These co-compounds refer to pairs in some form of special, and possibly reciprocal relationship. As such, few combinations are possible. (14.2a) mufo-yefu ‘married couple’ is an obvious pairing, while (b) sifu-abfu ‘same sex sibling pair’ is perhaps less so. It is, however, an important pairing in the context of reciprocal marriage exchange.

(14.2) (a)  
mufo-yefu
wife:SG:POSS-husband:SG:POSS
‘married couple’

Outside this chapter, those compounds that are especially exocentric may be written as a single word (i.e., without hyphenation) with a single gloss. This leaves several degrees of variation (and representation): at one end fully lexicalised forms which are given a single gloss and no indication of their etymology, at the other separate lexical items with the same glosses as they would have had they occurred alone. The nature of the compound is reflected in the free translation.
A similar set of compounds exist in Kwomtari, as shown in (14.3). Comparing (14.3a) to (14.1a) and (14.3b) to (14.2b) we can see that although the lexemes comprising the compounds are not cognate, the fixed ordering of elements is the same.

(14.3) Examples from Honsberger et al. (2008, p61)

(a)  
\begin{align*}
\text{inali-lufwa} & \\
\text{woman-man} & \\
\text{‘people’} &
\end{align*}

(b)  
\begin{align*}
\text{moo-yafi} & \\
\text{yB-eB} & \\
\text{‘brothers’} &
\end{align*}

The only co-compound in Momu I am aware of that doesn’t refer to humans is \textit{sibi-koy} ‘face’ shown below.

(14.4) \textit{sibi-koy}

\begin{align*}
\text{nose-eye} & \\
\text{‘face’ (cf. TP nus-fes)} &
\end{align*}

14.1.2 Sub-compounds and sequences

In sub-compounds and sequences, the contributing nouns are in an asymmetrical, usually hierarchical relationship. Usually one of the nouns has a more restricted reference in combination with the other. Sometimes one is a part of the other, or one is in possession of the other, or they are in a taxonomic relationship. Each type is discussed below.

As was the case with all co-compounds, some sub-compounds are exocentric, such that the meaning or reference is emergent from the combination, rather than the reference or meaning being restricted, modified or made more specific by the other.

In Momu, groups of people or outsider individuals are referred to via two compounding strategies. A group of people, either of a village or clan, is
expressed by compounding with \textit{muy} ‘cassowary’.\footnote{Dogs, pigs and cassowaries are treated as higher animates, and sometimes referred to as human. This may be why \textit{muy} ‘cassowary’ is used in “group of people” compounds.} Only clans with Momu origins were named this way. (a) \textit{Safnamuy} is a clan originating possibly from Mumuru, but also present in Mori village. The main \textit{Makumene} clan of Mori (originally not a Momu speaking village (§1.1.3)) does not compound in this way. Similarly, only nearby villages have names with \textit{muy} in them. The non-Momu speaking village of Sumo is called \textit{Sumuy} in Momu (b),\footnote{The shortened form of the place name is a bound form—\textit{Su}- cannot occur alone.} but the distant township of Vanimo has no form with \textit{muy} incorporated. Some Momu speaking village names contain \textit{muy}: \textit{Finamuy}, \textit{Savamuy}, and \textit{Fukumuy}.\footnote{This may have been a reflection of the dominant clan in the area when patrol officers wrote down village names.} \textit{Muy} is frozen in the form \textit{nanamuy} ‘foreigner(s)’ but there is no independent lexical form \textit{nana}.

(14.5) (a) \textit{Safna-muy}  
\begin{align*}
\text{clan.name-cassowary} \\
\text{‘(People of the) Savna clan’}
\end{align*}  
(b) \textit{Su-muy}  
\begin{align*}
\text{village.name-cassowary} \\
\text{‘(The people of ) Sumo village’}
\end{align*}  
(c) \textit{Nanamuy}  
\begin{align*}
\text{foreigner} \\
\text{‘Foreigner(s)’}
\end{align*}

When a place name is compounded with \textit{fe} ‘shit’, it refers to a person from that location. It is only used for outsiders (i.e., non-Momu speaking people) and is mildly derogatory. The term \textit{bufi} ‘outside place’ is frequently compounded with \textit{fe} (14.6a) to refer to an outsider. It can also compound with \textit{muy} compounds to refer to an individual from that group (b), or with a place name (c).

(14.6) (a) \textit{Bufi-fe}  
\begin{align*}
\text{outside-shit} \\
\text{‘An outsider’}
\end{align*}  
(b) \textit{Su-muy-fe}  
\begin{align*}
\text{village.name-cassowary-shit} \\
\text{‘A person from Sumo’}
\end{align*}
The compounding of a proper noun with *nyi* ‘ancestor(s)’ is used to refer to a specific ancestor of that name. This is especially important in disambiguating reference given that many children are named after ancestors.

(14.7) *Manbu-nyi*

Manbu-ancestor

PN-KIN

‘the ancestor Manbu’

Compounds with *muy* or *fe* are exocentric, while those with *nyi* are not. There is no transparent relationship between the lexemes *muy* ‘cassowary’ or *fe* ‘shit’ and the meaning that they contribute to the compound forms.

The relationship is a little clearer in the case of (14.8), but I would argue still exocentric. The relationship between *fyi* ‘water’ and *koy/sibti* ‘eye/nose’ is clear enough, but these compounds also express the state of crying or suffering under a cold. In this way, the compounds still express something further than the sum of their parts. *Koyfi* ‘tears’, in particular, verbalises to express ‘crying’.

(14.8) (a) *Koy-fyi*

eye-water

‘tears/crying’

(b) *Sibti-fyi*

nose-water

‘snot / a runny nose’

Compounding certain kin terms with *fanebo* ‘child(ren)’ makes a plural form. The plural form appears to be used mainly to refer to younger referents. Kin nouns are mostly singular. Possessed kin nouns are almost all singular and all incorporate possessive marking in their form (§4.6.2). For the compounds with Possessive Kin Nouns, the semantics of possession is lost in compounding (but the full form retained). The reference becomes improper, not referring to a specific or close kin relation. In (14.9b), the Possessed Kin Noun *masu* ‘his/her mother’ is used in the context where reference to child is recoverable. That is not part of the meaning in the compound plural form.
The remaining sub-types are generally more productive, and don’t often show the same signs of phonological integration into a single phonological form. The more frequently occurring a sequence is, the more likely it will be phonologically integrated. The sequences below are endocentric (Aikhenvald, 2007) in that one noun restricts the reference of the other in some way, generally producing a more specific reference in some way.

### 14.1.2.1 Type sequences

In Type sequences, the $N_{\text{mod}}$ functions to restrict the reference of the $N_{\text{head}}$. $N_{\text{mod}}$ always precedes $N_{\text{head}}$. For Type sequences the $N_{\text{head}}$ can stand alone in subsequent uses in a text as a broader reference to the same entity. Or the same term is equally acceptable as a first mention use, albeit less specific in reference.

In (14.10), *futy* are large, black, edible tree-boring beetles, active mostly at night. These are divided into those that bore into sago palms or into trees.\(^7\) These can be referred to more generally as *futy*.

\[(14.10)\]  
\[
\begin{align*}
(a) & \quad kwo & \quad \text{*futy*} \\
& \quad \text{tree} & \quad \text{beetle.sp} \\
& \quad N_{\text{mod}} & \quad N_{\text{head}} \\
& \quad \text{‘a wood boring *futy* beetle (large, black)’} \\
(b) & \quad u & \quad \text{*futy*} \\
& \quad \text{sago.palm} & \quad \text{beetle.sp} \\
& \quad N_{\text{mod}} & \quad N_{\text{head}}
\end{align*}
\]

\(^7\)I do not know if these two types (tree-boring and palm-boring) of *futy* are one and the same species, but they are certainly similar in appearance to my untrained eye. The relevant distinction here is not taxonomic as far as I could see, but rather an indication of where a meal had come from. A (generally unexpected) meal of *futy* can arise from the activity of felling a sago palm for making sago powder, or it can come from felling a rotten tree while clearing a garden plot. Taxonomic distinctions (where made) are generally formed by what I have termed “Class Term sequences” and most importantly these have the opposite ordering of nouns (§14.1.2.3).
‘a sago boring futy beetle (large, black)’

In (14.11), the relationship between $N_{head}$ and $N_{mod}$ is not “whole-part” (§14.1.2.2) or of “class” (§14.1.2.3), but rather one where the denotation of the sequence is a sub-type from the set of possible denotata of the $N_{head}$. That is, (14.11a) kwu fiky ‘kitchen’ is a type of house; (b) nebesy kisfu ‘sweet potato soup’ is a type of soup, and (c) esy man is a type of bag used for storing dried sago starch.

\begin{align*}
\text{(14.11)} & \quad \text{(a) } \kwu \text{ fiky} \\
& \quad \text{food house} \\
& \quad N_{mod} \quad N_{head} \\
& \quad \text{‘kitchen’} \\
\text{(b) } & \quad \text{nebesy kisfu} \\
& \quad \text{sweet potato soup} \\
& \quad N_{mod} \quad N_{head} \\
& \quad \text{‘sweet potato soup’} \\
\text{(c) } & \quad \text{esy man} \\
& \quad \text{sago bag} \\
& \quad N_{mod} \quad N_{head} \\
& \quad \text{‘A bag for sago—a sago bag’}
\end{align*}

(14.12a) is a multi-part sequence. The structure of the sequence is ambiguous, given that the first two and last two nouns form equally valid sequences in (b) and (c).

\begin{align*}
\text{(14.12)} & \quad \text{(a) } \text{esmwa mey fuku} \\
& \quad \text{mosquito teeth wound} \\
& \quad N \quad N \quad N \\
& \quad \text{‘mosquito bite’} \\
\text{(b) } & \quad \text{esmwa mey} \\
& \quad \text{mosquito teeth} \\
& \quad N_{whole} \quad N_{part} \\
& \quad \text{‘mosquito proboscis’} \\
\text{(c) } & \quad \text{mey fuku} \\
& \quad \text{teeth wound} \\
& \quad N_{mod} \quad N_{head} \\
& \quad \text{‘bite (lit. wound by teeth)’}
\end{align*}
14.1.2.2 Whole-part compounds and sequences

Whole-part compounds express a relation in which the N\textsubscript{part} is part of the N\textsubscript{whole} whole. The two nouns clearly exist in a hierarchical relationship such that one is a sub-component of the other. Typically a N\textsubscript{part} can stand alone in subsequent uses in a text, but it is not specific enough for an initial use (without other contextual cues—e.g., gesture). This is one way in which the use of whole-part compounds differs from Type sequences.

Also unlike Type sequences, by alternating the initial N\textsubscript{whole}, the reference is entirely different, rather than more specific.

(14.13) shows noun sequences expressing a whole-part relation.

\begin{itemize}
\item[(14.13) (a)] kwo fa
\begin{itemize}
\item tree leaf
\item N\textsubscript{whole} N\textsubscript{part}
\item ‘leaf of tree’
\end{itemize}
\item[(b)] key ma
\begin{itemize}
\item hand palm
\item N\textsubscript{whole} N\textsubscript{part}
\item ‘palm of hand’
\end{itemize}
\end{itemize}

With a higher animate N\textsubscript{whole}, the relation being expressed could be considered to be one of inalienable possession. Below I limit inalienable possession via sequencing to constructions where the possessor is an (animate) proper noun (§14.1.2.4).

\begin{itemize}
\item[(14.14) (a)] yime au
\begin{itemize}
\item man skin
\item N\textsubscript{whole} N\textsubscript{part}
\item ‘bodies’
\end{itemize}
\item[(b)] esyu safo
\begin{itemize}
\item dog tail
\item N\textsubscript{whole} N\textsubscript{part}
\item ‘dogs’ tails’
\end{itemize}
\end{itemize}

Amongst the set of possible N\textsubscript{part} Nouns, many have metaphorical extensions. Sibti ‘nose’ can be part of an animate whole, but a slightly variant form\textsuperscript{8} sibto refers to parts of certain inanimate wholes.

\textsuperscript{8}Sibto is possibly a fusion of sibti ‘nose’ with the singular genitive =u.
Whole-Part sequences can contain more than two elements. Each subsequent noun further divides the previous part. In (14.16), the whole-part compound in (a) *key-fuku* ‘finger’ is further divided into another part in (b). *Key-fuku* ‘finger’ is a high frequency, integrated single phonological word. The compound receives a single prominent accent instead of one for each lexeme in the compound, and sometimes the glide is deleted.

Amongst the possible N<sub>whole</sub> nouns, Whole-Part sequences can also contain proper nouns. Named animate wholes are in a possessive relationship, but for inanimate wholes the relationship is whole-part. In (14.17a) the generic *fyi* ‘river’ is the N<sub>whole</sub> to the N<sub>part</sub> *benya* ‘mouth (of river).’ In (b) the name of a river is used instead.
Named inanimate entities are limited to topographic features in Momu (e.g., rivers and mountains). These are expressed as a Class Term sequence, as in (14.18a), and so in (b) the Class sequence constitutes the “whole” component of the Whole-Part sequence, as indicated by bracketing.

(14.18) (a) 
\[ \text{fyyi} \quad \text{Nisnak} \]
\[ \text{river} \quad \text{Nisnak} \]
\[ N_{\text{class}} \quad \text{PN} \]
‘the river (called) Nisnak’

(b) 
\[ \text{fyyi} \quad \text{Nisnak}/ \quad \text{benya} \]
\[ \text{[river} \quad \text{Nisnak]} \quad \text{mouth} \]
\[ \text{[N_{\text{class}} \quad \text{PN}]_{\text{whole}} \quad N_{\text{part}}} \]
‘The mouth of the river Nisnak’

14.1.2.3 Class term sequences

Class term sequences express a taxonomic relationship between an initial class term $N_{\text{class}}$ and another nominal expressing the sub-class (Grinevald, 2000, pp59–61). The class terms are a restricted set of animal and plant types, or topographic features (i.e., rivers, mountains) and the sub-class nominal is usually the specific name of the plant or animal species, or the name of the location.

These differ from Type and Whole-part sequences in that the initial $N_{\text{class}}$ can stand as a more general reference to the same entity. It is the $N_{\text{head}}$ or $N_{\text{part}}$ in second position that fills this role and for Type and Whole-Part sequences respectively. In subsequent references in texts, it is possible to use the sub-class PN alone in place of the Class sequence. It is not obligatory for the $N_{\text{class}}$ to occur, but appears to be preferred upon first mention. The $N_{\text{class}}$ can be used regardless, assuming the circumstance do not call for a more specific reference.

(14.19) (a) 
\[ \text{syi} \quad \text{sifwa} \]
\[ \text{bird} \quad \text{bird.sp} \]
\[ N_{\text{class}} \quad \text{PN} \]
‘a sifwa bird—a bird that lives in the mountains and builds a leaf mound nest’

(b) 
\[ \text{oye} \quad \text{abo} \]
\[ \text{frog} \quad \text{frog.sp} \]
\[ N_{\text{class}} \quad \text{PN} \]
‘an abo frog—a large noisy frog’ (‘abo’ is onomatopoeic)
Class sequences also contrast with Type sequences in that a superordinate class of denotata would comprise variations in the PN (e.g., syi sifwa, syi swake, syi orki, ‘(the birds called) sifwa, swake and cockatoos’) while the N_class alone denotes the superordinate class. For Type sequences variations in the N_mod (e.g., nebesy kisfu, mwepe kisfu, muny kisfu ‘sweet potato soup, taro soup, tu lip⁹ soup’) express the sub-types, while the N_head denotes the super-ordinate class. For Whole-Part sequences variations in the N_whole switch the whole being referred to (syi koy ‘bird’s eye(s)’, kaf koy ‘opening of cup (the eye of the cup)’, esyu koy ‘dog’s eye(s)’) while varying the N_part maintains a reference to the same whole (albeit different parts) (kaf key ‘handle (arm of cup)’, kaf mofu ‘base of cup’).

### 14.1.2.4 Possessive sequences

Inalienable possession as expressed via sequencing is (as far as I observed) limited to possession of body parts or of houses.¹⁰ The possessor can be a proper noun, or a common noun used to make a specific reference (e.g., yime referring to an identifiable man, rather than the generic ‘men’). These possessive sequences could be considered a sub-type of whole-part sequences for body parts, but this explanation does not extend to possession of houses. A subset of kin relations typically involves sequencing with possessed kin nouns, which are considered separately below (§14.1.2.5). But some kin relations are expressed in this way.

(14.20) gives examples of possessive sequences with a common noun (a), and a proper noun (b). Proper nouns can denote an individual’s possession, as in (b), or a potentially collective possession as in nanamuy fiky ‘foreigner(s) house(s)’.

(14.20) (a) Yime key fuku=m y-o-wo.
  man hand finger=obl D-[IMPF]INAN:be.at-3SGS:NZR

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⁹ *Tu lip* is the name of this tree with edible leaves (from English *two leaves*). *Gnetum gnemon* is the scientific name.

¹⁰ I do not know if this extends to other external objects which might be marked in this way as inalienable. It does not extend to more abstract concepts such as thought or talk.
‘(It) is on a man’s finger.’ (Q: where is the ring?)

(b) Woryai, Primus fky eru oni-nua
   go.down:1DU S Primus house that look.come.up
   on-rai.
   look.one:1DU S
   ‘We go down river, and look up and see the house of Primus.’

Most commonly the N_{psr} is a proper noun in these constructions, but there are a few examples where the sequence is possessive but the N_{psr} is not a proper noun. In (14.21a) esabki/wunku are adjectives ‘bad/good’ functioning as proper nouns. In the genre of story-telling called ukumos ‘ancestor stories’, there are commonly two protagonists: the good man Wunku and the bad man Esabki. Note that in reversing the order of noun and adjective, as in (b), wunku functions unambiguously as an adjective ($§5.1$).

(14.21) (a) Esabki baso, Wunku baso
   bad.man children good.man children
   PN_{psr} N_{psd} PN_{psr} N_{psd}
   ‘the descendants of bad men, the descendants of good men’

(b) baso wunku
   child good
   N ADJ
   ‘good child(ren)’

Care must be taken to differentiate possessive sequences from external possession ($§10.2.1$). In some cases there is structural ambiguity between the two.

External possession is a common way that possession of body parts is expressed. In these constructions, a topical animate whole is established as the possessor of body parts otherwise unmarked for possession in the same or subsequent clauses. There are a set of constructions involving the state or position of body parts which can also—by extension—express the emotional or experiential state of the possessor commonly used in serialisation ($§13.2.1.1$).

When describing pain, this is usually attributed to a body part, rather than a general sense of pain via specialised verb forms. In (14.22a), te ‘first singular pronoun’ is a topical NP (or logical subject). Ebsi ‘leg’ is the subject
of the clause, and as such it is cross-referenced on the verb. The topical NP is understood to be the possessor of the body part. The effect is more striking in (b), where the topical referent is introduced in a prior clause. Several subsequent clauses describe the movements of various body parts.

(14.22) (a)  \[ Te \ ebsi \ skab-ta. \]
\[ 1SG \ leg \ \text{bad-inch} \]
‘My leg is bad.’

(b)  \[ Mu, \ niny \ oto=ai, \ tebol \ niny. \]
\[ Key \]
\[ woman \ above \ one.sits=\text{ANIM:be.at} \ table \ above \ hand \]
\[ nebe-ta \ si-nin-tuw. \]
\[ Koy \]
\[ two-do \ slide-3PLO:VTR\text{-come.down} \ 3SGS \ eye \]
\[ ufta. \]
\[ Mesis \ yeb \ koy \ tye-ponu. \]
\[ be.close \ 3SGS \ again \ then \ eye \ \text{TRANS}\text{-many-break} \ 3SGS \]
‘A woman sits on a table. She slides her hands down. She closes her eyes. Then she opens them again.’

These kinds of constructions are extremely common as serialised verbs that add nuanced detail in descriptions of people interacting (§13.2.1.1).

14.1.2.5 Possessed kinship nouns in sequences

Possessed kin nouns can sequence with an initial proper noun. The ordering is possessor-possessed. (14.23) gives examples where the possessor is an unmarked proper noun.

(14.23) (a)  \[ Jaklin \ masu \ \text{sisy=e,} \ abu \ wobu \]
\[ Jaklin \ mother:SG:POSS \ also=\text{EMPH} \ name \ 3SG:COM:GEN \]
\[ Solostika. \]
\[ Solostika \]
‘Jaklin’s mother also, her name is Solostika.’

(b)  \[ Jaklin \ masu \ \text{eru} \ ni=b \ tity \]
\[ Jaklin \ mother:SG:POSS \ that \ 3PL=\text{COM} \ go.first \]
\[ ina-si. \]
\[ many.go-3PLS \]
‘Jaklin’s mother and the others went ahead.’

When the possessor is a common noun, it can be modified. In (14.24) the possessor is modified by a demonstrative. In fact, I do not have an example
of a common noun not modified by a demonstrative when in a possessive construction involving a possessed kin noun.\textsuperscript{11}

(14.24) (a) \textit{Mu eru bafu y-ai-pwen-o,} woman that father:SG:POSS D-IMPF-[one.]comes-3SGS:NZR
\textit{wok sisy.} 3SG:RE also

‘The father of that woman, he too is coming.’

(b) \textit{Anu, yime anu bafu, butu kosy} this man this father:SG:POSS ladder path
\textit{oto=y-ai-wo} one.sits=IMPF ANIM:be.at-3SGS:NZR come.across\3SGS
\textit{syoko kosy=m.} door path=OBL

‘This one, this man’s father, (he) is sitting on the ladder close to the door.’

14.1.3 Verbal compounds

Verbal compounds have already featured heavily throughout this thesis but have not necessarily been identified as such. In diachronic asides, I have usually labelled the process as arising from serialisation.

Diachronically, there are lexicalised verbs arising from compounded forms. Notes about these forms are given throughout the thesis. Verbs like \textit{niysen} ‘hit’ (\textit{niy} ‘shoot one’ and \textit{sen} ‘one dies’\textsuperscript{12}) or \textit{otonoy/bunoy} ‘lean one/many’ (\textit{oton/bun} ‘put one/many’ and \textit{woy} ‘go across’\textsuperscript{13}) clearly arose from compounded forms. \textit{Sen} is also a completive marker (15.4), and \textit{woy} can also function as a directional aspectual suffix (§7.5.2.1).

Aspectual suffixes (§7.5.2) derive from a small set of synchronic full verbs. An alternative analysis would be to consider these a type of sub-compound. Amongst verb pairs coding verbal number (§6.6), the plural counterpart commonly shows some sign of having arisen from a compounding process.

\textsuperscript{11}Although I have no evidence for or against, I suspect that the demonstrative modifier is not required. This demonstrative modifier makes the reference specific, as would by the case with a proper noun, or with a genitive pronoun.

\textsuperscript{12}\textit{Niysen} has an irregular paradigm that retains some features from its pre-lexicalised form. Subject marking is entirely regular and marked by suffixes, except the third person singular subject form is \textit{nuwesn}. This is a preservation of the rounded form of \textit{niy}. Note that as an \textit{n}-final stem, this verb would not otherwise differentiate first and third person singular subjects, and so by preserving the third singular marking on the first verb in the compound, the distinction is not lost.

\textsuperscript{13}\textit{Otonoy/bunoy} is also synchronically a directional-marked form ‘put one/many across’. 467
The most common is the singular transitivising prefix *na-* (§6.6.2.3) which likely arose from serialisation (or compounding) with *na*, an earlier form of *pana* ‘get one’ (§C.3). Several other more opaque forms are discussed in §6.6.2.2.

Wälchli (2005) raises a few specific cases of serialisation that should be excluded from compounding (or coordination). For instance, when one partner in a binomial is heavily grammaticalised, this is not likely a compound. This is a valid but gradient concern in Momu, as many forms are at the very least tending towards grammaticalisation.

Co-compounds are rarer amongst verb compounds. The clearest examples are from the spatial verbs, where there are a number of possibilities. Examples include *Wownow* ‘(wavering) in and out’ (*wow* ‘go across’ and *now* ‘come across’) and *koweky* ‘aligned with and pointing down the downriver axis’ (*kow* ‘come downriver’ and *woky* ‘go downriver’). Both are examples of what Wälchli (2005, pp139–141) calls generalising compounds.

14.2 Conjunctive coordination

Conjunction in Momu is expressed by simple juxtaposition or asyndetic (unmarked) coordination (§14.2.1), and with the involvement of various markers (or syndetic coordination) depending on the subject or non-subject status of the NP (§14.2.2, §14.2.3, §14.2.4). While asyndetic coordination occurs throughout, the comitative maker is used as a coordinator for subjects alone (§14.2.2). There are a variety of coordinators for non-subject coordinated participants. In addition to these coordinators, TP *na* ‘and’, *wantaim* ‘with’ and *orait* ‘okay/alright’ are also frequently used in conjunction at various levels, while TP *o* ‘or’ is the only disjunctive coordinator, with no alternative (§14.3).

14.2.1 Intonational coordination

Conjunction in Momu is primarily constructed through “coordination by intonation” (Mithun, 1988b), asyndesis, or juxtaposition (Haspelmath, 2007a). There is no formal marking of conjunction, beyond intonational cues—coordinated elements are simply juxtaposed. In Momu, intonational cues include breaks

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14 Concerns about the overlap between serialisation and compounding in part stem from the imprecise nature of serial verb constructions.
in the otherwise unmarked contour expected for the speech act type (§10.3), possibly with a slight rise at the end of each item (if items are being “listed”), and possibly with a pause between coordinated elements.

Variation in intonation corresponds with the tightness of the construction in that the more marked the change, the looser the coordinated structure. Orthographically I collapse indications of pausing with intonational breaks with the use of a comma. Where there is no comma, there may still be a smaller variation in the intonation. The larger the set of coordinated items, the larger the effect generally. The more natural\textsuperscript{15} the combination, the less likely there is a marked intonational pattern, and the more likely a pair might appear more compound-like.

The overall order of presentation in this section corresponds to syntactic tightness first and foremost. I begin with coordination in and of noun phrases (§14.2.1.1), and then higher marked forms (§14.2.1.2), and finally I consider predicate and clausal coordination (§14.2.1.3). Dispersed throughout are examples of the other factors of “tightness.” Consideration of the semantics of possession (§14.2.5), and collectivity and simultaneity (§14.2.7) are covered in a separate sections, but these also include intonational coordination.

\textbf{14.2.1.1 NPs}

Different possibilities for coordination within an NP are sketched roughly in (14.25).\textsuperscript{16} For the present discussion, the templates simplify the internal structure of an NP to the notion of a nominal head and optional modifier(s). The full structure of an NP is given in §5.

\begin{itemize}
\item[(14.25)]
\begin{enumerate}
\item[(a)] \[ [ N N^* ] M O D^* ]_{NP} \\
\item[(b)] \[ NP ] [ NP ]^*
\end{enumerate}
\end{itemize}

NPs can be headed by coordinated nominals, (14.25a). This head can be modified by different modifiers (§5.1). Coordinated nominals are shown in (14.26) between square brackets. In (a) there is no modifier. Coordinated nominals are modified by a demonstrative in (b), and a genitive pronoun in

\textsuperscript{15}The notion of “natural coordination” is of coordination of elements that express concepts with closely related semantics (Wälchli, 2005). For instance, “mother and child”, “knife and fork” and so on.

\textsuperscript{16}In the template in (14.25), the asterisk (*) follows items that may repeat zero or more times. That is, it indicates both optionality and repetition of the element it precedes.
Full NPs can also be coordinated. (14.27) gives examples of coordinated NPs. In (14.27a), modification on both coordinated nominals indicates that it is two NPs that are coordinated. When a nominal stands alone as an NP and is coordinated with an NP with a modifier, it can be ambiguous without the consideration of intonation. In (14.27b) there is a break in the contour without a pause (indicated by “;”). This intonation indicates that the scope of the quantifier does not include the first nominal. In the absence of such intonation, the structure would be similar to the coordinated nominals in (14.26b) and (14.26c) above, and that yime mu kefe in (14.27b) would instead mean ‘some men and women’.

(14.27) (a) [[mu anu/NP, yime anu/NP]NP
  woman this man this
  n-a-momse-fi-u.
  PX-IMPF-talk-3DG-NZR
  ‘This woman and this man are talking.’

17Coordinated structures involving more complex possessive patterns are considered in §14.2.5.
(b) *Yime;* *mu kefe, na-pwenin man woman some many.-stand
  *y-a-sa.*
  D-[IMP|ANIM]there.be-3PLS:NZR
  ‘There is a man and some women standing.’

(14.28)

Coordinated elements can include clauses. Below the deverbal clause is a type of nominalisation coordinated with another nominal.\(^\text{18}\)

(14.29) *Fuku ku-u bokuboku tima-fi.*
  place sleep-NZR things give.many:1PLIO-3DU:S
  ‘They two gave us a place to sleep and various things.’

14.2.1.2 Above NPs

Relational and adnominal case and adverbial enclitics all postmodify an NP (§4.8). In this section I look at coordination of NPs marked by these types. Coordination with the Comitative (§14.2.2), representative coordinator (§14.2.3), and genitive (§14.2.5), and the meaning expressed by coordination with various adverbs (§14.2.6, §14.2.7) are all considered separately.

Both the relational oblique case and the (adverbial) restrictive marker are marked upon the outer edge of coordinated nouns or NPs. Marking cannot be applied within the coordinated elements.

(14.30) (a) *Safu ebsi=s y-o-wo.*
  tail leg=STR D-[IMP|NAN]there.be-3SGS:NZR
  ‘There is a tail and leg only.’

(b) *Eru pi=mu baso=m that one.goes=woman child=OBL
  koy-nin.
  see.many-3PLO:VTR[1][3SGS]
  ‘There he went and saw his wife and child.’

However, (relational) directional case can be marked on individual coordinated NPs as shown below, or on coordinated nominals (as in *Sene Usu=ti* ‘toward Sene and Usu’).

\(^{18}\)Note that this deverbal clause type can also function as a purposive clause. See (14.38c) on page 475 for an example of a coordinated purposive predicate.
Adnominal case-marked NPs can be coordinated. In (14.32), predicative uses of the adnominal proprietive marker =bu (§11.5) can (a) contain coordinated nominals, or (b) each nominal can be be proprietive-marked. In (c) multiple instances of habitative-marked NPs are coordinated.

(14.32) (a)  Te [emsi  nwu]=bu.  
1SG betelnut mustard.flower=PROP  
‘I have betelnut and mustard flower.’

(b)  Te  emsi=bu,  nwu=bu,  aibi=bu.  
1SG betelnut=PROP mustard.flower=PROP lime=PROP  
‘I have betelnut, mustard flower and lime.’

(c)  Ary kafokta-ta-m=fa?  
ebey wune tinu=mu,  kuo 
2PL be.afraid-do-2PLS=YNQ devil stone hole=HBT tree  
tinu=mu,  fyi=mu  a=m.  
hole=HBT water=HBT this=OBL  
‘Do you fear the devils in the holes of stones, in tree holes and in the water here?’

Finally, left-dislocated topics can be marked as contrastive focus with =ne (§4.8.9, §8.2.4). Multiple coordinated NPs can be marked with the focus marker and coordinated:

(14.33) Mumuru=ne  Savamuy=ne,  
Mumuru=FOC Savamuy=FOC  
nan-pue-ekenin-si  ere nepu ku ib  
TRANS>one-come-help:3PLO-3PLS thus meat dry together  
nan-pue=ta-si  Mori=m  ekenin-si  
TRANS>one-come=do-3PLS Mori=OBL help:3PLO-3PLS  
y-a-ta-sa.  
D-IMPF-do-3PLS:NZR  
‘As for Mumuru, and as for Savamui, together they were helping bring the dried meat to Mori.’

14.2.1.3 Predicate and clausal coordination

As noted in §14.1.3 on verbal compounds, the most common source of compound verbs is serialisation. Serialisation itself is a form of tight coordina-
tion—the tightest of which tend toward compounds.

Serial verb constructions are oft-repeated expressions which reduce over time. Common to all serial verb constructions in Momu are shared subjects and modal marking on the final verb. Shared subjects mean that effectively serial verb constructions are coordinations of verb phrases. Verb and verb phrase (or predicate) coordination incorporates all serial verb constructions (§13) but extends beyond them. This includes non-shared subjects (and therefore extends beyond verb phrases), and full modal marking on each coordinated clause. Tight verb and verb phrase coordination is discussed in §13. This section only considers the looser coordination of verb phrases and of clauses.

Looser coordination allows for loose overlap or even separate subject reference (what Wälchli (2005, pp.77–78) calls non-overlapping coordination). In the example below, unmarked coordination is ambiguous as to whether the referents are the same across some of the coordinated clauses, but it is necessarily the case that they cannot be the same across all.

\[
\text{(14.34) Kefe mon feymony-e-si, baky-er-si,} \\
\text{(780ms) kefe inuya-si, na-pwe=gyey-e-si} \\
\text{“emusu-ya!”} \\
\text{good-EMPH} \\
\text{“Some argued (with her) or ridiculed ... some laughed (at her) and (others) came and said “that’s good!””}
\]

Similarly, the events themselves can be simultaneous, overlapping, or temporally sequential. The above example includes events that are not temporally sequenced. More likely these are overlapping events in no particular order. In the example below, the first two clauses are simultaneous, and the third is explicitly marked as sequenced with the use of the adverb yeb ‘then.’ Sequenced coordinates need not be marked as such (see (14.36a) below).  

\[^{19}\text{Coordinated temporal sequences tend towards pseudo-coordination (Wälchli, 2005, pp.85–86) because these can be very close to subordinating structures. Generally speaking, to be properly coordinated then external elements must have scope over all coordinands. This is not the case in an example like this the book that I sat and read. This restriction is why serial verb constructions tend to sequence verbs such that prior VPs introduce participants that are understood to be relevant to later ones (§13.3.3). Additionally, in Momu, intransitive verbs almost always precede transitive ones, except in the special case of cause-effect serialisation (§13.2.3).}\]

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‘He holds a stick (in one hand) and the other hand is in his mouth, and he’s looking at his daughter.’

Where full modal marking is included on coordinated forms, this is taken to be clausal coordination, as the scope of the modality is over clauses, not verb phrases (§12.1).

‘We will light a fire and cook food.’

‘Some women will be cooking food and repeatedly bringing it down (to her).’

Sequences of transitive and intransitive verbs are taken to be a special case of serialisation in Momu (cause and effect serialisation, §13.2.3). I take this to be a formal marker of clause boundaries, such that in the example below, despite the first clause not having modal marking, it is still a case of clausal coordination. For this reason, the scope of the modal marker includes all coordinated clauses.

‘And then he became drunk and (he) wanted to fight.’

In the previous section, there are examples of phrasal predicates (proprietive possession in (14.32) on page 472, and habitative location in (10.46b) on page 353). Momu has numerous non-verbal predicates (§11), and many can
be intonationally coordinated. For instance, in (14.38a), two attributive predicates (§11.3) are coordinated. In (b) numeral modifiers create a possessive predicate type (§11.4.2). In (c) the predicates are coordinated purposive clauses (§15.8).

(14.38) (a) Kusko [syebo], [motu].
      leaf  white  black
      ‘The paper is black and white.’

(b) Te [baso munebo tyenebem], [menabu fasni].
      1SG child daughter two son one
      ‘I have two daughters and one son.’

(c) Sioko afa mamo=tि=े /क|e kan-|-र/ |t|a|k| su-|-र/.
      door other other.side=DIR=EMPH shit defecate-NZR
      bladder urinate-NZR
      ‘On the other side of the door is for defecating and for urinating.’

Various subordinate clause types can be coordinated. In (14.39a) and (b), temporal adverbial clauses (§15.3) are coordinated, while in (c) completive-marked clauses (15.4) are coordinated.

(14.39) (a) Awen=ketya aru-o, nu ten-tu
      cover:.one:VTR=LCOMPL that-EMPH just many.die-DISTR
      eru. Awen=ba ten-tu=ba,
      that cover:.one:VTR=COM[ADV] many.die-DISTR=COM[ADV]
      eru ere-а, gime eru a-|fi-|-u=ne,
      and.so-EMPH man that ANIM:there.be-3DUS-NZR=FOC
      ‘(The cloud) covered them, killing them all. When it covered
      them and when it killed them all, the man (and his wife) stayed
      (in the hole) ...’

(b) A-pyen=ab,
    IMPF-[one.]comes[1|3SGS]=COM[ADV]
    oto=onyipin=b,
    one.sits=face.toward[1|3SGS]=COM[ADV]
    y-ai-kawe.
    D-IMPF-consume:3SGS:NZR
    ‘When I was coming toward it and when I sat facing it, it was
eating.’

(c) Yekebe tyinu-esen yeb
    sunlight be.shine\3SGS-COMPL then
    kita-tu-esen=a, eru ere yeb
    dry-INCH-DISTR-COMPL=EMPH and.so then
Once the sunlight shines and the place has dried, then I come and light a fire.

14.2.2 Comitative coordination

The comitative functions as either comitative, instrumental and temporal in different syntactic positions. A comitative case is a common source cross-linguistically for coordinators (Haspelmath, 2007a, pp29–33), and Momu is amongst these languages.

The comitative case is used as both a mono-syndetic and bi-syndetic coordinator for (generally animate) subjects. When the comitative is used on a (generally inanimate) non-subject participant in a clause, its interpretation is usually instrumental. A different strategy involving the serial verb bar ‘with’ is used to express conjunction of non-subject participants (animate or inanimate) (§13.2.6). There is also a serial verb construction to unify the set of referents expressed by subject and object to a serial verb construction, in the form of the accompanitive verb (§13.2.4.1).

(14.40) gives examples of the comitative case =b functioning as a mono-syndetic post-positive coordinator.

(14.40) (a) Mu eru, yime eru=b, transis fafo woman that man that=COM trousers long slide.into-3PLO:VTR-3DU:S

‘That woman and that man wear long trousers.’

(b) Ary bu=b na-pwe-mi=a? 2PL who=COM many.-come-2DU:S=Q

‘You came with who? (lit. you and who came?)’

The comitative strategy differs from intonational coordination in that it can and frequently does coordinate NPs coded by zero anaphora. Or, alternatively, it simply functions as an associative marker.

In (a) baso=b ‘with the child’ is added to the first clause yime abu pweno ‘should your husband come’ as an afterthought repair (i.e., not adjunct). The subject cross-reference reflects this, being singular. In the next clause, the reference to the child is repeated and the husband is elided, but the subject cross-reference is updated to dual. In (b) the first and only explicit reference
to masu ‘his mother’ is given two clauses before nowbusa ‘she came outside’. Then the father is added to the referent set without explicitly mentioning the mother, with bafub ‘and his father’, and the subject cross-reference on the subsequent verb is updated to dual third person. In (c) yime afab ‘and another man’ is added to the first referent mu anu ‘this woman’ and the subject indices on the two verbs are updated appropriately.

(14.41) (a) Yime abu pwen-o, baso=b, man 2SG:COM:GEN [one.]comes-3SGS:NZR child=COM
baso=b na-pwe-fi-u, baso menebu afa child=COM many.-come-3DUS:NZR child boy other
eru, yeb yeni-f-mu.
that then say-2SGS-VOL.FUT
‘Should your husband come, with the child—should (your husband and) the child, the other boy come, then you will instruct them.’

(b) Masu mother:SG:POSS come.across\3SGS-LNK-EMPH that
bafu=b a-na-tebria=mwakni-fi.
father:SG:POSS=COM IMPF-many.-fly=seek-3DUS
‘His mother ... came outside and (she) and his father flew, seeking out (food).’

(c) Mu woman anu this now come.across\3SGS [one.]stands[1]3SGS] man
afa=b other=com y-a-momse-fi-u.
other=COM D-IMPF-talk-3DUS-NZR
‘This woman comes and stands, and is talking with this man (lit. (she) and this man are talking).’

When both NPs are comitative-marked, then the comitative case is functioning as a bi-syndetic post-positive coordinator.

(14.42) (a) Mwano=b, Pempe=b baso yeb nari-fi.
Mwano=COM Pempe=COM child then carry.1SGS-NZR
‘Mwano and Bembe together carried a child.’

(b) Mu=b yime=b otota-fi-u=ne, ... woman=COM man=COM many.sit-3DUS-NZR=FOC
‘A man and a woman, the two sit down and ...’

14.2.3 Representative coordination

The representative marker is a special linker of coordinated elements (Haspelmath, 2007a). In un-coordinated use, the meaning is roughly of a plurality
of items, possibly with additional referents similar to the marked referent (§3.5.5.4). Wälchli (2005) labels this a form of “non-exhaustive” coordination.

(14.43) (a) Pakini tya eskuta-fi. pumpkin RCO pluck.many-3DuS
   ‘They harvested the pumpkins.’

(b) Pakini tya o? Aty tya. pumpkin RCO or banana RCO
   ‘(Are they) something like pumpkins? Or like bananas?’

As a coordinator, additional representative forms are listed, each marked with tya.

(14.44) (a) Pufku-nua-now yey-en
   get.up\3SGS-come.up-come.across\3SGS say.to-3SGO\VTR
   ‘kwu tya esy tya menanu kirvai-mu,
   food RCO sago.jelly RCO where consume:1DU\VOL\FUT
   yerebu nepu tya anu?’
   1PL\COM\GEN animal RCO this
   ‘He got up and came outside and asked him “So all the food and sago jelly, where is the food/meat we will eat?”’

(b) Pi=koy-nin baso tya mufu
   one.goes=see.many-3PLO\VTR child RCO wife:SG\POSS
   tya=m. RCO=OBL
   ‘He went and saw his child and wife.’

(c) Nakye tya amseke tya eru boku=m spider RCO ants RCO that what=OBL
   a-si-ta. ANIM:be.at-3PLS-STVZR
   ‘Where are the many spiders and many ants?’

14.2.4 Proprieteive Coordination

There are just a couple of examples in my corpus of coordination that appear to be formed with the proprietive marker.

In (14.45) two different speakers use the proprietive marker =bu as a coordinator-like form. The proprietive marker is used on predicating NPs to mark a possessive or attributive relationship (§11.5).
In (a) Fiona=bu=m Tom=bu=m ‘With Fiona and Tom’ is clearly the object for the first clause. In (b) Mumuru mu=bu Savamui mu=bu yifsiare mu=bu ‘Mumuru women, Savamui women, Yifsiare women’ is more like a fragment. At any rate, the full status of this construction is at this stage unclear.

(14.45) (a) Te luk=b Fiona=bu=m Tom=bu=m
1SG Luke=COM Fiona=PROP=OBL Tom=PROP=OBL
nayin-e. Sandaun motel rum
follow-EMPH Sandaun motel room
ma-nepri-fi. Yery
1PLO-TRANS>one:go-3DUŞ 1PL
ma-tyebri-si.
1PLO-TRANS>many:go-3PLS
‘Luke and I followed Fiona and Tom. They took us to a Sandaun motel room. They took us.’

(b) Esy=m kaani-si-mu momu-e! Mumuru
sago.jelly=OBL mix.sago-3PLS-VOL.FUT NEG-EMPH Mumuru
mu=bu Savamui mu=bu, (2sec) yifsiare
woman=PROP Savamui woman=PROP Yifsiare
mu=bu, (2sec) sumui mu na-pwen —
woman=PROP Sumui woman many.-come
Ah! Esy a-kaani-si a-kaani-si
EXCLM sago.jelly IMPF-mix.sago-3PLS IMPF-mix.sago-3PLS
a-kaani-si ...
IMPF-mix.sago-3PLS
‘They will make sago jelly now! The women of Mumuru, with the women of Savamui, with the women of Yifsiare, the women of Sumui, (together) they came and—Ah! they were making making making sago jelly! ...’

14.2.5 Possession

Possessive relations in compounding can be marked by genitive case, genitive pronouns, or by possessed kin terms. All are usually marked intonationally, but in one of the examples below, TP na ‘and’ is used.

The examples below show that a genitive NP can be either (a) coordinated nominals sharing a single genitive marker, or (b) marked on each.20 In (c), there is a complex mix of comitative coordination (§14.2.2) which

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20In (14.46b), the coordinated genitive NPs then share a single oblique marker.
is then marked as genitive. The plural genitive is used to indicate collective ownership, while in (b) the singular genitive is used to mark separate ownership.

(14.46) (a) *Nepu yeko eru bofu=s*  
animal true that head=RSTR  
y-o-wo,  
bofu key=u=s.  
D-[IMPF][INAN:there.be-3SGS:NZR head arm=SG:GEN=RSTR  
‘The animal there is just a head, its head and arm only.’

(b) *Kwo bofu Tom=u na Fiona=u=m*  
fire head Tom=SG:GEN and Fiona=SG:GEN=OBL  
y-owo.  
D-[IMPF][INAN:be.at:3SGS:NZR  
‘There is a light at Tom’s and Fiona’s heads.’

(c) *Fiky Kana=u, Seku=b=nwu,*  
house Kana=SG:GEN Seku=COM=PL:GEN  
Ori=b=nwu yefu=b=nwu,  
Ori=COM=PL:GEN husband:SG:POSS=COM=PL:GEN  
kisy=m kow te-pwe fiky  
rubbish=OBL come.down\3SGS TRANS>many-come house  
eru=m a-sku-ta.  
that=OBL IMPF-dump-STVZR\3SGS  
‘Kana’s house... (including) of Seku, and (the house) of Ori and of her husband, (the flood) brought rubbish and dumped it on those houses.’

In (14.47a) the coordinated NPs include a genitive pronoun modifier for each head noun. The third coordinated NP happens to be the possessor for these genitive pronouns. In (b) the three coordinated NPs also include possessive structures; this time a possessed kin noun *mufu* ‘his wife’ and a genitive pronoun. The possessor for each builds through the utterance. The possessor of the second NP is the first, the possessors of the third are the first two.

(14.47) (a) *Mufu wobu baso wobu,*  
yime eru, nu otokta-si eru.  
man that already many.sit-3PLS that  
‘His wife and his child, and the man (himself) sat.’
14.2.6 Parallel action

Momu uses *sisy* in coordination to convey parallel or near parallel action. *Sisy* ‘also’ is marked on the subject, and sits outside the NP. Parallel action is not collective, and it only implies simultaneity (§14.2.7). At best the actions can be described as overlapping.

In (14.48), there is both a (a) tight and (b) loose version. In the tight version, coordinated subject NPs share the same predicate, while the loose version is of coordinated clauses, which have possibly non-identical predicates.

(14.48) (a)  
\[
\text{Mu tabu sisy, mu tabu,}
\]
\[
\text{woman 1SG:COM:GEN also woman 1SG:COM:GEN}
\]
\[
\text{bafo sisy, sibti ki-ta-si feymon}
\]
\[
\text{father:SG:POSS also nose dry-INCH-3PLS argue}
\]
\[
\text{ni-si y-a-sa.}
\]
\[
\text{perform-3PLS D-[IMPF|ANIM:there.be-3PLS:NZR}
\]
\[
\text{‘My wife and my wife’s father too, they are there stony faced and cross.’}
\]

(b)  
\[
\text{Esyu sisy ondyitu y-a-koy-nin-o,}
\]
\[
\text{dog also face.down D-IMPF:see.many-3PLO:VTR-3SGS:NZR}
\]
\[
\text{baso peru eru sisy fukonwu}
\]
\[
\text{child small that also be.prone}
\]
\[
\text{y-a-koy-nin-o.}
\]
\[
\text{D-IMPF:see.many-3PLO:VTR-3SGS:NZR}
\]
\[
\text{‘The dog faces downwards looking at them and the small boy also lies prone looking at them.’}
\]

A similar coordination type occurs in the Trans New Guinea language Mian, in that it employs an ‘also’ marker =sa as a coordinator Fedden (2011, pp219–221), however, the use in Momu appears to be more specifically for parallel actions.
14.2.7 Collective and simultaneous coordination

In the looser intonational coordination, and in representative coordination, collectivity and simultaneity are often open to interpretation. In tighter co-ordinative structures like serial verb constructions, these features may be apparent based on the construction type. Manner serialisations (§13.2.1) necessarily indicate simultaneity. Cause-effect serialisations (§13.2.3) necessarily indicate temporal sequencing without overlap. The accompanitive (§13.2.4.1) necessarily constructs a (semantic) collective group (but partitions them for the purposes of subject tracking). Similarly, comitative coordination (§14.2.2) as an explicit marker of coordination also indicates a collective sense for the coordinated referents.

There are two relevant adverbs that adjust the semantics of coordinands: *ikob* ‘together’ and *siskub* ‘at the same time.’ These adverbs could be considered to contribute to what Haspelmath (2007a, p.15) calls emphatic coordination. However, use is not exclusive to coordinated forms.

With *siskub*, the event performed by the coordinated referents is simultaneous or coordinated. That is, if the unmarked form is ambiguous with respect to the simultaneity of the action, the addition of the adverb clarifies that the event is simultaneous.

\[(14.49) \quad \text{(a)} \quad \text{Mu} \quad \text{tyenebem ef, yime tyenebem ef,} \]
\[\text{woman two and one man two and one} \]
\[\text{na-pyenin-si-bus, siskub na-pyenin-si.} \]
\[\text{many.-stand-3PLS-LNK same.time many.-stand-3PLS} \]
\[\text{‘3 women and 3 men first stand up, at the same time, they stood up.’} \quad \text{bernard-reciprocals}\]

\[(14.49) \quad \text{(b)} \quad \text{A-ta-fi-u-\text{ne, siskub. Mufu \ make \ tebria} \text{wife:S\ POSS fly\3SGS} \text{yefu \ make \ tebria. Siskub} \text{husband:S\ POSS fly\3SGS same.time}} \]
\[\text{ina=otota-fi kifyi. many.go=many.sit-3DU\ consume:3DU} \]
\[\text{‘They do it at the same time. The wife flew off and the husband flew off. At the same time they go sit and they ate.’} \quad \text{kasper-kokomo}\]

The semantics of *ikob* ‘together’ is dependent on the verb with which it co-occurs. So for instance in (14.50a), *ikob yasa* ‘be together’ functions to indicate that the referents—*bafu tya masu tya* ‘his mother and father’—are
co-locational, relative to the previously mentioned child. In (b) *ikob muskeraimu* ‘we dig together’ means that the task is jointly attended to.

(14.50) (a)  *Baso nibu anu anta oton-bus,*

child 3PL:COM:GEN this do.like.this one.sits-LNK

*bafu tya masu tya ikob*

father:SG:POSS RCO mother:SG:POSS RCO together

D-[IMPF]ANIM:there.be-3PLS:NZR

‘Their child sits here first, like so, and there are his father and mother together.’

(b)  *Yerebu ikob muske-rai-mu.*

1PL:COM:GEN together scrape.dig-1DU-S-VOL:FUT

‘Let’s dig together.’

### 14.2.8 Inclusory conjunction

What Haspelmath (2007a, pp.33-35) refers to as ‘inclusory conjunction’ is a topic discussed at two different points in this thesis. This is in part because so much of conjunction is commonly expressed without a coordinator and so these constructions have been placed next to similar topics.

For inclusory conjunctions involving pronouns, these are treated as ‘inclusory constructions’ and are considered in §5.4.2. Inclusory conjunctions involving possessed kin nouns are considered in §14.1.1 as co-compounds.

### 14.3 Disjunctive coordination

The coordinator for disjunction is *o* ‘or’ and is borrowed directly from TP *o* ‘or.’ It is a postpositive coordinator occurring after all coordinands, be they nominal, phrasal or clausal. The disjunctive coordinator can be used interrogatively or non-interrogatively, and the difference is prosodically marked. As a coordinated disjunctive interrogative, the function differs from a polar interrogative. It is instead an ‘alternative question’ form (§10.3.2).21

For instance, (14.51) gives examples of predicative uses of NPs that contain disjunctive coordinands. In (a) the rising intonation on both coordinators marks it as interrogative. In (b) the use is standard (declarative), and the intonation on the coordinators is falling.

---

21A disjunctive interrogative asks for a yes-or-no response while an alternative question form asks the responder to select from the named set, or name an alternative.
Yeko anu muny o bin o?
true this aibika or beans or
‘Is this aibika (Abelmoschus manihot) or beans (or something else)?’

Sibti tya eru sibti kefe fafo o iba o.
nose RCO that nose some long or flat or
‘Many noses, some noses are long or flat.’

Although I describe the coordination as postpositive, there is considerable variation in its use. In (14.52) we see bi-syndetic post-positive use (a), mono-syndetic use (b) and pre-positive use (c). In (b) we also see the disjunctive coordinator scoping above the oblique. This is not the case for unmarked or comitative-marked conjunction.

Mu o yime o y-a-yiskon-o.
woman or man or D-IMPF-yell-3SG:NR
‘A woman or a man is yelling.’

Bot sisy pin-u o, Mosbi=m, o
boat also one.goes-NZR or Moresby=OBL or
haus sik=m pin-u sisy-e, fiiki=m
hospital=OBL one.goes-NZR also-EMPH close=OBL
onfa, maku mengi!
NEG.MOD far INTENS
‘The boat for going or, for going to Moresby or a hospital is not close—it’s a very long way!’

Anu mey u wobu yeeko anu. O kusu o
this teeth seed 3SG:COM:GEN true this or blood or
kain olsem.
something.like.that
‘This is his teeth (flying through the air). Or blood or something like that.’

The disjunctive coordinator can be used with full clauses as well. The distribution of the coordinator is as varied for this kind of conjunction as it is for nominals. (14.53) gives some basic examples of clausal disjunction, with all three variants of disjunctive coordinator use.

Yime anu oko nu pyinu tyako=m
man this ground already be.night sleep=OBL
wow n-a-ku-wo.
O
go.across\3SGS PX-IMPF-sleep\3SGS-3SGS:NZR or

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14.4 Adversative coordination

Adversative coordination is an interpreted meaning of intonational coordination (§14.2). The adversative meaning is not overtly marked as such, but is rather interpreted from the lack of cohesion of the events in the coordinated clauses.

In (14.54), the adversative reading is clear from the semantic incompatibility of the coordinated clauses. In (a), the desires are conflicting and in (b) one cannot be ruined by someone else, and ruin oneself. More or less common to all is that the subjects contrast between coordinated clauses.

(a) Ni wakf-a-si ... ni pana-si-mu, te 3PL firm-VTR-3PLS 3PL get-one-3PLS-VOL.FUT 1SG wakf-ar te panai-mu. firm-VTR[1|3SGS] 1SG get-one[1SGS]-VOL.FUT
‘They were firm that they would take her, but I was firm that I would take her.’

(b) Kusen o sen ai o? lie\3SGS or one.dies ANIM:there.be[1|3SGS] or
‘Is he unconscious or dead?’

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Specific adverbs in the second clause, or combinations of modal or aspectual marking across clauses can signal particular adversative meanings. The adverb *fesis* ‘again’ signals a concessive meaning in (14.55a). In (b), the second clause specifically indicates negative reciprocation, in contrast to the first clause. This is one use of the adverb *akfu* ‘reciprocally’ (§10.2.2.3). In (c), an inceptive-marked clause (§12.1.2.4) frequently sets up an adversative reading when the following clause is in some way incompatible.22 Use of the adverb *yesy* ‘just’ in the second clause in such adversatives leads to a substitutive (in the sense used by Thompson, Longacre and Hwang (2007, pp263–264) for adverbial clauses).

(14.55) (a)  
\[ Pwe=a=m \quad oton, \quad fesis \quad esyu \]  
\[ \text{one.comes=here=OBL one.sits[1|3SGS] again dog} \]  
\[ y-a-tapwen-o. \quad \text{D-IMPF-cut-3SGS:NZR} \]  
‘He came and sat here, but the dog is chasing him again.’

(b)  
\[ Baso \quad tabu \quad pi=yinu \quad ian \quad baso \]  
\[ \text{child 1SG:COM:GEN GO:FUT=laugh laugh[1|3SGS] child} \]  
\[ tabu \quad yinu \quad akfu \quad ia=momu. \quad \text{1SG:COM:GEN laugh reciprocate laugh[1|3SGS]=NEG} \]  
‘I went and smiled at my child, but my child did not smile back at me.’

(c)  
\[ Fisbu \quad peru \quad ney=mesti \quad yebo, \]  
\[ \text{Fisbu small come.across[1SGS]=INCEP[1SGS] then} \]  
\[ anebo \quad kwo \quad wuki \quad u \quad eru \]  
\[ \text{3SGO:hear[1|3SGS] tree Wugi seed that} \]  
\[ loono. \quad \text{break.through\3SGS} \]  
‘I’m about to come across a minor branch of Fisebu but then I hear a Wugi fruit fall (break through).’

---

22 Use of the inceptive does not automatically trigger an adversative reading however. It is possible for a compatible clause to continue on (§12.1.2.4).
Subordinate clauses are clauses that function in place of another unit or phrase (Thompson, Longacre and Hwang, 2007). In this chapter, I provide an overview of many subordinate clause types that occur in Momu, including clauses that function as modifiers to nominal forms (§15.1, §15.8), and clauses which modify other (main) clauses (§15.2, §15.3, §15.4, §15.5, §15.6, §15.7, §15.9). Clauses that function as noun phrases (§16.2) are covered separately in §16. Subordinate clauses in Momu are formed with non-finite clauses that more or less approach the same form as a main clause, but show varying degrees of restriction upon realisation of inflectional categories and arguments (§16.5). The specific clause types depend on varying combinations of subordinators and clausal forms.

At the end of this chapter I revisit the many constructions introduced at the beginning, and group them by function or semantic type (§15.10).

Relevant to many construction types here is a contrast in viewpoint aspect (§7.1); specifically a contrast between perfective and imperfective aspect. At times, I label these as “events” and “spans” respectively, following Longacre (2007).1 Spans incorporate durative readings of inchoative verbs, and events incorporate resultant-state readings of inchoative verbs.

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1Longacre (2007) uses events and spans in the context of succession or temporal sequences. Here I also use them for overlapping elements, where Longacre uses punctiliar and continuous to differentiate them. I will instead be explicit about whether the relevant relationship is overlap or succession.
15.1 Relative clauses

Relative clauses are subordinate clauses that function as nominal modifiers (Thompson, Longacre and Hwang, 2007). These clauses can function to restrict the reference of the nominal that they modify (Andrews, 2007; Keenan and Comrie, 1977), but can also function to supplement a clause with detail that extends beyond reference. Both types are considered here.\(^2\)

The basic components of a relative clause in Momu are a head noun, a reduced, sentence-like clause (§16.6), and a relativiser—in that order. The distal demonstrative *eru* and sometimes the proximal form *anu*, and their reduced counterparts\(^3\) *e* and *a* are used as relativisers in Momu. The relative clause is positioned after the noun that it modifies. Specific alternate constructions exist for obliques (§15.1.2) and genitives (§15.1.3).

The overall NP containing the relative clause may be case-marked to indicate its relation to the main clause. Because additional modifiers are limited and uncommon, the case marker is generally applied to the relative clause on the right edge. The noun being modified by the relative clause is unmarked for its role within the subordinate clause. There is no relative pronoun within the relative clause.\(^4\) In the absence of overt marking, the role of the relativised head within the relative clause is often inferred from context.

(15.1) shows examples of relative clauses where the head noun’s role within the relative clause is (a) subject, (b) object, (c) location-oblique, (d) instrument-oblique, (e) theme-oblique, and (f) genitive. Relative clauses are marked in bold. These roles attract relational-case marking (except subjects) in main clause positions (§4.8.1, §8.2.2, §8.2.3), but case is not in any way marked on the head noun in the subordinate clause. The role of the relativised noun in the relative clause is generally inferred from context. That context includes the absence of an NP in the relevant position in the relative clause, but then it is also very common for other elements (including

\(^2\)Not considered here: relative clauses in Momu are a major and common type of insubordination (Heine, Kaltenböck and Kuteva, 2016). A casual glance over the example texts (§A) will reveal many instances of insubordinate uses of the demonstratives *anu* and *eru*. Unfortunately, for reasons of space, this topic will not be treated in this thesis.

\(^3\)The reduced relativisers *e* and *a* are clitics. Most commonly they form a phonological word with a case marker, or they are enclitic to the predicate of the relative clause. The combination of the relativiser *anu* with the directional marker =*ti* often reduces to *anti*.

\(^4\)Relative pronouns are not used generally, except in a subset of cases where a genitive is relativised (§15.1.3).
the head noun) to be topically elided. An unmarked but overt head, and the absence of NP in the relative clause is what I refer to as the general strategy for relative clauses in Momu.

(15.1) (a)  
\textit{Eru yefu eru fyim}  
that husband:SG:POSS that water=OBL  
\textit{pi=kuw eru}  
one:goes:consume\3SGS that[REL]  
\textit{pi=mufo=m}  
GO:FUT=wife:SG:POSS=OBL  
n-a-pupu-er-o.  
PX-IMPF-beat-3SGO:VTR-3SGS:NZR  
‘That is her husband, who drank beer, beating his wife.’

(b)  
\textit{Man tya eru tyi-fi eru}  
string.bag RCO that carry:many-3DU:SG that[REL]  
nukuw\-ta tyi-fi-mu.  
load-STVZR carry:many-3DU:VOL:FUT  
‘Those bags that they carry, they will carry filled up.’

(c)  
\textit{Te feku Flerwick wufe nuku fwaik-e fwaik-e ta}  
1SG place Flerwick trap rope tie:up\~iter\~do  
\textit{eru=m}  
1SG that[REL]=OBL 1MPF-search:for-3PLO:VTR\1SGS  
‘I am searching for the place where Flerwick tied up traps about the place.’

(d)  
\textit{Te kaf Slupi fyim kuw e=m}  
1SG cup Slupi water=OBL consume\3SGS that[REL]=OBL  
\textit{panai-mu.}  
get:one\1SG:VOL:FUT  
‘I will get the cup Slupi drank from.’

(e)  
\textit{Mony te bun eru, te yey-en-a,}  
talk 1SG hear that[REL] 1SG say:to-3SGO:VTR-1SGS:NZR  
kamefeta-meta.  
know\3SGS:EP1:FUT  
‘He will understand should I tell him the talk that I heard.’

(f)  
\textit{Yime yeko anu, key anta anu.}  
man true this hand do:like:this\3SGS this  
‘This man (we’re talking about), is (the one) whose hands are like this.’
In all of the above examples, the same general strategy is employed. In addition to this general strategy, obliques can be coded by internally headed relative clauses (§15.1.2). For genitives, only inalienable possession or possessed kin are coded by the general strategy. Both alienable and inalienable possession can be marked with a relative pronoun (§15.1.3).

The role of the NP containing the relative clause is straightforwardly marked as with all other NPs, on the right edge. So for instance, in the example below, the relative clause is within a genitive NP, marked as such by the singular genitive \( =u \). This genitive, in turn, modifies the noun *kumasy* ‘bow’, and this NP is marked as the object of the main clause by the oblique marker \( =m \).

(15.2) \( Te \ kumasy \ yime \ won \ y-ai-wo \)
\[
\begin{align*}
&1SG \ bow \quad man \quad go.up \ D-\text{ANIM:there.be-3SGS:NZR} \\
&\text{eru} = u = m/ \quad \text{panai.} \\
&\text{that[REL] = SG:GEN=OBL} \quad \text{get.one}[1SGS] \\
&\text{‘I got the bow of the man who is up there.’}
\end{align*}
\]

Modifiers occurring before or after the relative clause are extremely uncommon but possible. In (15.3a) the relative clause is post-modified by a demonstrative adverb (underlined). In (b) the relative clause is preceded by an adjective (also underlined).

(15.3) (a) \( Peenu \ eru \ e = m \)
\[
\begin{align*}
&[\text{one.}.] \text{arrives} \backslash 3SGS \quad \text{there = OBL} \\
&a.i-ku-pan. \\
&\text{IMPF-sleep} \backslash 3SGS-\text{until.dawn} \\
&\text{‘He slept until dawn there at (the place) where he arrived.’}
\end{align*}
\]

(b) \( Bie, \ kaf \ anow \ fyi \ atim \ eru = ti, \ kuw \ sisy \)
\[
\begin{align*}
&\text{what\textit{sit} cup big water heat that[REL] = DIR food also} \\
&\text{eru kaf tya plet tya bu-si} \\
&\text{that cup RCO plate RCO put\textit{.many-3PLS}} \\
&\text{y-o-wo} \quad \text{eru} = ti. \\
&\text{D-[IMPF]INAN:there.be-3SGS:NZR there = DIR} \\
&\text{‘A what\textit{sit} – a big cup that heats water (i.e. a kettle), food too,} \\
&\text{cups and plates and so on, they’re all placed there.’}
\end{align*}
\]

As with regular NPs, a modifier can fill the role of the head (§5.2).
(15.4) (a) *Su eru, mukwayu menyi si-nin* shoe that big INTENS slide.on-3PLO:VTR[1][3SGS]
\[ eru, yeko eru. \]
that[REL] true that ‘The shoes, the really big ones that he wears, are there.’
(pointing at picture)

(b) *Eru nu feno eru nu kamefare.*
that just remain\[3SGS] that[REL] just understand:like:that ‘The one that remained thus understood.’

(c) *Kefe na-pwe-si eru amku-er-si.*
some many.-come-3PLS that[REL] ignore-3SGO:VTR-3PLS ‘Some that came ignored him.’

The subordinate clause is a basic, sentence-like clause (§16.6). The volitional future and realis progressive can be used, as well as other aspect marking.

15.1.1 Discourse pragmatic interactions

Relativisers can both come from and develop into discourse markers (Hendery, 2012). For instance, relative clauses in the nearby Imonda language are expressed as a pre-modifying use of topic-marked clauses (Seiler, 1985). Relative clauses in Momu are subject to the same conditions as found elsewhere throughout the syntax. Topical heads can be elided, focussed, posed as afterthought repairs, and so on.

To varying degrees relative clauses can occur at some distance from the head that they modify. For instance, in (15.5), the heads occupy the topic slot of the main clause. This is indicated by a minimal pause and break in intonation, plus in (a) a demonstrative modifier indicating the right boundary of the NP, and in (b) contrastive focus marking.

(15.5) (a) *Yime anu fiky siebo=m ai* man this house white=OBL ANIM:be.at[1][3SGS]
\[ eru pwe=b, mufo eru yeb \]
that[REL] [one:]comes=COM[ADV] wife:SG:POSS that then \d-IMPF-come.down\[3SGS-3SGS:NZR ladder \]‘When this man, (the one) that was in jail came, his wife then is coming down the ladder.’

(b) *Yime=ne patya anu pyinu.*
man=FOC start\[3SGS this[REL] run\[3SGS ‘As for the man, the one that started off, he ran.’
Headless relative clauses are extremely common. What the relative clause refers to, and what position in the main clause it occupies is assumed by the speaker to be recoverable by the hearer. In (15.6a) the elided head occupies the subject position of both the relative clause and the main clause. In (b) it is the locative oblique to both.

(15.6) (a) \[ Key \text{ efefwar} \quad \text{ eru,} \quad \text{ fey}=m \]
\[
\text{hand} \quad \text{fold.one}[1|3SGS] \quad \text{that}[\text{REL}] \quad \text{fight}=\text{OBL} \\
\text{ta-mu.} \\
do;3SGS-VOL.FUT \\
‘(The one) that has clenched his fist will fight now.’
\]

(b) \[ Te \quad \text{kufeneti}=ai \quad \text{ eru}=m \]
\[
1SG \quad \text{one.be.hide}=\text{ANIM:be.at}[1|3SGS] \quad \text{that}[\text{REL}]=\text{OBL} \\
\text{ukwa-mu.} \\
\text{find}:1SGO:VTR[3SGS]-VOL.FUT \\
‘He will find (the place) where I am hidden.’
\]

There are two patterns of repair where the speaker makes an initial minimal reference but provides specific followup in a right-dislocated afterthought. In (15.7a) and (b) the afterthoughts are headless relative clauses. In (15.8a) and (b), the heads are initially elided, and then provided as afterthought repairs.

(15.7) (a) \[ Te \quad \text{yime} \quad \text{ eru}=m \quad \text{pi}=on-mu, \]
\[
1SG \quad \text{man} \quad \text{that}=\text{OBL} \quad \text{GO.FUT}=\text{look.at.one}[1|3SGS]-\text{VOL.FUT} \\
\text{Mori} \quad \text{nisyi} \\
\text{Mori} \quad \text{shoot.one:3PLS} \quad \text{that}[\text{REL}]=\text{OBL} \\
‘I will go and see that man, (the one) that the Mori people shot.’
\]

(b) \[ Meno=m \quad \text{y-a-on-o}, \]
\[
\text{daughter}=\text{OBL} \quad \text{D-IMPF:look.at.one}-3SGS:NZR \\
\text{yefu} \quad \text{y-a-pupw-er-o} \]
\[
\text{husband}:\text{SG:POS} \quad \text{D-IMPF:beat}-3SGO:VTR-3SGS:NZR \\
e=m. \\
\text{that}[\text{REL}]=\text{OBL} \\
‘He is looking at his daughter, (the one) that is being beaten by her husband.’
\]

(15.8) (a) \[ Na-peeni-rai \quad \text{ eru}=m \quad a-rai, \]
\[
\text{many.-arrive-1DU} \quad \text{that}[\text{REL}]=\text{OBL} \quad \text{ANIM:be.at}-1DU\text{S} \\
\text{Kaspar} \quad a=m. \\
\text{Kaspar} \quad \text{this}=\text{OBL}
\]

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‘We are (at the place) where we arrived at, at Kaspar’s (house) here.’

(b) *Mo na-pwe=a=m*  

yet TRANS:one-come[1|3SGS]=this|REL|=OBL  

*oton-u=ne,*  

kwo anow a=m.  

one.sits[1|3SGS]-NZR=FOC tree big this=OBL  

‘He sits (at the place) where he came to, on the big tree.’

15.1.2 Internally-headed RCs

Relative clauses can be internally headed by specific forms which appear to be limited to generic nouns functioning as obliques. The full range of forms is not clear at the present stage of analysis.5 These are forms like *feku* or *fekob* ‘place’ for a locative oblique, or *mony* ‘talk’ for a theme-oblique. Further investigation is needed to establish what other internal heads are possible.6

(15.9) (a) *Te mony eru bun eru, te*  

1SG talk that hear[1|3SGS] that|REL| 1SG  

*te yey-e-meta.*  

‘The conversation that I heard, I will tell him.’  

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(b) *Mo te yime yeswo feku nuw*  

yet 1SG man pig place shoot.one\3SGS  

*eru=m on momu*  

that|REL|=OBL see.one[1|3SGS] NEG  

‘I have not seen the place where the man shot the pig.’  

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15.1.3 Genitives

There are two strategies for relative clauses where the role of the participant in the clause that is being relativised is as a possessor of another participant. These two strategies divide up on the basis of the type of possessive construction (§5.6). Possessed kin terms (§4.6.2), and inalienable body parts (as used, for instance, in external possession, §10.2.1) don’t mark the genitive on the possessor. Possessed kin terms are possessive-marked, and body parts are considered inalienable. For these categories, the general strategy discussed

5Note that the internal heads of §15.1.2 have only been observed in elicited data.

6In textual instances, topically elided participants frequently mean that it is not possible to class some relative clauses as internally or externally headed. However, it is clear that these same internal heads can be used as external heads as well.
so far is used: the possessor is relativised, and the possessed referent occurs otherwise unmarked in the relative clause.

(15.10)  

1sg bow man go.up D-ANIM:there.be-3SG:NZR

eru=y/=m/

that[REL]=SG:GEN=OBL get.one[1sgS]

‘I got the bow of the man who is up there.’

Otherwise, a genitive pronoun will fill the position internally, functioning as a relative pronoun.

(15.11)  

(b) Yeko eru key wobu tet-a-fi eru.

true that hand 3SG:COM:GEN tie-.one:VTR-3DU:S that

‘This is one whose hands they tied.’

(a) Yemkinu wobu uw pwana

half 3SG:COM:GEN cut\3SGS break\3SGS

eru=ne, yeb tekopwan.

that[REL]=FOC then cut.many.across:break[1\3SGS]

‘As for (the stick) whose portion he broke off, he then cuts it up.’

15.1.4 The Accessibility Hierarchy

In their seminal paper, Keenan and Comrie (1977) (also (Comrie and Keenan, 1979)) posit a hierarchy of grammatical functions that predicts constraints on the expression of relative clauses given the function in the relative clause of the relativised head. The core notions of this hierarchy have mostly stood the test of time, despite controversies about some of the formal categories drawn upon in the work (Andrews, 2007, pp226–231). Here I add to the body of work responding to these posited universals.

The expression of relative clauses in Momu conforms to the hierarchy, shown in (15.12).

(15.12) Subject > Object > Indirect Object > Oblique > Genitive >

Object of Comparison

A general strategy exists in the form of externally headed relative clauses lacking a relative pronoun. This strategy extends all the way though the hierarchy, excluding objects of comparison which have no mono-clausal realisation in Momu. Another specific strategy exists in the form of internally
headed relative clauses (§15.1.2), which applies only to obliques. An additional strategy also exists specifically for alienable possession. Inalienable possession and possessed kin use the general strategy (§15.1).

The accessibility hierarchy predicts that strategies should extend rightwards through the hierarchy as given in (15.12) without a break. This prediction is met by the general strategy in Momu. According to Keenan and Comrie (1977, p67) “a particular RC-forming strategy may apply to only a single position”. The specific strategies Momu has for obliques and for genitives are allowed for, as they do not extend to other positions.

15.2 Location-adverbial relative clauses

Locative adverbials are frequently expressed as headless relativised directional verbs (§3.6.2.1). The relativised predicate is always inflected for third person singular subject and takes no modal inflection. The object or event being located need not necessarily have been in motion, despite these verbs being ordinarily used to express motion in a specific direction.7

(15.13) gives examples of the pair of verbs now/waw ‘come across / go across’. These verbs express motion across some kind of threshold or barrier such as the doorway of a house, a river or the bush. These relativised forms express, for instance, that the event occurs in an area visible or invisible to the deictic centre.

(a) is a response to viewing a video with people sitting in frame, and occurs in the context of people entering and leaving the frame. (b) and (c) refer to locations on the other side of a barrier. In (b) the utterance is in the context of a series of pictures. The speaker refers to the location where they had previously seen the man in the picture using a relativised form. In (c), the speaker locates the event as being inside themselves.

(15.13) (a) *Mu yime kefe, now an=ti otota-si.
many.sit-3PLS
‘Some people sat here (in the open).’ (lit. where it comes across)

7See §13.2.2 for details of how these same verbs perform a similar adverbial function in motion serial verb constructions.
15.3 Comitative clauses

The comitative marker functions on many levels in the syntax of Momu (§4.8.3). In addition to functioning as a relational case on nominals, the comitative also functions as a subordinator for marking of temporal adverbial clauses.

The form of the subordinate clause is a deverbal clause with subject marking (§16.5.1). This deverbal clause cannot be marked for modal categories, but can be marked for viewpoint aspect (i.e., imperfective or perfective). Alternatively, a subject-inflected stem (§16.6.1) in the perfective can be used in a comitative clause. The subject or location of the subordinate clause need not be shared with the main clause, as demonstrated in the example below.

(15.14) Won-fi a-won-fi-u=be, yime
    go.up-3DUS IMPF-see.one-3DUS-NZR=COM[ADV] man
    na-pwe=na-peeni-si.
    many.-come=[PFV]many.-arrive-3PLS
    ‘As the two men were going up to visit God, the (other) men arrived.’

The ordering of the comitative clause relative to the main clause, and the viewpoint of the subordinate and main clauses affects determines the meaning of the adverbial clause. Possible combinations are plotted in Table 15.1.

---

8 The inceptive/desiderative =meni can be marked inside a comitative clause (§15.3.3), but appears limited to an inceptive sense.
Initial comitative clauses are far more common (§15.3.1). Instances of final comitative clauses are rare (§15.3.2). Irregular uses of a comitative clause are considered in §15.3.3.

<table>
<thead>
<tr>
<th>comitative clause</th>
<th>main clause</th>
<th>perfective</th>
<th>imperfective</th>
</tr>
</thead>
<tbody>
<tr>
<td>initial</td>
<td>perfective</td>
<td>sequence</td>
<td>span in event</td>
</tr>
<tr>
<td></td>
<td>imperfective</td>
<td>span in event</td>
<td>overlap</td>
</tr>
<tr>
<td>final</td>
<td>perfective</td>
<td>simultaneous</td>
<td>event starts span</td>
</tr>
<tr>
<td></td>
<td>imperfective</td>
<td>span in event</td>
<td>unattested</td>
</tr>
</tbody>
</table>

Table 15.1: Variation of comitative clauses by position and viewpoint

15.3.1 Sentence-initial comitative clause

The combination of an imperfective-marked comitative clause with a subsequent perfective clause indicates that the activity in the first clause persisted during the completion of the second. Both (15.15a) and (b) are straightforward examples of this combination.

(15.15) (a) Awen-a=b,
IMPF:see-1SGS:NZR=COM[ADV]
titmony-en
[PVF]whisper-3SGO:VTR[1][3SGS] here=OBL
pyen-af-e."
[one.]comes-COND:2SGS-EMPH
‘While I’m watching, I willed it: “come here.”’
bernard-christmas

(b) A-ki-fi-u=b
IMPF:sleep-3DUS:NZR=COM[ADV] frog that just
abo eru nu
onatin.
[PVF]one.separate[1][3SGS]
‘While they were sleeping the frog left them.’
ma-frog-story

When both clauses are imperfective, the activities are simultaneous or overlapping. In (c) the imperfective is an iterative sense in the comitative clause, and the final verb is inchoative (§3.1.1.2). The result-state of the inchoative verb is achieved over the duration of the iterative imperfective. Similarly in (d), a state verb is the predicate in the comitative clause indicating that the state holds during the event.
(15.16) (a) *A keka te nukwu yu anu wor*  
A dry.leaves 1SG vine vine.sp this go.down  
ai-wo=b, a-kwo seboy  
IMPF[ANIM:there.be-3SGS:NZR=COM][ADV] um tree Seboy  
niny y-a-oton-a anu.  
above [PROG]D-IMPF-put.one-1SGS:NZR here  
‘Um, while the dry leaves are underneath, I am putting the Seboy log on top here.’

(b) *A-pwen-a=b,*  
IMPF-[one.]comes-1SGS:NZR=COM[ADV]  
*oto=onyipin-a=b,*  
one.sits=look:toward-1SGS:NZR=COM  
y-ai-kuwe.  
[PROG]D-IMPF-consume\3SGS:NZR  
‘While I was coming, and when I crouched and looked toward it (the cassowary), it was eating.’

(c) *Sim e=m ku ai-ta=b yeb*  
try.to there=OBL sleep\3SGS IMPF-do\3SGS=COM then  
wune sukw-ta.  
stone similar.to-INC  
‘He tries to sleep there over and over, then turns into stone.’

(d) *Nu poonu=ba faino eru ni*  
just be.broken\3SGS=COM[ADV] child that just  
y-ai-wo eru.  
[PROG]D-[IMPF]ANIM:there.be-3SGS:NZR that  
‘(The barrier) is broken, and the chick is there (in the hole).’

When an initial comitative clause is perfective, and the second clause is too, the sense is of strong temporal sequencing. One event’s completion precedes the other. Despite the examples (particularly (b)), the sense of causation is not strong.

(15.17) (a) *Ereye=feno-fi-u=b, yeb*  
do.like.that=leave-3DU-S-NZR=COM[ADV] then  
won yeb won.  
[PVF]go.up[1\3SGS] then [PFV]go.up[1\3SGS]  
‘When they did it like that and left her, she then went up.’

(b) *Te yarse=b, ebsi to yeb*  
1SG [PFV]fall.down[1\3SGS]=COM leg 1SG:GEN then
kaanu.
[PFV]be.broken\3SGS
‘When I fell, my leg broke.’

(c) **Tu! yenu=be,**
    
    *bang! [PFV]say\3SGS=COM[ADV] there=OBL
    tu=tyinu,
    [PFV]come.down\3SGS=be.fall\3SGS
    a-sesobneta-wo=b.
    IMPF-shake-3SGS:NZR=COM[ADV]
    ‘When (the gun went) BANG, (the cassowary) fell over on the spot, quivering.’

When a perfective is followed by an imperfective, whether the first or second is the comitative clause, the bounds of the (imperfective) span include the (perfective) event within it. In (15.17c) above and in (15.18a) below, the comitative-marked span includes the moment of the event. In (b) the state (sen ‘be dead’) of the span includes the comitative-marked event.

(15.18) (a) **Tyekni=pin**
    be.accompany.by.many=one.goes[1|3SGS] song that=OBL
    avuya=be
    IMPF:Sing\3SGS:NZR=COM[ADV] that
    ‘He went, accompanied by them, singing all the while.’

(b) **Pi=fekob**
    GO.FUT=place Sumo.village there=OBL many.-Arrive-1PLS
    Na-peeni-t=be,
    yeb sen.
    many.-Arrive-1PLS=COM[ADV] then one.dies[1|3SGS]
    ‘We arrived at Sumo village. When we arrived, she was dead.’

(c) **Key i-e=feno-wo=b,**
    hand [PFV]pull-3SGO:VTR=leave-3SGS:NZR=COM[ADV] and
    afa=m y-a-tapwen-o nu-e.
    another=OBL [PROG]D-IMPF-cut-3SGS:NZR just-EMPH
    ‘When/once he had shaken her hand (lit. pull), he was off chasing (lit. cut) the other.’

**15.3.2 Sentence-final comitative clause**

As we saw above, comitative-marked clauses can postmodify the main clause. This ordering is far less common. Sequences where an imperfective clause
is postmodified by an imperfective comitative clause don’t appear possible.

We saw above in (15.17c) and (15.18a) that a perfective event can be post-
modified by a comitative-marked imperfective span.

In addition to this, an imperfective span can be postmodified by a comitative-
marked perfective event, indicating an event triggering the span (15.19a). Or, a
perfective event may be postmodified by a comitative-marked perfective
event, indicating simultaneity (15.19b).

(15.19) (a) Fa a-nu sis-y, a-koyfi-ta-ta,
    child this also IMPF-cry-do\3SGS-STVZR
masu=m anebu=b.
    mother:SG:POSS=OBL [PFV]3SGO:hear\[1\]3SGS\=COM[ADV]
‘The child too might be crying when he hears his
mother.’

(b) Fi-nyib ei- kab
night EXCLM morning
pi=koy-nin ati- nu yunyi
go:fut=see.many-3PLO:VTR\[1\]3SGS\ perhaps just sun
nu wor-o=b.
just [PFV]come.down-3SGS:NZR\=COM[ADV]
‘In the evening—no—morning, I went to visit them, at about the
time the sun came down (i.e. past midday, not
sunset)’

15.3.3 Irregular cases for comitative clauses

Here I discuss less typical uses of comitative clauses.

I do not have many examples of modal marking in the context of comit-
ative clauses. (15.20) shows the main clause marked as volitional future.

(15.20) Kuw=m koyfita=b “sa sa sa sa”
    food=OBL [PFV]cry\3SGS\=COM[ADV] sa sa sa
erenu-mu eru.
do.like.that\3SGS-VOL.FUT that
‘When it cried for food, “sa sa sa sa” is how it would
sound.’

(15.21) shows that =menu (§12.1.2.4) can be used within the comitative
clause. This form can code both inceptive and desiderative senses, and it
appears that both can apply within a comitative clause.

(15.21) (a)
(15.22)  \textit{Nu}  \textit{fukobta-mu}  \textit{nu.} \textit{Nu}  \\
\textit{just break.through\textbackslash{}3SGS-VOL.FUT just just} \textit{fukobta\textbar{}menu-wo=b.}  \\
\textit{break.through\textbackslash{}3SGS=INCEP\textbackslash{}3SGS-3SGS:NZR=COM[ADV] just} \textit{fukobta aru.}  \\
\text{[PFV]break.through\textbackslash{}3SGS that} \text{‘It will break through now. Just as it is about to break through, it has broken through.’} \\
\text{kaspar-kokomo}

(b) \textit{Suf=menu=ba}  \textit{masu} \text{hold=DESID\textbackslash{}3SGS=COM[ADV] mother:SG:POSS} \text{\textit{suf} = y-a-i-en-o.} \text{hold=} [\text{PROG}\text{D-IMPF-pull-3SGO}\text{VTR-3SGS:NZR} \text{‘When he wants to grab (the pig), his mother is dragging him away.’} \text{picture-task-part2}

In (15.23) the comitative-marked inchoative verb \textit{ufta} ‘be strong’ is not marking a temporal relationship, but rather a manner. Similarly, in (15.17c) (repeated below), \textit{asesobnetawob} ‘shaking’ also indicates a manner.

(15.23)  \text{... tyipwan.} \text{I-e\textbar{}i-e=ar} \text{\textit{ufta=b,}} \text{be.strong=com[ADV] then \textit{[PFV]discard.one-go.down\textbackslash{}3SGS \text{‘... and he snapped it. He pulled at it repeatedly, with force, and then threw it down.’}} \text{cut-and-break-part1}

(15.17c) \text{Tu!} \text{yenu=be,} \text{e=m} \text{\textit{tu=tyinu,}} \text{[PFV]say\textbackslash{}3SGS=COM[ADV] there=OBL} \text{\textit{tu=tyinu,}} \text{[PFV]come.down\textbackslash{}3SGS=be.fall\textbackslash{}3SGS \text{\textit{a-sesobnetawob=b.} \text{IMPF-shake-3SGS:NZR=COM[ADV] \text{‘When (the gun went) BANG, (the cassowary) fell over on the spot, quivering.’}} bernard-cassowary}

In (15.24), comitative-marked nominals are interpreted as predicates. The noun \textit{yinu} ‘smile/laughter’ in (a) expresses a state or span, and the predicating adjective \textit{sukw} ‘be similar to’ in (b) is an event. See also §11.8 for predicative uses of adverbial clauses more generally.

(15.24) (a) \textit{Yinu=ba y-ai-tu-wo,} \text{laughter=COM [\text{PROG}\text{D-IMPF-\text{come.down}\textbackslash{}3SGS-3SGS:NZR}} \textit{yime eru pin=b.} \text{\textit{man that [PFV]one.goes\textbackslash{}1\textbackslash{}3SGS=COM[ADV]}}
‘She comes down (the ladder), laughing, when the man goes (to her).’

(b)  
Ni sisy yenifí ‘o o o o’. Wo sisy — faino
3PL also [PFV]say-3DUS o o o o 3SG also child
sisy — ‘o o o o’. A! nu sukwe=be.
also o o o o EXCLM just be.similar.to=COM[ADV]
‘They said “o o o o.” It too—the child too—(says) “o o o o.”
Aha! (It is) when they are alike.’

15.4 Compleitive clauses

The subordinating completive -sen suffixes to a subject-inflected stem (‘bare stem clause’, §16.6.1). The subordinate clause can be perfective or imperfective and can be placed in initial (§15.4.1) or final position (§15.4.2) in the main clause. This affects the overall meaning of the sentence. The perfective form of the subordinate clause sets a boundary. In sentence-initial position, it indicates the initiating conditions, and in sentence-final position it sets the terminal boundary. The imperfective form indicates a span that still meets the conditions for the perfective, but which has overlap with the main clause event. The overall sentential viewpoint may be perfective or imperfective as well. These combinations are shown in Table 15.2. Very commonly, the sentence is marked with a modal form, usually indicating future orientation.

<table>
<thead>
<tr>
<th>Compleitive clause</th>
<th>Main clause</th>
<th>Perfective</th>
<th>Imperfective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial</td>
<td>Perfective</td>
<td>close sequence</td>
<td>event initiates</td>
</tr>
<tr>
<td></td>
<td>Imperfective</td>
<td>event in span</td>
<td>overlap</td>
</tr>
<tr>
<td>Final</td>
<td>Perfective</td>
<td>unattested</td>
<td>event terminates</td>
</tr>
<tr>
<td></td>
<td>Imperfective</td>
<td>span terminates</td>
<td>span terminates</td>
</tr>
</tbody>
</table>

Table 15.2: Variation of completive clauses by position and viewpoint

The completive is identical to the synchronic full verb sen ‘one dies’. Similar suffixed forms are present amongst the aspectual suffixes (§7.5.2), where they likely arose from serialisation. Indeed, the meaning of this suffix is similarly concerned with boundary setting. However, in usage, this suffix

\[9\] Note that TP indai (or i dai in other parts of PNG) ‘death’ extends to “to stop, to cease, to end or to be ended”, but also in the context of desire or longing (Mihalic, 1971, pp79–80). In Momu, sen is common in many compounds: siensen ‘be hungry (hungry + die)’, momsen ‘talk’ (talk (n) + die), niysen ‘hit (shoot + die)’, kisen ‘lie down (sleep +
is restricted to subordinate clauses. In the absence of any other suitable elements, I consider it the subordinator. Also differentiating this form from serial verb constructions is the fact that the subject need not be shared with subsequent verbs.

15.4.1 Initial boundary ‘Once’

When the completive clause occurs sentence-initially, it indicates the initial boundary for the main clause.

An initial (perfective) event with a (perfective) event main clause indicates a close sequence of events initiated by the completive clause.

(15.25) (a) **Kukokw i-en-esen**, nibe eru ere

vine.sp [PFV]pull-3SGO:VTR-COMPL penis.gourd and.so

syesi pin-wow "fwo fwo fwo fwo".

wind [PFV]one.goes-across\3SGS fwo fwo fwo fwo

‘Once he (started to) light a fire (by pulling a vine back and forth under a log), his penis gourd knocked about in the wind (making the noise:) “fwo fwo fwo.”’

(b) describing preparing a garden

**Kwo su-esen**, bokuboku

fire [PFV]be.lit-COMPL things

kirip-nin aru, nukwu tyu.

[PFV]trim-.many:VTR[1|3SGS] that vine RCO

‘Once the fire was lit, I trimmed things – vines and so on.’

The sentence can be marked with the volitional future indicating that the initiating event must take place first (i.e., is non-actual).

(15.26) (a) **Mau teten-esen**, yeb

rain [PFV]stop.raining-COMPL then

pi-mu.

one.goes[1\3SGS]-VOL.FUT

‘Once it stops raining I will go.’

(b) **Masu eru fyi fwas-esen**, eru

mother:SG:POSS that water [PFV]bathe[1\3SGS]-COMPL that

yeb pwe=naaknu

then [one.]comes=be.accompany.by.one\3SGS
die’ and **senpin ‘go unconscious (die + go).’**
ai-mu eru.
ANIM:there.be[1|3SGS]-VOL.FUT that
‘Once the mother has washed, she will then come stay with (the baby).’

For sentences marked with the epistemic future, fulfilment of the initiating event makes the overall event possible.

(15.27) (a) \textit{Mesi=now-pwen-esen} fiiki
\begin{align*}
a=m, & \quad \text{eru na-pwe-t tyekta-r-meta.} \\
here=OBL & \quad \text{that many.-come-1PLS fill.liquid-1PLS-EPI.FUT}
\end{align*}
‘Once (the river) has come back again close by, we can come there and fill up (with water).’

(b) \textit{Oney=m pin-esen},
\begin{align*}
\text{Oney=} & \quad \text{Oney=} \quad \text{obl} \quad \text{pin-esen,} \\
\text{yey-wa-si-meta.} & \quad \text{talk.to-1|2SGO:VTR-3PLS-EPI.FUT}
\end{align*}
‘Once I have gone to Onei, they can tell me.’

The initial event can also mark the beginning of a span (future-marked or otherwise):

(15.28) (a) \textit{Nebesy eru, in-nepri-r-esen} \\
\begin{align*}
\text{sweet.potato} & \quad \text{that [PFV]plant-EXT-1PLS-COMPL} \\
\text{nebesy} & \quad \text{tya=m}
\end{align*}
‘Once we have planted out the sweet potato, we will be waiting for the sweet potato (and so on).’

(b) \textit{Anub ai-af-sen}, \\
\begin{align*}
\text{now} & \quad \text{[PFV]ANIM:there.be-COND:2SGS-COMPL song} \\
\text{uw-pi} & \quad \text{uw-pi=ar-r-meta.} \\
\text{sing-EXH-ITER=do.to-1PLS-EPI.FUT}
\end{align*}
‘You should stay now, so that we can sing songs.’

(c) \textit{Eru wusy eru, rata eru} \\
\begin{align*}
\text{that crayfish that ladder that} & \quad \text{orait wor-si} \\
\text{eteno-w-esena,} & \quad \text{alright go.down-3PLS} \\
\text{pun-si} & \quad \text{tu=ai-ar-si}
\end{align*}
give.many:3SGIO\3SGS=IMPF-do.to-3PLS
Those freshwater crayfish, once he put the ladder down into (the hole), they would repeatedly go down and get them for him.

When the subordinate clause is an (imperfective) span, the beginning of the two spans coincide. The span persists and is thus overlapping.

When the main clause is a (perfective) event, it is contained within the span.

(a) **Awon-fi-sen**  

imperf:see-one-3DUS-compl  go.fut=[PFV]one.sits  tree

afa=m  another=obl

‘Once they are watching him, he flew and sat at another tree and ...’

(b) **Yefko=m masu=m**

mouth=obl  mother:sg:poss=obl

imperf:regurgitate-go.down.in[1|3sg]-compl  3sg  also

ere=b  san-nua.

like.that=COM  [PFV]slide-come.up\3sgS

‘Once (its father) was regurgitating the contents of his mouth to its mother, it too reached out (with its beak).’

When the bounding span combines with an (imperfective) main clause span, the two overlap. Again the main clause can be future-marked, as in (15.30a).

(a) **Masu ai-kuw-esen,**

mother:sg:poss  impf:consume\3sg-compl  child=obl

yeb  fiy=m  ai-no-mu.

then  breastmilk=obl  impf:give.one:3sg\3sgs-vol.fut

‘Once (the child’s) mother is eating, she will then be feeding the child breastmilk.’

(b) **Hi-nin-sa=ne,**

[PFV]light.fire-many:vtr-3pl:s:nzr=loc

imperf:be.lit-distr-compl  that then sago.jelly=obl

cook-stvzr-3pl:s:nzr

‘Having lit fires, once they are burning all about, then they cook sago jelly.’

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(c) **God wob a-ikak-ninta-sen** kwu

God 3SG:COM IMPF-do.well.-many:VTR\3SG:COMPL food
yerbu emsu=m yeb wu-ta.
1PL:COM:GEN good=OBL then STANCE-STVZR
‘Once God is fixing everyone, our food might be good.’

### 15.4.2 Terminal boundary ‘Until’

When the completive-marked clause occurs sentence-finally it indicates the terminal boundary. This ordering of the completive-marked clause requires the main clause to describe an (imperfective) span.

When the completive clause is a (perfective) event, that event marks the end of the main clause span.

(15.31) (a) **Wow-now ai-ta,** fuku

wowu pin-esen makwu-mes o,
3SG:COM:GEN [PFV]one.goes[1]|3SG]-COMPL middle-ADV or
wow-pi=oku=ti o.
go.across\3SGS-go=bush=DIR or
‘It goes back and forth repeatedly until it goes to its place in the middle, or across towards the bush.’

(b) **Efeke oyiে=m usyi ai-ar-si mobke**

song Oiye=OBL sing:3PLS IMPF-do.to-3PLS coconut
u=m kasi-si-sen.
sago=OBL [PFV]cook-3PLS-COMPL
‘They were singing the Oiye, while they cooked sago and coconut.’

When the completive clause is an (imperfective) span, the end of that span is the terminal boundary for the main clause span.

(15.32) (a) **A-wuk-si aru=o,**

IMPF-look.after-3PLS that=EMPH
pa=aney-ta-sen;
yime cru mesis mu
GO.FUT=big-INCH\3SGS-COMPL man that again woman
afa yeb na-meta.
another then marry\3SGS-EPL.FUT
‘They would look after (the baby) until it grew up, and then that man could marry another woman again.’
15.5 Backgrounded clauses

The most common role for the focus marker =ne (§4.8.9), is to signal contrastive focus:

(15.33) Anub nanamuy kwu na anub n-a-kirye.
      now foreign food now now PX-IMPF-consume:1PLS:NZR
Na kubti=ne, wok yesy nebesy kisfu, mwepe
and before=FOC 3SG:RE just sweet.potato soup taro
kisfu, ...

‘Now we are eating foreign foods. But before, it was just sweet potato soup, taro soup ...’

A similar contrast can be established on a clausal level:

(15.34) Fyi ikakta kyekin-esen, esy yeb ikakta
      water do.well be.boil[3SGS]-COMPL sago.jelly then do.well
sen-mu. Na fyi kyekin=momu=ne,
one.dies[1|3SGS]-VOL.FUT and water be.boil[3SGS]=NEG=FOC
esy merekata-ma.
sag.jelly soft-INCH-APPR

‘Once the water boils well, the sago jelly will set well. But should the water not boil, the sago jelly might be soft.’

As a subordinator, the focus marker has a discourse pragmatic backgrounding function. That is, the clause indicates background information, relevant to the main clause. The form of the subordinate clause is a deverbal clause with subject inflection. The backgrounded clause can be perfective (events) or imperfective (spans). No sequence of spans linked in this fashion is attested, but the remaining combinations are possible.

Within an intonation unit, focus-marked clauses can be preceded by other subordinate clause types. I have, in these instances, taken these preceding
clauses to be within the backgrounded information (i.e., within the scope of the focus marker).\footnote{Focus-marked clauses can also be coordinated (§14.2.1.3).} Thus backgrounded clauses only occur sentence-initially.

Being background information loosely implies that in terms of temporal sequences, it precedes the main clause event or span. Spans do not imply temporal overlap, but nor do they deny it. Sequenced events need not immediately follow each other.

The use of a topic or focus marker as a marker of backgrounded information is found in other Papuan languages (Berghäll, 2016; Farr, 1999; Foley, 1986; Reesink, 1987). Near to Momu, Imonda employs a topic marker in a similar fashion. Seiler (1985, pp198–208) explores the use of this marker thoroughly.\footnote{The Topic marker in Imonda extends beyond similar functions in Momu. For instance, topic clauses can pre-modify nominal heads, functioning a bit like a relative clause (Seiler, 1985, pp64–67). Momu instead has a dedicated relative clause construction (§15.1).} Other Waris family languages employ topic markers for similar functions (Brown, 1990; Minch, 1992). The focus marker te in Kwomtari is central to a rich variety of coordinating particles, including standing alone to mark similar backgrounding functions (Honsberger et al., 2008). In all these languages, backgrounding is just one possible function. Frequently present is a conditional reading of a topic-marked clause. This appears to be the only clause level possibility, for instance, in Biaka (Hamlin, 1998, pp123–127).

In Momu, a conditional reading is possible for focus-marked clauses, though not common. There is a special particle skune (§15.5.4), which has a fused focus marker in its form. This can be used to construct conditional clauses. Additionally, in combination with imperatives, a second person subjunctive nominalised clause can be focus-marked (§15.5.3).

15.5.1 Relating events

Backgrounded perfective clauses relate to a perfective clause as a loose temporal sequencing of events.

\begin{align*}
(15.35) & \quad \textbf{Nene peteku pana} \\
& \quad \text{knife small get\text{-}one\$3$$S$$} \\
& =\text{nor-u=ne, napwa-feno.} \\
& \quad \text{[PFV]pierce\$1\$3$$S$$\$]-NZR=FOC [PFV]break\text{-}INCMP\$3$$S$$} \\
& \quad \text{‘Having gotten a knife and pierced it, it is partially broken.’} 
\end{align*}
For sequenced events, the main clause can be future-marked. This does not have scope over the backgrounded clause.

(15.36) (a) bekubeku eru-a, *redita-fi-u=ne*, yeb things that-EMPH [PFV]get.ready-3DU-S-NZR=FOC then tinu eru=m yeb buno-fi-mu. hole that=OBL then put.many.across-3DU-S-VOL.FUT

‘Having gotten all the things ready, they will then put them in the hole.’

(b) *Eru Warafu=m nery* that Warapu=OBL come.across:1PLS

*momse-t-u=ne* yeb Wanimo=m [PFV]talk-1PLS-NZR=FOC then Vanimo=OBL

ina-t-mu. many.go-1PLS-VOL.FUT

‘Having come into Warapu and discussed it, we would go to Vanimo.’

(c) *Taun=m pin-o=ne*, te meyero=m town=OBL [PFV]one.goes-3SG:S-NZR=FOC 1SG how=OBL on-mu=a?

see.one[1][3SGS]-VOL.FUT=Q

‘Having gone to town, I can’t see him (lit. how can I see him?)’

### 15.5.2 Relating spans and events

Backgrounded clauses may be imperfective spans related to events, or events related to spans. There is no implication of overlap between span and event, but such a reading is possible for some of the examples below. Relating spans to spans using backgrounding is not attested.

(15.37) gives examples of backgrounded spans with main clause events.

(15.37) (a) *A-wina-si-u=ne*, *nuwku tekenayen-a.* IMPF-swing-3PLS-NZR=FOC rope [PFV]snap[3SGS]-EMPH

‘They were swinging on the rope, and it snapped.’
(b) **Tekopwa-tekopwa=ai-ar-u=ne, yeb**

cut~ITER=IMPF-do.to-NZR=FOC

*tekopwa-pin.*

[PFV|cut-EXIT[1|3SGS]]

‘Having chopped away at it repeatedly, he cut all the way through.’

---

(c) **Eru=m sista aru,**

that=OBL be.worry\3SGS that

**ai-ku-pan-u=ne,**

IMPF-sleep-until.sunrise[1|3SGS]-NZR=FOC

*bamo-fanebo=m ye-nin*


1SG:GEN make.jelly-COND:2PLS-NZR

‘Having worried about that and slept through until sunrise, he then said to his younger sisters “make my sago jelly.”’

---

The examples in (15.38) relate a backgrounded perfective event to an imperfective span.

(15.38) (a) **Nuwku yefkeb, tit-nin-si-u=ne,**

vine vine.sp [PFV|tie.-many:VTR-3PLS-NZR=FOC

*eru ere yeb a-nermi-si.*

and.so then IMPF-lower.one-3PLS

‘Having tied many vines to the platform, they then were lowering it down.’

---

(b) **Baso eru, y-a-koyfita-wo.**

child that D-IMPF-cry-3SGS:NZR

**Amkuta-wu=ne,**

yeb y-a-koyfita-wo.

[PFV|ignore[1|3SGS]-NZR=FOC then D-IMPF-cry-3SGS:NZR

‘The child is crying. Having turned his back to him, he is crying.’

---

(c) **Eru fiwo eru kirimar,**

that animal.sp that [PFV|kill[1|3SGS]

**Kirimar-u=ne,**

*eru ere*

[PFV|kill[1|3SGS]-NZR=FOC and.so

ai-ku-pan eru. IMPF-sleep\3SGS-until.sunrise that

‘He killed many Fiwo (possum sp.). Having killed them, he then slept through until dawn.’

---

In relating events and spans via backgrounding, overall modal marking is extremely uncommon but is possible:
Non-verbal predicates (here taken to be spans) can also occur as backgrounded clauses:

(15.40) (a) \textit{Te} \textit{awu uyenu=ne, fyi=m}  \\
\hspace{1cm} 1SG skin hot=FOC water=OBL  \\
\hspace{1cm} \textit{pi=fwas-mu.} \hspace{1cm} \textit{GO.FUT=bathe[1|3SGS]-VOL.FUT}  \\
\hspace{1cm} ‘Were I hot, I would go wash in the river.’ \hspace{1cm} \textit{2008.406}  \\

(b) \textit{Te} \textit{baso=bu=ne, metau=m pwe-mu,}  \\
\hspace{1cm} 1SG child=PROP=FOC how=OBL \textit{[one.]comes-VOL.FUT}  \\
\hspace{1cm} \textit{ary=m.} \hspace{1cm} 2pl=OBL  \\
\hspace{1cm} ‘I have a child, I cannot visit you. (lit. Having a child (to look after), how could I visit you?)’ \hspace{1cm} \textit{2012.81}  \\

\subsection*{15.5.3 Backgrounded second person deverbal subjunctive}

The second person subjunctive form can be nominalised and backgrounded as shown below. The form has a nearly identical meaning in the absence of the focus marker (§15.7.1).

(15.41) (a) \textit{Pun-af-u=ne} \hspace{1cm} \textit{imas}  \\
\hspace{1cm} [PFV|get.many-COND:2SGS-NZR=FOC] quickly \hspace{1cm} \textit{pwen.} \hspace{1cm} \textit{[one.]comes[SG:IMP]}  \\
\hspace{1cm} ‘You should get it and (having done so) come back quickly.’ \hspace{1cm} \textit{steven-luke}  \\

(b) \textit{Oko uwen-af-u=ne, \hspace{1cm} kwo boku}  \\
\hspace{1cm} \textit{ground \textit{[PFV|dig.one-COND:2SGS-NZR=FOC} tree base} \textit{tapwan-af-u=ne,} \hspace{1cm} \textit{yime abu}  \\
\hspace{1cm} \textit{[PFV|cut-COND:2SGS-NZR=FOC man} 2SG:COM:GEN \textit{pwen-u,} \hspace{1cm} \textit{baso=b} \hspace{1cm} \textit{na-pwe-fi-u.} \hspace{1cm} \textit{[one.]comes-NZR child=COM many.-come-3DU:S-NZR[PL:IMP]}  \\
\hspace{1cm} ‘You should first dig a hole and cut the base of a tree, and then your husband and child should come.’ \hspace{1cm} \textit{steven-tumbuna}  \\

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The example below, from an older source (and possibly representative of Western Momu\textsuperscript{12}) shows the plural form. I do not take this as representative of modern Eastern Momu.

(15.42) \textit{Yesy sisukw wuyam-u=ne,}
\textit{just a little time} [PFV]INAN:there.be:COND:2PLS-NZR=FOC
\textit{sen-meta-m-ya.}
\textit{one.dies-EP1.FUT-2PLS-EMPH}
‘If you (pl.) should stay just a bit longer, you (pl.) might die.’

\textbf{15.5.4 \textit{skune} ‘Imaginative conditional’}

A variant of the focus-marked clause type is a fusion of the predicative \textit{sisukw} ‘be similar to’ with \textit{=ne} forming \textit{skwune}. The form is uncommon and only occurred in elicitation.\textsuperscript{13} The main-clause marking for this construction is always the epistemic future, making these utterances a question of possibility, not of intention.

(15.43) (a) \textit{Te a-kiy-a skwune,}
\textit{1SG IMPF-consume-1SGS:NZR be.similar.to:FOC}
\textit{niiy-meta.}
\textit{shoot.one[1SGS]-EP1.FUT}
‘If it was something I ate (habitually), then I could shoot it.’

\textsuperscript{12}The full list of divergent features in (15.42) are: (1) the adverb \textit{siskwu} is \textit{siskub} in Eastern Momu, (2) the second plural is not used in this construction type in Eastern Momu, only the singular form is used, and (3) the epistemic future marker is inflected for subject. This does not occur in Eastern Momu, where subject marking precedes the epistemic future.

\textsuperscript{13}I first encountered the form in grammar notes by Baron (1984, p25). Initially, examples had extremely limited possibilities. My informants rejected anything but the simplest deverbal or non-verbal predicates as subordinate clauses. Not until my last field trip did I get my first unprompted (but nevertheless elicited) occurrence in (15.43c).
(b) \textit{Te kamefe skwune, te}  
1SG understand be.similar.to:FOC 1SG niy-meta.  
shoot.one[1SGS]-EPI.FUT  
‘If I knew, I could shoot it.’

2008.138

(c) \textit{Mebke afa=b}  
star another=COM pwe=ai=skwune, mony  
[one.]comes=ANIM:there.be[1|3SGS]=be.similar.to:FOC talk  
ikakta a-momsen-meta.  
do.well IMPF-talk[1|3SGS]-EPI.FUT  
‘Had I come and stayed another year, I might be talking well.’

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15.6 Restrictive clauses

Restrictive clauses operate to divide an established set of propositions, or to contrast a proposition as exclusive of an existing set. Restrictive clauses are the potential topic counterpart to the backgrounding, contrastive, or resumptive (actual) topics of focus clauses (per Haiman, 1978).

As a marker on noun phrases (§4.8.8), the restrictive functions similarly to divide or contrast referents. In the example below, Monica and Antonia are talking about an image with two speech bubbles. One is above a man, and the other above a woman. Having established the owner of the first speech bubble, Monica contrasts the owner of the second one as different to the first.

(15.44) picture-task-part1

M: \textit{Mm anu mony yime anu=\textup{u}.}  
yes this talk man this=SG:GEN  
‘Yes, this speech bubble belongs to the man.’

A: \textit{Mony yime eru=\textup{u}.}  
talk man that=SG:GEN  
‘The bubble belongs to the man.’

M: \textit{Mm, anu=es mufo anu=\textup{u}.}  
yes this=RSTR wife:SG:POSs this=SG:GEN  
‘Yes, and this (other one) is his wife’s.’
When applied to clauses, the restrictive operates in a similar fashion. A potential proposition is put forward and coupled with a potential outcome should the proposition hold. In texts, a counterpart to the hypothetical and its outcome are often given. For instance, in (15.45a), Yarin talks of a hypothetical man who is well behaved, and listens to his elders. This man is helped. In subsequent clauses, Yarin explains what happens to a (generically) ill behaved man should he find himself in the initiation ritual described. In (15.45b), Monica describes the behaviour of a mother around a hypothetical newborn, and contrasts this with a hypothetical toddler.

(15.45) (a) *Eru cre, yime kefe eru te=m*  
and.so man some that 1SG=OBL  
*ekw-a-si-meta, te yime amsu=s,*  
help-1SGO:VTR-3PLS-EPI.FUT 1SG man good= RSTR  
mwena y-a-ninebun-a, yime ofuy.  
’And so, some men can help me, if I am a good man, and I am listening to the old men.’

(b) *Peteku=m ai eru=es, masu*  
small=OBL ANIM:there.be[1|3SGS] that[REL]=RSTR mother  
*fiky tin ai.*  
Na aney-ta house inside ANIM:there.be[1|3SGS] and big-INC\3SGS  
*eru oko=m ta-fi a-ta-fi.*  
that[REL] ground=OBL do-3DU\3SGS IMPF-do-3DU\3SGS  
’If (the newborn child) were small, the mother would remain in the house. And (the child) that has grown walks around on the ground.’

A restrictive-marked deverbal or non-verbal clause is an “unreal” conditional (Thompson, Longacre and Hwang, 2007). The above examples both involve non-verbal predicates, as this appears to be the most common usage. Subjects need not be identical between the conditional and main clause. Both the volitional future and the epistemic future can be marked on the main clause to indicate what would or could happen.

(15.46) gives examples of various non-verbal predicates in the conditional clause.

(15.46) (a) *Ay koy=bu=s, yeb on-f-mu.*  
2SG eye=PROP=RSTR then see.one-2SGS-VOL.FUT  
’If you have eyes you’ll see it.’
Modal-marked subordinate clauses are marginal at best and are restricted to the volitional future. Most speakers rejected the elicited forms given below. A similar meaning can be achieved by intonational coordination of the clauses below, without the restrictive marking.
(15.48) (a) *Te* *panai-mu=s* *yeb*

1SG *get.one[1SGS]-VOL.FUT=RSTR* then

*yey-wa-meta.*
say.to-1|2SGO:VTR|1|3SGS|-EPI.FUT

‘If I want to get it, then I can tell you.’

(b) *Ay* *pi-f-mu=s* *yeb* *yeni*

2SG *one.goes-2SGS-VOL.FUT=RSTR* then say[3SG:IMP]

‘If you want to go then say so.’

Counterfactual and negative possibilities need further exploration but most likely are possible within this construction type.

(15.49) *Baso* to *Australia=m* *ai-wo=s*

child 1SG:GEN *Australia=OBL* ANIM:there.be-3SGS:NZR=RSTR

*yeb* *bion* *pwe-mu.*

then INAB [one.|comes|1|3SGS]-VOL.FUT

‘Were my child in Australia, I could not come.’

15.7 Absolutive clauses

The term “absolutive clause” comes from Thompson, Longacre and Hwang (2007) and refers to a subordinate clause lacking an overt marker of the relationship between it and the main clause. In Momu, this is the subordinating use of a deverbal clause, with none of the marking otherwise described in this section. The adverbial role of such a clause is determined from context, in much the same fashion as otherwise unmarked clausal coordination (§14.2.1.3).

A thorough analysis of the (quite broad) range of possibilities within this type is beyond the scope of the present work. Instead, I present a sample of the kinds of meanings expressed via absolutive clauses. Interpreted functions are given in the translation in parentheses. In the majority of cases, the interpretation is of consequences.

(15.50) (a) *Ay* *nua-f-mu* *te=m*

2SG *come.up-2SGS-VOL.FUT* 1SG=OBL

*u-wan-nua-u.*

sing-1|2SGO:VTR-come.up-NZR

14 Briefly, an avenue of future exploration would be the insubordinative uses of deverbal clauses (Heine, Kaltenböck and Kuteva, 2016). While I am aware of such uses in Momu, they were rare enough that more data gathering would be necessary to give a proper explication.
‘You want to come up, (so) call out to me.’

(b) Te kafok-war-a, ay
1SG fear-1|2SGO:vtr-1SGS:NZR 2SG
pi-f-mu=onfa.
ome:goes-2SGS-VOL,FUT=OBL NEG.MOD
‘I’m worried about you, (so) you can’t go.’

(15.51) (a) Maw tu, koy tyako-ta-wo.
rain come.down\3SGS eye sleep-do-3SGS:NZR
‘Rain falls and (consequently) I get drowsy.’

(b) Erenu sanno, erenu=m ai-ta-wo,
do.like:that only do.like:that=OBL IMPF-do-3SGS:NZR
te nu pwe-meta!
1SG just [one.\]comes[1|3SGS]-EPI,FUT
‘That’s nothing, (regardless) I’ll still come!’

(15.52) (a) Mo koy kafeta, yerebu=s
yet road long-INCH 1PL:COM:GEN=RSTR
te-nepri=ar-t-u.
clear-EXT=do.to-1PLS:NZR
‘The road is already long, (since) we alone have been clearing
it.’

(b) Oke syoko anow-e, yunyi wor-o=m
okay door big-EMPH sun go.down-3SGS:NZR=OBL
y-o-wo,
syesi
D-[IMPF]INAN:there.be-3SGS:NZR wind
pwe-ta-u.
[one.\]comes-STVZR-NZR
‘Okay, there is a big door on the side where the sun sets, and
(consequently) wind comes inside.’

15.7.1 Second person deverbal subjunctive

Second person deverbal subjunctive clauses are fixed upon the singular form
as an impersonal use. In combination with an imperative or future-marked
main clause, these clauses are used to describe a hypothetical situation, and
the potential or intended outcome should the hypothetical situation come to
be. The construction is usually a form of advice.
(15.53) (a) *Ay kwu eru kiy-af-u,*  
   ssg food that consume-COND:2SGS-NZR  
   die-2SGS-EPI.FUT  
   ‘Should you eat that food, you might die.’  

(b) *Eru ere nu,*  
   and.so just  
   *tyi=ti-yai-af-u eru,*  
   carry.many=TRANS>many-go.across-COND:2SGS-NZR that  
   *ni ai-in-af-u eru, faskoy ere,*  
   just IMPF-plant-COND:2SGS-NZR that same like.that  
   *mweke memnwu ta-af-u sukwa,*  
   garden old do-COND:2SGS-NZR be.similar.to  
   ‘And so, should you carry them in and be planting them, it is  
   the same—like working over an old garden.’  

(c) *Anta pin-af-u=o, fuku=ti,*  
   do.like.this one.goes-COND:2SGS-NZR=EMPH chest=DIR  
   *an=ti onya-f on-f-mu,*  
   here=DIR face.downwards-2SGS see.1SGS-VOL.FUT  
   ‘Should you go thus, you should look downwards at chest  
   height.’

This form is used to describe instances of generic advice, and can be directed  
at a crowd. In the examples below, though, (15.54a) is directed specifically  
and in response to a situation that is less hypothetical. In (b), the speaker  
is talking from personal experience. The utterance is more an explanation  
or justification of how he subsequently behaved, framed as generic advice.

(15.54) (a) *Sekeneeti-yai-af-u,*  
   slip-go.across-COND:2SGS-NZR  
   *tu=tyini-f-meta,*  
   come.down=be.fall-2SGS-EPI.FUT  
   ‘Should you slip, you might fall down.’  

(b) *Teku ereru=m pin-af-u,*  
   *olsem si*  
   work that.kind=OBL one.goes-COND:2SGS-NZR like bird  
   mony sukwa na-pue-sa.  
   talk be.similar.to many.-come-3PLS:NZR  
   ‘Should you go on this kind of work, (rumours) like the chatter  
   of birds come to you.’
15.8 Purposive modifier

A subjectless deverbal clause (§16.5.1) can function as a purposive clause (shown in bold). A purposive clause modifies a nominal (underlined). These purposive clauses can also be used predicatively (§11.8). As shown in (15.55), the purposive clause can be right dislocated. In (15.55b) and (c) we see coordinated purposive clauses.

(15.55) (a)  

*Ketya-si=be, nu momu, /kosy /mesis
lose-3PLS=COM[ADV] just NEG path again

*won-u*/.
go.up-NZR

‘When they dropped (the rope), they no longer had a means of going up again. (lit. [a path for going up])’

(b)  

*[Bot sisy /pin-u] o, mosbi=m, o
boat also one.goes-NZR or Moresby=OBL or

*[haus sik=m pin-u] sisy-e, fiiki=m
hospital=OBL one.goes-NZR also-EMP close=OBL

onfa, makwu=mengyi!
NEG.MOD distant=INTENS

‘The boat (journey) for going, or for going to Moresby or a hospital is not close, it’s a really long way!’

(c)  

*[Sioko afa], kakfoti n-o-wo,
door other left:DIR PX-[IMPF]NAN:there.be-3SG:S:NZR

[/fyi fwas-u], [mey nebsita-u], [key fyjita-u]/.
water bathe-NZR teeth wash.one-NZR hand wash-NZR

*[Sioko afa] mamo=ti-e, [/fe kaanu-u],
door other side=DIR-EMP shit defecate-NZR

*[tuk su-u]/.
bladder urinate-NZR

‘There is a door on the left, (it is) for washing, for brushing teeth, for washing hands. The other door is on the other side, (it is) for going to the toilet.’

In Baron’s notes, he gives two examples (below) where postposed adverbial purposive clauses are subordinated with the oblique marker. In present day Eastern Momu, I could neither elicit this construction type nor was it given to me spontaneously.

(15.56) excerpted with altered glossing (Baron, 1984, p25)
15.9 Linked clauses

The exact function of \textit{=bus} ‘clause linker’ is unclear at the present stage. There are few examples across my corpus, but from those examples, it appears to be another temporal sequencer. From the data (most of which is given below) it seems that the linked clauses share the same subject (marked on both subordinate and main clauses). The form of the subordinate clause is a subject-inflected stem (§16.6.1). Where the volitional future occurs on the main clause, it appears to have scope over the whole sentence.

(a) \textit{Pwen }\textit{mu=m na-mu=m},
\begin{verbatim}[one.|comes[1|3SGS] woman=OBL marry \3SGS-VOL.FUT=OBL \end{verbatim}
‘He came to get married.’

(b) \textit{Minyi }\textit{pi-ta tapwan-mu=m}.
\begin{verbatim}snake.sp there=OBL one.goes[1|3SGS]-STVZ
\end{verbatim}
‘I am on my way to kill that snake.’

\begin{verbatim}
\begin{tabular}{l}
15.9 Linked clauses

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(a) \textit{Ety-e-t-ebus, kwo su-esen, eru ere,}
\textit{light.fire-.one:VTR-1PLS-LNK fire be.lit-COMPL and.so}
\textit{nu, mweke=m sane-r-mu eru,}
\textit{just garden=OBL sweep-1PLS-VOL.FUT that}
\textit{‘We will light it, and once it is alight, we will sweep the}
\textit{garden.’ bernard-garden}

(b) \textit{Muyime otota-si=bus, kwu=m}
\textit{people many.sit-3PLS=LNK food=OBL}
\textit{kisyi-mu, consume:3PLS-VOL.FUT}
\textit{‘The people will sit down and eat food.’ bernard-reciprocals}

(c) \textit{Eru ere ereye-si kisyi=buse, kwo Ute}
\textit{and.so do.like.that-3PLS consume:3PLS-LNK tree tree.sp}
\textit{yeb won-si.}
\textit{then go.up-3PLS}
\textit{‘And so, just like that they ate it, and climbed an Ute}
\textit{tree.’ peter-oiye}

(d) \textit{Kwo tinu e=m wor=bus,}
\textit{tree hole there=OBL go.down.in[1|3SGS]=LNK}
\textit{uwe-now}
\textit{dig.one-come.across\3SGS}
\end{verbatim}

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functions of subordinate clauses

15.10  Functions of subordinate clauses

This section is concerned with revisiting the constructions covered so far, and grouping them by what they do. These can be primarily broken down by the position they occupy in a clause, but also, particularly with adverbial clauses, what kinds of meanings they express. Where relevant, alternate, non-subordinating strategies that express similar meanings are also mentioned. Complementation is covered separately in §16.

15.10.1  Nominal modifiers

There are two subordinate clause types that modify nominals in Momu. The first are relative clauses (§15.1), which function to either restrict reference or to provide relevant information about the modified head. The second are purposive clauses (§15.8). These indicate the purpose of the modified head. These purposives could be considered a sub-type of (reduced) relative clause in Momu, as they are built upon a nominalised form (Andrews, 2007).

15.10.2  Adverbial clauses

Adverbial clauses are a clause type conveying detail relevant to the main clause as a whole.

15.10.2.1  Time

Time adverbial clauses concern the temporal sequencing of events. In Momu, this is achieved by several different construction types including comitative, completive and clause linking adverbial constructions (§15.3, §15.4, §15.9). Backgrounding (§15.5) and absolutive (§15.7) adverbial clauses, while not primarily about temporal sequencing, can describe events that follow each other.

Very “tight” sequences (in the sense of Wälchli (2005)) tend to be expressed as serial verb constructions in Momu (§13). Looser temporal sequences can be expressed by unmarked coordination (§14), and the tem-
poral nature of that sequencing can be augmented by certain adverbs (§9.5), usually occurring in the second of a pair of coordinated clauses.

For temporal sequencing in adverbial clauses, a perfective viewpoint is used for both main clause and subordinate clause. Compleitive adverbial clauses signal nearly co-temporal events (§15.10.2.5). The compleitive-marked event is the initiating boundary for the main clause event. As such, the temporal sequencing is close. Comitative adverbial clauses, on the other hand, signal temporal sequencing that need not be close. Events related by a backgrounding clause are loosely temporally sequenced (§15.5), but in addition to this, the background clause is usually relevant to the main clause in some way (e.g., as a cause). Preliminary analysis of the clause linker =bus is that it is similarly loose, but what additional meaning it adds is unclear at this point.

For compleitive temporal sequences, it is possible for perfective compleitive clauses to temporally precede an imperfective main clause as well. The equivalent viewpoint aspect for comitative clauses indicates overlap.

While temporal sequencing of coordination is iconic (i.e., the order of clauses reflects the order of events), adverbial clauses need not be so. For both comitative and compleitive adverbials, when they occur after the main clause, their sequence is non-iconic.

### 15.10.2.2 Location

Momu lacks a dedicated location adverbial construction. Such information is usually coded by a relative clause (§15.1), including special relative clause forms (§15.2). It is particularly common for a headless relative clause to fill this role.\(^{15}\)

### 15.10.2.3 Manner

Manner is not expressed by adverbial clauses in Momu.\(^{16}\) Otherwise, manner is expressed by dedicated serial verb constructions (§13.2.1), or more

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\(^{15}\)For some headless relative clauses, it is not always clear that they are filling a location role for the main clause. Instead, the relative clauses appear to function as contextualising comments, and that the most easily identifiable role for these clauses is to locate the event.

\(^{16}\)There is a single example of a manner adverbial clause amongst overwhelmingly temporal uses of the comitative (§15.3). The clause uftab ‘do firmly/strongly’ in (15.23a) on page 501 appears to be a genuine manner adverbial.
generically by anaphoric reference to a prior clause with the manner adverbs *ereyer* ‘do it like that’ or *erenu* ‘done like that’.

### 15.10.2.4 Purpose, reason or concessive

There are no dedicated adverbial clause constructions for expressing purpose, reason or concession.

There is a noun modifier for expressing purpose (§15.8). Otherwise purpose or reason can be inferred from context for coordinated (§14.2.1.3) or absolutive clauses (§15.7).

Backgrounded clauses (§15.5) most frequently can be interpreted as expressing reason, as the backgrounded clause is usually relevant in some way to the main clause.

Coordination, where the second clause employs the adverb *fesis* ‘again’ can signal concession when the events are semantically incompatible (§9.5.6, §14.4).

### 15.10.2.5 Simultaneity

Simultaneity is expressed by comitative clauses, where both the comitative clause and the main clause are expressed in the imperfective viewpoint (§15.3.1). The comitative does not imply anything about the initial and terminal boundaries of the simultaneous events, but rather indicates that there is a significant degree of overlap.

An imperfective completive adverbial clause overlaps with an imperfective main clause, such that the spans are simultaneous (§15.4). In addition to this, though, an initial completive clause indicates the beginning of the overlap, and a final completive clause indicates the termination of the overlap.

Imperfective comitative and completive clauses combined with perfective main clauses indicate that the perfective event took place during the imperfective span. For the completive the event is either co-temporal or successive with the relevant boundary, given the order of the completive clause.

### 15.10.2.6 Conditional

Conditional adverbial clauses can primarily be divided into those where the conditional component (the *if* clause) describes a real or unreal event
Conditionals in Momu are spread across a number of adverbial constructions. Restrictive (§15.6), completive (§15.4), backgrounding (§15.5) (especially the dedicated backgrounding construction skune, §15.5.4) and second person subjunctives (§15.7.1) all express similar conditional constructions.

A restrictive clause indicates a hypothetical (unreal) condition. A second person subjunctive is used for an advice-type speech act. The subjunctive clause presents a possibility and the main clause indicates the predicted outcome should the advice be followed.

\[(15.58)\] \textbf{Maw} anow-mes tu-wo=s teb
\begin{tabular}{lll}
  rain & big-ADV & come.down\{3SGS-3SGS:NZR=RSTR 1SG:COM/yeb & u=m & pi-mu. \\
  then & sago=OBL & one.goes[1|3SGS]=VOL.FUT \\
\end{tabular}
\[\text{‘If it really rains, then I’ll go to (process) the sago.’}\]

The combination of a skune clause (§15.5.4), with a main clause marked with the epistemic future indicates a non-real condition, and what might have been had that condition been the case. Skune clauses only occur with epistemic-future-marked main clauses.

\[(15.59)\] \textbf{Mebke} afa=b
\begin{tabular}{llll}
  star & another=COM & pwe=ai=skune, & mon=m \\
  one.[comes=ANIM:there.be[1|3SGS]=be.similar.to:FOC & talk=OBL \\
  ikakta & a-momsen-meta. & do.well & IMPF-talk[1|3SGS]=EPI.FUT \\
\end{tabular}
\[\text{‘Had I come and stayed another year, I might be speaking well.’}\]

The above conditional types all specialise for conditional expressions only. All contain some kind of indicator of subjunctive status. The remaining combinations are situations where the combinations can be interpreted as conditional. The same constructions in a different context do not have conditional readings.

The combination of a completive clause with a main clause predicate marked with the volitional future indicates an outcome once a condition comes to be. A completive clause can also combine with an epistemic-future-marked main clause to indicate possibility or capacity (see (15.27) on page 504).
(15.60) **Te anyer fufwan-a-sen, yeb**

1SG do.like.this blow.on.one-1SGSZSZ-NZR-COMPL then

swu-mu.

be.lit-VOL.FUT

‘(Once) I blow it like so, it lights.’

Reading the completive as a kind of conditional is not difficult because in marking an initiating boundary, the completive clause can be interpreted as the condition under which the main clause event occurs.

Ordinarily a backgrounded clause (§15.5) is understood to be actual, but in some circumstances, and in combination with a volitional-future-marked main clause, the combination can be interpreted as conditional. The backgrounded clause usually describes information relevant to the main clause event. One relation of relevance then is that the background event is the condition under which the main clause event occurs.

### 15.10.2.7 Substitutive

Substitutives exchange one possibility for another. In §14.4, I describe substitutives amongst the adversatives expressed by coordination. An equivalent is possible with a similar clause structure embedded in a comitative clause (§15.3), but, as with adversative coordination (§14.4), the substitutive meaning is only possible when the main clause expresses something incompatible with the first.

(15.61) (a) **Nuwsen=menu-wo=b, ikaka=,**

hit\3SGS=INCEP\3SGS-3SGS:NZR=COM\ADV do.well=

banisim-ar aru, yeko anu.

block-do.to[1\3SGS] that[REL] true this

‘He’s about to hit her, but in this one (a picture), she blocks him well.’

(b) **Sifmmenu=ba, masu**

hold:INCEP\3SGS=COM\ADV mother:SG:POSS

sif=y-a-i-en-o.

hold=D-IMPF-pull-3SGO:VTR-3SGS:NZR

‘Just as he’s about to hold (the pig), his mother is (instead) pulling him away.’

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Chapter 16

Complementation

This chapter examines complementation. Complementation refers to the situation where a clause functions as an argument to a predicate (Cristofaro, 2003; Noonan, 2007; Schmidtke-Bode, 2014). Complementation involves a complex interaction of a complement-taking predicate (henceforth CTP), complementiser, and the form of the sentential complement (henceforth complement).

In this chapter I take an inclusive approach to CTPs. I include structures where it is not clear that a complement is filling a (core) argument position. I also consider CTPs that are less predicate-like, for instance, forms that are phonologically bound to the complement and that may have lost lexical status in the path towards grammaticalisation as an inflection.

Momu has a complementising case strategy (Dench and Evans, 1988) based on the oblique case. The restrictive marker is also used as a complementiser. The order of the complement relative to the CTP is important in Momu. Some CTPs fall into different classes of construction depending on the position of the complement. Generally speaking, pre-predicative complements are consistent with tighter syntactic integration.

16.1 The classes of complement-taking predicates

To begin, CTPs are here grouped and exemplified using a slightly modified version of the semantic classes of CTPs given by Noonan (2007). Just about all of the classes are represented in Momu, with the exception of predicates of pretence, manipulation, and achievement. In each subsection I give examples
of variation of CTPs, complementiser, and complement form where relevant. Themes that emerge cross-cutting these semantic classes are the topics of later subsections. In all examples in this section, the CTP is underlined and the complement (and complementiser if present) is in bold.

16.1.1 Utterance predicates

Utterance predicates express information as a complement that is transferred in a manner specified by the CTP. There are a range of constructions that achieve this in Momu.

The main predicates are the intransitive verbs yeni ‘say’ and ereni ‘(say) like that’, and their transitive counterparts yeyen ‘say to’ and the verb pair ereyen/erenin ‘(say) like that to one/many’.

(16.1) (a) Eru tye-pwe-si, eru ere yeb that TRANS>many-come-3PLS and.so then yenu-mu “fes eru.” say\3SG\-VOL\-FUT enough that ‘They brought (the meat), and so he would say “that’s enough”’

(b) Eru te=m ereye-si “ay mu menyi that 1SG=OBL like.that.to.one-3PLS 2SG woman true nu pi=a-uk-f-mu.” just GO\-FUT=IMPF\-look.after-2SG\-VOL\-FUT ‘They said to me “You should be the one to look after her.”’

(c) Ereni-si-momu fyi ai. say.like.that-3PLS-NEG water ANIM:be.at[1|3SG]$ ‘They said it was in the water.’

The ‘say’ forms are used especially for conveying information that was originally given as speech. The ‘(say) like that’ forms are used more loosely to convey the gist of a communication, including situations where the information may even have been conveyed by other means, but is represented as speech.

Yeyen is a high-transitive verb. Ereyen/erenin are a pair of transitive verbs that index only singular and plural number. The subject to all verbs

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1 All ‘(say) like that’ forms are built from the demonstrative manner adverb ere ‘like that’ (§3.6.1) with various verb-forming suffixes (§6.3.2, §6.3.3.1). The transitive form only indexes the number of the object. At the present stage of analysis, it is not clear whether this is another instance of verbal number.
refers to the source of the information. The object to the transitive form refers to the recipient of the information.

In all cases here, if one considers the speech complement as filling an argument position, then the utterance complement is oblique according to the criteria laid out in §8. For reported speech, the argument status or even embedded status of such a complement is often disputed (De Roeck, 1994; Thompson, 2002).

In order to be consistently interpreted as utterance predicates, the complement to these verbs usually follows the verb. Unlike many other complement clause types in this chapter, there is no complementiser. The form of the complement is sentence-like (§16.6), and shows no restriction on the marking of categories on the complement. The utterance is often accompanied by voice quality and intonation consistent with an independent clause. All of these factors combined indicate that in Momu utterance complements are the least syntactically integrated of all complement clauses, to the extent that it is questionable whether they are subordinate at all.

Other strategies exist for conveying reported speech. A reference to the source via an NP, followed immediately by the complement, or even just a shift in voice quality in the absence of an utterance CTP can indicate a shift in footing such that the hearer understands that the speech of another person is being conveyed.

(16.2) (a) Aike: "kwwu n-o-wo."
   ‘Aike (said) “There’s food here.”’

(b) Nu ai-pwen mu eru=m
   just IMPF-one comes woman that=OBL
   koy-nin=ba (900ms) “Ah!
   see.many-3PLO:VTR[1][3SGS]=COM EXCLM
   Ary=efa?”
   2PL=YNQ
   ‘He was coming by when he saw the women...“Aha! It’s you two?”’

Representations of non-declarative speech acts as reported speech such as requests, demands, questions and so on are signalled entirely by the form of

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2Only in elicitation was a complementiser in the form of the oblique marker =m accepted, but it is unlikely that these were equivalent cases of reported speech. Oblique-marked complements to the verbs yen i ‘say’ and yegen ‘say to’ usually signal a different meaning to reported speech (§16.1.2).
the utterance complement. There is no marking or alternation in the CTP to indicate this, unless the entire sentence is itself one of these non-declarative speech acts.

(16.3) (a) ... ye $\overline{b\nu}$ yenu “Te $\overline{b\kappa k\delta=t\i}$ then say\3SGS 1SG where=DIR 
pi-$\mu=a$?" one.goes[1|3SGS]-VOL.FUT=Q
... then he said (asked) “where shall I go?”

(b) Mu $\overline{eru}$, yenu “kiy-$\am$!”
woman that say\3SGS consume-PL.IMP
‘The woman said (demanded) “Drink!”

(c) Ay $\overline{y\kappa ni-f=\fa}$ say-$\2\sg$ 2SG say-2SGS=YNYQ Flerwick 
ai-$\ta=\fa$?" 
ANIM:there.be[1|3SGS]-STVZR=YNYQ
‘Did you say (ask) “Is Flerwick around?”’

16.1.1.1 Direct and indirect reported speech

In all cases above, the speech complement is given as direct reported speech, and represented as such when unambiguously so, by placing the portion of reported speech between double-quotes.

Direct reported speech is presented in a form similar or identical to the original speech, or representative of imagined speech. Deictic elements such as pronouns and demonstratives are not calculated from the place and moment of reporting speech, but rather “shift” to the place and moment of the original (or imagined) speech act.

Direct reported speech in Momu tends to have a higher number of exclamations, curses and and other “emotional” elements (De Roeck, 1994). Such elements are commonly employed in reported speech to signal a shift in footing. Especially common in Momu is the adverb mo ‘yet/still’. This frequently occurs at the beginning of one or more portions of reported speech, in situations where it conveys a sense of irritation, making it more like one of these emotional elements.

(16.4) $\overline{y\kappa ni-si}$, (400ms) “tsk! (750ms) mo kosy $\fa\fe ta$!”
say-3PLS tounge.click yet road long-INCH
‘(The people of Mori) said “tsk! The road is too long (for us to travel all that way)!”'

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Indirect reported speech, where shifters are calculated relative to the moment of speech, appears to be possible. However, I have only encountered this in elicitation, and so I am currently treating this as unlikely, pending natural examples arising in texts. In both the examples below the shift from the moment of speech is that these were both directed at second person referents, but the predicate in the complement is marked for a third person singular subject. The form of the predicate in (16.5a) is shifted to an (unmarked) perfective, but as the moment of speech would have been either an imperative or a volitional-future-marked form. Also, the preparative serial verb construction (§13.2.3.1) in (a) (where bun ‘put many’ is the final verb) is used to indicate that a task has been completed satisfactorily according to some norm. This is also a shift away from the moment of speech, where a preparative would not be used in directing someone.

(16.5) (a)  
Te Flerwick=m yey-en kwo  
1SG Flerwick=OBL say.to-3SGO:VTR[1|3SGS] wood  
to=m  
1SG:GEN=OBL  
nari=na-pwe=oton.  
carry.one=TRANS>one-come=put.one[1|3SGS:PFV]  
‘I told Flerwick to bring my piece of wood (in preparation).’

(b)  
Te yey-en te=m  
1SG say.to-3SGO[1|3SGS] 1SG=OBL  
yi-wa-mu.  
follow-1|2SGO:VTR[1|3SGS]-VOL.FUT  
‘I told (him/her) that (s/he) should follow me.’

There is some cross-over here with non-utterance uses of the same verbs. “Indirect” complements do occur with utterance verbs when they are instead functioning as propositional attitude predicates (§16.1.2). Such uses are translated as “think”, but are of a completely different nature to reported speech. These other “think” forms are propositional attitude predicates (§16.1.2).

16.1.1.2 Manner of utterance

Few CTPs code the manner of delivery of the utterance, since these are more commonly coded adverbially. The best candidates are discussed here. Several speech verbs are built around the nominal mony ‘talk/speech/sound’.
Titmonyen ‘beckon silently’ codes a specific manner of delivery.

(16.6) Titmonyen, “anu=m puen-ef-a”
beckon.silently here=OBL [one.,comes-COND:2SGS-EMPH
‘I beckoned silently, “You come here!”’

Momsen ‘talk’ is roughly manner-encoding, describing utterances embedded in a back-and-forth exchange.

(16.7) Eru nu momsen “Te nu anu!”
that just talk[1|3SGS] 1SG just this
‘He said/chattered “Me now!”’

Bufta ‘reckon (say to self)’ without a complement describes the act of cognition, and has a transitive counterpart in the verb pair bufwar/bufnin ‘reckon of one/many’. Only the intransitive form functions as a CTP. The form of the complement is sentence-like, like with other utterance CTPs. 

Bufta is used as a kind of narrative device to give voice to the inner-monologue of a character in a tale. As such it only applies to third person referents as subjects. In narrative, these are self directed utterances that serve to progress the narrative. They provide context or are used in place of declarative clauses describing eventual actions.

(16.8) Yime eru bufta “te mu
man that reckon\3SGS 1SG woman
pupw-er-mu.”
beat\3SGO\VTR[1|3SGS]-VOL.FUT
‘The man reckoned “I will beat her.”’

The intransitive speech verb yen is used in exactly the same fashion. See (16.3a) on page 530 for an example.

These forms are built from the nominal bufo ‘thought’, but as complement-taking predicates, I consider these less about the act of cogitation. I draw

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3 The intransitive form of momsen ‘talk’ is identical to the third singular object form momsen-en ‘talk to him/her’, where the right edge is formed by a series of object cross-referencing verb-forming suffixes (§6.3.3.1). Diachronically, I suspect that intransitive momsen arose from the fusing of an oblique-marked object mon=m ‘talk/speech/sound’ with the synchronically present verb sen ‘(one) dies’, which is a common feature of many incorporations and compounds (cf siemens ‘be hungry’, niysen ‘hit’, kisen ‘be lying down’, etc.). Given that the right edge has the appearance of the verb-forming suffix -en ‘third singular object’, the form was re-interpreted as an object cross-referencing verb.
a distinction between this kind of think verb and the ones described as propositional attitude predicates (§16.1.2). The nominal form bufo ‘thought’ is also a part of a subclass of commentative CTPs (§16.1.6). Most noticeably different is that the cognition verb bufta (or the transitive forms) can be used to describe anyone’s thoughts, but as a CTP, bufta is limited to third person referents in narrative.

16.1.2 Propositional attitude predicates

Propositional attitude predicates are similar to utterance predicates in that there is a transference of information. In addition to this, the speakers attitude towards the veracity of that information is expressed.

In Momu, the attitude towards the information can be coded as neutral or negative, on the basis of the form of the complementiser. A neutral or favourable attitude by the speaker towards the proposition is coded by the oblique complementiser case =m, and a skeptical attitude is coded by the restrictive complementiser =s.

All complements to propositional attitude predicates precede the CTP, indicating that these are more syntactically integrated than complements to utterance predicates.

The complements are sentence-like (§16.6), and allow for the marking of viewpoint aspect (§7.1). Modal marking is not allowed, except for some complements which can be marked with the volitional future, usually marking asserted desire, intention or obligation. Some complements discussed here can be non-verbally predicated.

16.1.2.1 =m/s yeni ‘I say (assert/think)’

The personally held belief of the speaker is commonly asserted with the speech verb yeni with a pre-predicative complement. The oblique =m as a complementiser indicates a neutral attitude by the speaker, as in (16.9a), and the restrictive =s indicates a skeptical attitude, as in (b). Nominally predicated and volitional-future-marked complements are possible. The progressive matches the complementiser: the realis form couples with complements marked by the oblique and the irrealis form couples with complements marked by the restrictive.

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4See also §16.1.3 for deontic modal predicates.
(16.9) (a)  
Te  Flerwick yeswo afa=m
1SG  Flerwick pig another=OBL
nuw-mu=m  yen.i.
shoot.one\3SGS-VOL.FUT=OBL say[1SGS]
'I think/thought Flerwick should shoot another pig.'

(b)  
Te=ne  ak  amsu=m  ai
1SG=FOC RE good=OBL ANIM:there.be[1SGS][COP]
ter=ku wbobo —  ak  miyo  emsu=m
1SG=EMPH not.know RE mother good=OBL
a-ta=se
[IMPF]ANIM:there.be\3SGS-STVZR=RSTR[COMP]  think[1SGS]
'I myself had been fine—I didn’t know!—I thought my mother
was fine.'

denis-mother

16.1.2.2 The stance predicate

The various forms of the stance predicate allow the speaker to assert something they believe to be true (§12.1.2.1) in combination with temporal adjustments or layered epistemic modality. The CTP is transparently related to the full synchronic inanimate existential verb wu, but with defective subject marking. The oblique-marked complement fills the only argument position to this predicate. If the complement is in the progressive then only the realis form is used.

The irrealis progressive form of the CTP—wuta ‘it might be the case that’—is quite common across my corpus. This form is used by the speaker to signal a present doubt in a belief, coded in the form of the complement. In using this form, the speaker presents their opinion and is inviting the addressee to challenge it. Again, nominal predicates and volitional future marking are allowed in complements.

(16.10) (a)  
Nepu  eru  fe=y-a-nepri-wo
animal  that  INTENS=D-IMPF-take.one\3SGS:NZR

The various forms of the stance predicate differ based on TAM marking. Subject marking is defective. The variants are the perfective form wu ‘It was the case that’, the volitional-future-marked form wumu ‘it will be the case that’ and the irrealis progressive form wuta ‘it might be the case that’.

Note that in (16.10), fim ‘in the river’ is given as an afterthought after the CTP. While I consider this particular instance as an afterthought repair, there are cases with some of the more grammaticalised CTPs where a postposed argument from the complement seems to indicate that the CTP is somewhat less than a full predicate, and more like an inflection. For more discussion of this point, and examples, see §16.3.2.
nepru
  take.one\3SGS

netyi=wor-mu=m
  throw.one=go.down[1|3SGS]-VOL.FUT=OBL[COMP]

wu-ta,  fyi=m.

STANCE-STVZR  water=OBL

‘Perhaps the animal wants to / will take him and throw him in the river.’

(b)  Eru=r,  ating,  yime  anow  on
     that=EMPH  perhaps  man  big  see[1|3SGS]

wu-ta.

STANCE-STVZR

‘That, perhaps, God might know.’

The perfective and volitional future forms of the stance predicate are far less common across my corpus. Further investigation is necessary to understand possible variation in the form of the complement to these forms, as not all of the combinations otherwise seen with the irrealis progressive form of the CTP (wuta) have been observed.

### 16.1.2.3  \( =m \) onfa Modal negative predicate

The negated counterpart to the stance predicate is the ‘modal negative’ onfa. As with the positive counterparts, only the oblique is used as a complementiser. Viewpoint aspect can be marked on the complement. If the complement is in the progressive then only the realis form is used.

(16.11)  \( \text{Yime a-ta}=m \text{ onfa}. \)

\[
\begin{array}{l}
\text{man}  \text{ IMPF-do}\3SGS=OBL \text{ NEG.MOD}
\end{array}
\]

‘The man hadn’t been walking around.’

For verbal predicates, there is a contrast between simple negation as expressed by the stance coding onfa, and simple negation by momu, as shown below.

(16.12) (a)  \( \text{Yime nu ai}=m \text{ onfa}. \)

\[
\begin{array}{l}
\text{man}  \text{ just ANIM:there.be[1|3SGS]=OBL NEG.MOD}
\end{array}
\]

‘The man hasn’t been here.’ (it is not the case that he was here before now)

(b)  \( \text{Yime ai-momu}. \)

\[
\begin{array}{l}
\text{man}  \text{ ANIM:there.be[1|3SGS]=NEG}
\end{array}
\]

‘The man isn’t/wasn’t here.’
Complements marked by the volitional future code a propositional attitude layered over a deontic modal (§16.1.3). Non-verbal predicates of complements to onfa code simple negation (§11.9) rather than negated stance.

Both stance and its negated counterpart only allow realis progressive complements. This strikes at the heart of the modal nature of these constructions in the terms that I defined for modality in §12 (i.e., that Modality is a consideration of alternatives). While it may seem odd that a realis form applies to a negated proposition (i.e., to something that isn’t so), it is in the difference between the negation types that the reason for this becomes clear. In the examples above, the perfective complement to onfa in (16.12a) indicates that speaker asserts that a past state of affairs did not hold, and hints or implies the alternative: that this state of affairs holds presently, or perhaps in the future. The plain negated form in (16.12b) is less nuanced. A past or present state of affairs doesn’t hold, and no implication is made about the present or future. Given such an explanation of onfa, employing a realis progressive within the complement makes sense.

A realis progressive complement to onfa indicates that a state that the speakers know to be relevant doesn’t hold at the moment of utterance. Such an utterance implies, however, that it shortly will be so. In the example below, the speaker is anticipating that what isn’t initially true at the time will become so when the video he is describing progresses.7

(16.13) Bernard describes a video where he knows that the first referent in this example is initially out of frame.

\[
\begin{align*}
\text{Mu} & \ afa & \ \text{eru}, & \ \text{y-ai-wo=m} \\
\text{Woman} & & \text{another that} & \ D-[\text{IMP}] \text{ANIM:there.be-3SGS:NZR=OBL} \\
onfa & & \text{On-o=ne}, & \ \text{oo}, \ \text{ay=ne} \\
\text{NEG.MOD} & & \text{see.one-3SGS:NZR=FOC} & \text{EXCLM 2SG=FOC} \\
pyc-f=ake. & & & \\
[\text{one.}]\text{comes-2SGS=EMPH}
\end{align*}
\]

‘The other woman is not there now. Having seen her (she says), “Oh! You’ve come!”’

\footnote{Such constructions as that seen in (16.13) are hard to stumble upon naturally, let alone reliably elicit. Further work is necessary to fully understand this form, including, for instance, whether an implied inversion as a past state can be read into the form.}

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16.1.2.4 on Seems

A restrictive-marked complement to on ‘see’ is used to express ‘seems’, a common semantic extension (Evans and Wilkins, 2000). That is, to put forward a proposition for which the speaker has weak confidence in its veracity. As with other propositional attitude predicates, the combination with a restrictive-marked complement indicates a skeptical or unfavourable attitude on the part of the speaker. This is the only choice of complementiser with this CTP for this reading. On is also a CTP for expressing acquisition of knowledge (§16.1.7) and for immediate perception, but note that for these uses a different complement type and position is employed.

(16.14) (a) Oimni-ta=s on. ruined-INC\(\rangle\)=RSTR SEEMS
‘Seems to be ruined (unfortunately)’

(b) Fyi tya nu abkobkota, mo water RCO just be.scattered yet
ai-kuw=s on. IMPF-consume\(\langle\)3SGS=RSTR SEEMS
‘Beer cans are scattered all over the place. Seems as if he had still been drinking (unfortunately).’

(c) Reviewing the arrangement of some picture cards. The speaker is expressing their doubt about the order.
Anu wok anu afki wu=s on. this 3SG:RE this next.to INAN:there.be=RSTR see
‘Seems as though this was next to this one.’

16.1.3 Deontic modal predicates

Elements of epistemic modality concerning certainty have already been considered under propositional attitude predicates (§16.1.2). Here we see that the same predicates with a volitional-future-marked complement cover deontic modality.

16.1.3.1 Desire, intention, obligation

Speaker-asserted beliefs in a desire, intention or obligation can be put forward by either the utterance verb yeni in a first person form (unmarked), or the various forms of the stance predicate.
(16.15) (a)  \textit{Te Flerwick yeswo afa=m}  \\
\textit{1SG Flerwick pig another=OBL}  \\
\textit{nuw-mu=m yeni.}  \\
\textit{shoot.one\[3SGS-VOL.FUT=OBL \ say[1SGS]}  \\
\textit{‘I think/thought Flerwick should shoot another pig.’}  \\
\textit{2010.129}  \\
(b)  \textit{Wob nuw-mu=m wu-ta.}  \\
\textit{3SG:COM shoot.one\[3SGS-VOL.FUT=OBL STANCE-STVZR}  \\
\textit{‘He might have wanted to shoot it.’}  \\

16.1.3.2 Inability, prohibition  

Negative counterparts are either coded by the modal negative \textit{onfa}, or by the adverbials \textit{biom ‘unable’ (§9.6.3) or bie ‘prohibition’ (§9.6.4)} in the complement to a positive CTP.

(16.16) (a)  \textit{Peru menyI gimas yeyisko-mu=m}  \\
\textit{small INTENS quickly cry.out[1\[3SGS-VOL.FUT=OBL}  \\
\textit{onfa.}  \\
\textit{NEG.MOD}  \\
\textit{‘The little one shouldn’t call out too quickly.’}  \\
\textit{kaspar-kokomo}  \\
(b)  \textit{Bio=m pwe-mu=m}  \\
\textit{unable=OBL [one.]comes[1\[3SGS-VOL.FUT=OBL}  \\
\textit{wu-ta.}  \\
\textit{STANCE-STVZR}  \\
\textit{‘He possibly is unable to come.’}  \\
\textit{2008.426}  

Counter to the predictions of Noonan (2007), complements to this class are neither reduced nor subjunctive in Momu. Instead it is an unreduced form of the complement, and specifically, the marking of the volitional future that signals a deontic meaning. In Momu such a meaning cannot be achieved without being embedded within a propositional attitude predicate. The deontic component is not being coded by the CTP, and so this should be considered a variation from a propositional attitude predicate, not a separate CTP type.

16.1.4 Desiderative predicates  

Desiderative predicates are a type of propositional attitude predicate. In this class, the subject’s attitude towards the proposition is expressed as one of desire.
16.1.4.1 *yeni* ‘I say (I want)’

The utterance verb *yeni* ‘say’ in combination with a deverbal predicate indicates the speaker’s desire that the proposition coded in the complement comes to be. This function of the ‘say’ verb is common amongst papuan languages (Reesink, 1993). Further testing is necessary, but in Momu, this CTP appears to be fixed upon a first person subject.

(16.17)  
\[Te \quad yeni \quad Fiona \quad irmas \quad pwen-u=we.\]  
\[1SG \quad say[1SGS] \quad Fiona \quad quickly \quad [one.]comes-NZR=EMPH\]  
‘I want Fiona to come quickly.’

16.1.4.2 *efiyeni* ‘not want’

The negative counterpart *efiyeni* ‘to not want’ also takes a deverbal predicate.

(16.18)  
\[Efiyeni \quad mu \quad eru \quad mony \quad bun-u=a\]  
\[not.want[1SGS] \quad woman \quad that \quad talk \quad hear-NZR=EMPH\]  
‘I don’t want to hear that woman’s story.’

A stativised (-ta ‘stativiser’) version of the CTP indicates uncertainty towards the veracity of the complement on the part of the speaker.

(16.19)  
\[Efiyenu-ta \quad taun=m \quad pin-u=r.\]  
\[not.want[3SGS-STVZR] \quad town=OBL \quad one.goes-NZR=EMPH\]  
‘S/he must/might not want to go to town.’

16.1.4.3 *=meni* ‘Inceptive (Desiderative)’

The inceptive *=meni* is a grammaticalised form of *yeni* fused with a complementising use of the oblique *=m* (§12.1.2.4). It is used to express an inceptive sense, but in some cases a desiderative sense appears to be a better translation.\(^8\) I consider this form to be a partial predicate, being half way between an independent predicate and a fully grammaticalised inflection. The form is not phonologically independent and has fused with the complementiser. No inflection is available except for subject marking.

The form of the complement is a bare verb stem (§16.6.1) whose position is strictly prior to the CTP. Subject marking on the CTP must agree with

\(^8\)Both inceptive and desiderative senses are coded by *tp laik*. The semantic drift may be influenced by Tok Pisin, but also makes this form difficult to translate as times. See §12.1.2.4 for more discussion.
the subject of the complement. This means that coding of desiderative senses is limited to desires that can be realised by the holder of the desire. Unlike the utterance form above, it is clear that it can code the desires of referents other than the speaker.

(16.20)  
\[
\text{Efek}\=\text{m} \quad \text{yeb} \quad \text{usyi}\=\text{meni}-\text{si}, \quad \text{Oye}\=\text{m} \quad \text{yeb}
\]
\[
\text{song}\=\text{OBL} \quad \text{then} \quad \text{sing:3PLS}\=\text{DESID-3PLS} \quad \text{Oye}\=\text{OBL} \quad \text{then}
\]
\[
\text{usyi-mu}.
\]
\[
\text{sing:3PLS-VOL.FUT}
\]

‘They wanted to sing a song, and so they would sing an Oye.’

16.1.5 Predicates of fearing

Predicates of fearing are a specific type of propositional attitude predicate, where the attitude towards the proposition is one of fear. The relevant predicate is the intransitive \textit{kafkota} ‘be afraid’, while the transitive \textit{kafokyer} ‘fear (for)’ doesn’t appear to be a CTP.

The CTP allows a sentence-like complement after the verb. The modal apprehensive marker -\textit{ma} or epistemic future -\textit{meta} (increasingly used in place of the apprehensive, §12.1.1.4) can be marked on the complement to indicate a temporary and future-oriented fear. The complement is optionally oblique-marked.

(16.21)  
\[
\text{Te} \quad \text{kafok-tai,} \quad \text{efke} \quad \text{te}\=\text{m}
\]
\[
\text{1SG} \quad \text{fear-do[1SGS]} \quad \text{sickness} \quad \text{1SG}\=\text{OBL}
\]
\[
\text{nou-ma}\=\text{m}.
\]
\[
\text{come.across-APPR=COMP}
\]

‘I fear that I’ll get sick (lit. sickness will enter me).’

A subjectless deverbal complement is used to code a generic and enduring fear. This complement may occur before or after the CTP, and is also optionally oblique-marked.

(16.22)  
\[
\text{Te} \quad \text{kafoktai} \quad \text{siiki} \quad \text{sukwan-u.}
\]
\[
\text{1SG} \quad \text{be.afraid[1SGS]} \quad \text{sugarcane} \quad \text{husk.one-NZR}
\]

‘I fear husking (a) sugarcane. (I may cut myself)’

The transitive counterpart can be used adverbially in a way that is similar to a CTP, but note that the nominaliser formally marks it as subordinate, making the bold text in the example below an absolutive adverbial clause (§15.7), not a CTP.
16.1.6 Commentative

Commentatives (or factives) are a refinement of propositional attitude predicates. Commentatives present a strong emotional reaction or a judgement on the proposition expressed by the complement.

16.1.6.1 Body parts

In Momu, most emotional language is expressed through body parts (See also §13.2.1.2). The heart, liver or stomach are all seats of strong emotion and anger. Thoughts (bufo) are also given a voice in conveying strong emotions. Complements to this class of predicates tend to be similar to reported speech. The body part “speaks” as the subject of an utterance predicate, or an utterance complement is simply apposed to an NP coding the body part. As with reported speech, the complement usually follows the predicate, and is sentence-like in realisation (§16.6).

16.1.6.2 Attributive predicates

A second type of commentative involves a deverbal predicate to some specific attributive predicates (§11.3). These represent judgements of the proposition expressed by the complement.
Relevant predicates include moral judgements: *emsu* ‘good’, *skabu* ‘bad’, or judgments of difficulty: *uyen* ‘be heavy (i.e., hard to do)’. All are one-place CTPs.

Complements can be optionally marked oblique or marked restrictive—especially for moral judgements. These deverbal complements do not mark subjects, but a subject NP can be included. Subjectless complements indicate generic judgements.

(16.25) (a)  
Eru momu=e — Jacklin masu  
that NEG=emph Jacklin mother:SG:POSS  
narin-u uyen.  
give.birth.to.one-NZR heavy  
‘It wasn’t so—it was hard for Jacklin’s mother to give birth.’  

(b)  
Fyi fwas-u=s emsu.  
water bathe-NZR=RSTR good  
‘It is good if one bathes.’  

Similarity or rough equivalence is also expressed by a deverbal predicate. The CTP is adjective *sukw* ‘similar’ or the verbalised form *sukta* ‘be(come) similar’. Note, however, that these are two place predicates, and that a realis progressive complement is possible, in addition to a deverbal one.

(16.26) (a)  
Mweke memnu ta-f-u sukwa.  
garden old do-2SGS-NZR be.similar.to  
‘It’s like working over an old garden.’  

(b)  
Baso peru asir y-a-ni-sa sukwa.  
child small bird.sp D-IMPF-perform-3PLS:NZR be.similar.to  
‘The small children are like Asir birds chattering away.’  

16.1.7 Predicates of knowledge and its acquisition

Predicates of knowledge and acquisition of knowledge code this knowledge in a complement. In Momu, this complement is deverbal.

Relevant predicates include those describing the possession of knowledge, including the nominal forms *kamefe* or *kamey* ‘understanding/knowledge’ and their intransitive counterpart *kamefeta*. The absence of knowledge is expressed by the nominal form *kwobo*, which has no verbalised counterpart. Loss of knowledge is coded by the verb *titwer* ‘forget’.

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Complements to these predicates can occur before or after the predicate. A complementiser is not used, but emphatic markers sometimes occur on the complement, accompanied by marked prosody. Their relative frequency may indicate that they are on their way to developing into a new complementiser. For titwer, the experiencer subject is either coded as a person or their thoughts (see commentatives in the previous section).

(16.27) (a)  Keti man=m tiata-wo kamefeta.
    Keti bag=OBL knit-3SG:NSR know\3SGS
‘Keti knows how to make a string bag.’

(b)  Mo te kumasy mamy\=-tin-u=a, te
    yet 1SG bow draw.string=release-NZR=EMPH 1SG
    kwobo.
    be.ignorant
‘I don’t know how to fire an arrow.’

(c)  Bufo fe=titwer buk=m
    thought INTENS=forget book=OBL
    nari\=na-pwen-u=wer.
    carry.one=TRANS>one-come-NZR=EMPH
‘I forgot to bring the book!’

Acquisition of knowledge is similarly coded by a deverbal complement\footnote{In the case of (16.28b), the complement is nominal predicate (§11.2.2), rather than a deverbal one.} to a verb of perception (on/koy\=nin ‘see’ or bun ‘hear’):

(16.28) (a)  Te maw fenib tuw-u=er
    1SG rain night come.down-NZR=EMPH
    bun-momu.
    hear[1\3SGS]-NEG
‘I did not hear that rain fell in the night.’

(b)  Anow meny\=i! Yery koy-nin=a olsem
    big INTENS 1PL see.many-3PLV:VTR=EMPH like
    yerebu PNG baso sukw.
    1PL:COM:GEN PNG child similar
‘Truly! We saw that they were like children of (our) PNG. (i.e.,
we saw that they behaved like PNG people)’

16.1.8 Immediate perception predicates

Immediate perception predicates describe a means by which an event is perceived. The perceived event is encoded in the complement. In Momu, this
complement is in the realis progressive.

The intransitive verbs *on* ‘see’ and *bun* ‘listen’, and transitive verbs *on/koynin* ‘see one/many’ and *nabun* ‘hear’ are the main sensory verbs which can take a complement in Momu.

(16.29) (a) *Yime eru yeb bu-si-meta faino*

\[\text{Man that then listen-3PLS-EPI.FUT child} \]

\[\text{y-a-yiskon-o.} \]

\[\text{D-IMPF-cry.out-3SGS:NZR} \]

‘(At such a time) the men can hear a (hornbill) chick crying out.’

(b) *Flerwick yeswo mweke=m*

\[\text{Flerwick pig garden=OBL} \]

\[\text{y-ai-kuwe=m anabun.} \]

\[\text{D-IMPF-consume:3SGS:NZR=OBL 3SGO:hear[1|3SGS]} \]

‘Flerwick heard a pig eating in the garden.’

(c) *Apona te kusko=m y-a-kwasta-ya=m*

\[\text{Apona 1SG paper=OBL D-IMPF-write-1SGS:NZR=OBL} \]

\[\text{y-a-owan-o.} \]

\[\text{D-IMPF-see:1SGO-3SGS:NZR} \]

‘Apona is watching me writing on the paper.’

(d) *Mm yeb nu onyituw ere onyituw*

\[\text{yes then alreadt face.downwards like.that face.downwards} \]

\[\text{y-a-koy-nin-o} \]

\[\text{D-IMPF-see.many-3PLS-VTR-3SGS:NZR} \]

\[\text{y-a-na-tapri-sa.} \]

\[\text{D-IMPF-see.many.-fly-3PLS:NZR} \]

‘Yes, he is facing downwards watching them flying.’

The other non-contact perception—*si* ‘smell’—is likely able to function as an immediate perception CTP given the sole elicited example below, but further work is needed to confirm this.

(16.30) *Te kuwu abka si-momu, mi kuwu=m*

\[\text{1SG food odour smell[1SGS]-NEG mother food=OBL} \]

\[\text{y-a-kaanu-wo.} \]

\[\text{D-IMPF-cook\‘3SGS-3SGS:NZR} \]

‘I didn’t smell mother cooking the food.’

Sensation via contact (e.g., *tekan* ‘touch’ or *kiy-on* ‘taste’\(^{10}\)) is not expressed

\(^{10}\) *Kiy-on* ‘taste’ is combination of *kiy* ‘consume’ and *on* ‘see’. There are a handful of verbs that combine with *on* to signal an attempt at something. These most likely arose from serial verb constructions.
by a CTP.

16.1.9 Phasal predicates

Phasal or aspectual meanings in Momu are more commonly expressed by cause-effect serial verb constructions (§13.2.3) or have developed from serial verb constructions (§7.5.2).

16.1.9.1 =meni Inceptive

The marginal CTP =meni ‘inceptive’ is the only phasal CTP (§12.1.2.4).

(16.31) (a) *Eru a=m
that here=OBL
pi=oto=menu=o=b, tyemony=b, ie
GO.FUT=sit=INCEP\3SGS=3SGS:NZR=COM shout=COM fish
anu ketia eru.
this lose\3SGS that
‘When he was about to sit down here, when he shouted, he dropped this fish.’

(b) *Fisbu peru ney=meni yeb,
Fisbu little come.across[1SGS]=INCEP[1SGS] then
anebun kwo wuki u eru toonu.
3SGO:hear tree laulau fruit that be.break.through
‘I’m about to come across Fisbu and I hear a laulau fall.’

16.1.10 Negative predicates

Negation via a CTP is a rare strategy amongst the world’s languages (Noonan, 2007, p144). Momu is a language where synchronically, one of the two negation strategies (onfa ‘modal negative’) is clearly a CTP.\(^\text{11}\) This predicate codes propositional attitude (§16.1.2) and deontic modal predicates (§16.1.3) depending on the form of the (verbally predicated) complement.

For non-verbal predicates in complements, the CTP onfa is the only strategy for negative equation, attribution (shown in (16.32) below) and location (§11.9). The other negator momu also functions as a two place predicate to code negative possession (§11.10). Issues of scope and other features related specifically to negation are discussed in §12.2.

\(^{11}\)There is some evidence that the second negation strategy (via the particle momu) used to operate on a nominal clause as well (§12.2.1).
(16.32) (a) *Mwe eru peteku=m onfu.*
   sea  that small=OBL  NEG.MOD
   ‘The sea was not small/calm.’

(b) *Mwe eru peteku.*
   sea  that small
   ‘The sea was/is small/calm.’

It is possible that the other negation strategy (the negative particle *momu*) is a CTP in Western Momu, or was a CTP. See §12.2.1 for more detail.

16.2 Complement clauses

I here summarise the variation in the form of the complement clauses described in §16.1. I take “complement” to include the clause itself, and, where relevant, any marker of subordination in the form of a complementiser. In §16.5.1, I describe specific variation in the form of deverbal clauses, and in §16.6 I describe the form of sentence-like clauses.

Complement clauses in Momu vary in the degree to which they are syntactically integrated with respect to the CTP. At one extreme, utterance complements in Momu show little integration with the CTP. Utterance complements are usually intonationally distinct from the CTP, have essentially no restrictions on the marking of categories, and are not marked formally as subordinate by a complementiser. The complement only ever occurs after the CTP and is at best considered as filling a non-core role, but is more likely paratactic, or juxtaposed.

At the other extreme, there are several, often non-overlapping ways in which complements can be more syntactically integrated.

Complements can be marked as subordinate by a complementiser (either the oblique =m, or the restrictive =s). Subordination may also be marked via nominalisation of the clause by the nominaliser =u, or portmanteau subject marking nominaliser forms (§16.5.1.1).

Syntactic integration may be indicated via reduction in the form of the complement clause. Especially for deverbal clauses, there may be a restriction on subject NPs or subject marking as we saw for generic acquisition-of-knowledge CTPs (§16.1.7). Inflectional categories may be heavily restricted.

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12 A third complementiser is possibly in development. Complements to (acquisition of) knowledge CTPs (§16.1.7) are very commonly marked with an “emphatic” =r. At present this form has no corresponding position in marking on nominals.
For instance, complements to predicates of immediate perception (§16.1.8) can only occur in the realis progressive. Complements to predicates of deontic modality (§16.1.3) are only marked with the volitional future. Sentence-like complements to predicates expressing temporary fears are marked with the apprehensive (§16.1.5).

The position of the complement relative to the CTP is indicative of the syntactic integration of the complement. In defining grammatical relations, we see that arguments in Momu occur before the predicate (§8.1.3). However, in some instances, the lowest ranked argument to a predicate can optionally occur after the predicate, but within the one intonational contour (§8.1.3), i.e., not as a topical afterthought. The most sentence-like of complements tend to show low syntactic integration by restricting the positioning of their complement to after the CTP. The most integrated of complements tend to show higher integration by only occurring before the CTP.

16.3 Complement-taking predicates

The form of the CTP in Momu varies between intransitive and transitive verbs, and between various non-verbal forms. Some CTPs show a degree of grammaticalisation towards inflectional categories (§16.3.2). Some CTPs specialise by always taking a sentential complement, while others do not. Some CTPs are restrictive of categories such as subject or TAM marking (upon themselves, not the complement).

16.3.1 Valence and CTPs

For Momu, few CTPs fill a core argument with a complement. Arguably the most syntactically integrated complements fill the sole argument position for the CTP. Most propositional attitude predicates (§16.1.2) (and associated deontic interpretations, §16.1.3) are one-place predicates; namely the stance predicate (§16.1.2.2), the modal negative (§16.1.2.3) and the ‘seems’ CTP (§16.1.2.4). Commentatives coding judgements, as expressed by attributive predicates, are also one-place predicates (§16.1.6.2). Such CTPs tend to show the greatest degree of grammaticalisation.
16.3.2 Grammaticalisation of modal marking

Many CTPs discussed in this chapter are defective for a variety of categories, or are nominal.

Perhaps the best example is the marginal one-place CTP \( =\text{meni} \) ‘inceptive/desiderative’. This form still inflects for subject, but no other category. There is diachronic evidence from older, Western Momu materials (as elaborated upon in §12.1.2.4) that this form developed from the fusion of the oblique complementiser \( =m \) and the speech verb \( \text{yeni} \).

In fusing with the complementiser, this form has become phonologically bound to the complement. The form of the complement is a bare stem. These factors combine to place this predicate in a position essentially in complementary distribution with other modal inflections.

Recall that a curious commonality across all modal inflections in Momu is that they all begin with the segment \( m \):

\[ -\text{mu} \quad \text{volitional future} \]
\[ -\text{meta} \quad \text{epistemic future} \]
\[ -\text{ma} \quad \text{apprehensive} \]
\[ -\text{me} \quad \text{hypothetical future} \]
\[ -\text{mene} \quad \text{prohibitive} \]

I hypothesise that these forms all arose from the grammaticalisation of CTPs and that this \( m \) is a remnant of the oblique marker \( =m \). This is a common source for the development of modal inflections (Traugott, 2006).

Unfortunately, most of these inflections are simply too reduced to recover remnant CTPs, but in the case of \(-\text{meta}\), older material from Western Momu materials show optional marking of subject on this form (Baron, 1984, pp23–25). See also §12.1.1.2 for other synchronic indicators of the verbal status of this specific inflection.

There are other indicators that the synchronic state of the “modal predicates” (§12.1.2) in Momu is somewhere between predicates and inflections. Momu allows for a single post-predicate participant (§8.1.3). If a participant to a complement occurs after the CTP, yet falls within the same intonational contour, then this indicates that the complement may not be subordinate.
The CTP may not be a full predicate. This is the case in the examples below:

(16.33) (a) \[ \text{Ti=tyepri-fi-mu=m} \text{ wu-ta} \]
\[ \text{carry.many=take.many-3DU=OBL STANCE-STVZR} \]
\[ \text{fiky=m.} \text{ house=OBL} \]
\('Perhaps they will carry them to the house?\) picture-task-part2

(b) \[ \text{Yerebu ma-tyepri-r-mu=m} \]
\[ \text{1PL:COM:GEN 1|2PLO=take.many-1PLS=OBL} \]
\[ \text{onfa God=u fekob e=m, momu.} \text{ NEG.MOD God=SG:GEN place there=OBL NEG} \]
\('We cannot take things to heaven (God’s place), no.’ rich-fool

16.4 Coreferential arguments for transitive CTPs

High-transitive verbs are transitive verbs that include full object cross-reference (§3.1.2.1). These verbs almost always select for human objects. Amongst CTPs, the utterance predicates \textit{yeyen} ‘say to’, \textit{momsen} ‘talk to’, \textit{titmonyen} ‘beckon silently to’, the pretence CTP \textit{monsikan} ‘promise/deceive/bribe’ and immediate perception CTPs \textit{on/koynin} ‘see one/many’ and \textit{anabun} ‘listen to’ are all high-transitive verbs. All take sentence-like complements, but complements to the immediate perception predicates are restricted to the realis progressive.

For all these CTPs, a core argument to the CTP may be coreferential with an argument in the complement. Immediate perception CTPs in fact require the coreference of CTP object and a complement argument.

It is very common in Momu for topical arguments to be elided.\(^1\) Thus it is more common for coreferential arguments in adjacent clauses to be coded by at most one overt NP.

Overt coding of all arguments is possible across main and complement clauses, especially for post-CTP complements, as in (16.34a). If the coreferential main clause argument is not topically elided, then it precedes both

\(^1\)In combinations where a main clause argument is coreferential with an argument in the complement, this argument is extremely likely to be cross-referenced on the predicating verb of the complement. This is due to the very broad preference in Momu for verbs that prototypically select for human referents to also include cross-reference to this argument.
the CTP and complement, as in (16.34b). The main clause coreferential argument may be elided, and overtly coded in the complement, especially in direct reported speech, as in (16.34c).

(16.34) (a) Flerwick te=m yey-wan, "Ay Felwick 1SG=OBL say.to-1[2SGO:VTR][1][3SGS] 2SG wune ef no-f-mu.” money one give:one:3SGIO-2SGS-VOL.FUT ‘Flerwick told me “You should give (him) some money.”'

(b) Te ninebun, yime y-a-momse-sa. 1SG 3PL:LISTEN.to[1][3SGS] men D-IMPF-talk-3PLS:NZR ‘I heard (them,) the men talking.’

(c) Te koy-nin, te 1SG see.many-3PL:LISTEN.to[1][3SGS] 1SG yey-a-fi “very rikodim-a-rai-mu.” say.to-1SGO:VTR-3DUS 1PL record-do.to-1DUS-VOL.FUT ‘I met (them,), and (they_{x}) said to me_{y} “we_{x} will record (you_{y}).”'

Transitive utterance and pretence CTPs only allow post-predicate complements. Immediate perception CTPs allow flexible positioning of the complement. Pre-predicate complements mark a coreferential main clause object and complement subject as a subject, by not marking that argument with the oblique, as in yime in (16.35a). If the complement is postposed, but the coreferential NP is overtly coded in the main clause before the CTP, then it is (optionally) marked as an object by the oblique, as in (16.35b).

(16.35) (a) Te yime muri=m y-a-papkar-o=m 1SG man lime=OBL D-IMPF-shoot-3SGS:NZR=OBL on. 1[3SGS] on. ‘I saw a man shooting at a lime.’

(b) Te yime=m on, muri=m 1SG man=OBL [one.]sees[1][3SGS] lime=OBL y-a-papkar-o=m. D-IMPF-shoot-3SGS:NZR=OBL

14There are rare cases where a complement is topically fronted. See (16.27b) on page 543 for an example where the complement is fronted before the main clause subject.

15Excluding left-dislocated topical afterthought, at most one argument can occur after a predicate in Momu (§8.1.3). Thus a main clause object and complement cannot both occur after the CTP.
16.5 Non-finite clauses

In this section I discuss two types of deverbal clause. A more restricted form (§16.5.1), demonstrated in (16.36a) lacks relational case in the deverbal clause, and a less restricted form (§16.5.1.1) allows relational case and subject-marking which is sometime portmanteau with the deverbal marker, as demonstrated in in (16.36b).

(16.36) (a) Te efiyeni taun pin-u.
1SG no.want[1SGS] town one.goes-NZR
‘I don’t want to go to town.’

(b) Te taun=m a-pin-a=b, wo
1SG town=OBL IMPF-one.goes-1SGS:NZR=COM[ADV] 3SG
nu sen.
just [PFV one.dies[1]3SGS]
‘While I was going to town, s/he died.’

16.5.1 Deverbal clauses

Deverbal or nominalised clauses are formed with the nominaliser -u. The nominaliser is also used to form lexical nominals (§4.9), is a part of the realis progressive (§7.4.2), and has a main clause interpretation as a deontic form (§10.3.3.2).

Deverbal clauses are used in sentential complements to a subset of complement-taking predicates (§16.1.4, §16.1.5, §16.1.7), in (temporal adverbial) comitative clauses (§15.3), backgrounded clauses (§15.5), (conditional adverbial) restrictive clauses (§15.6), absolutive clauses (§15.7), purposive modifier clauses (§15.8) and “linked” adverbial clauses (§15.9).

There is a small amount of variation in the formation of these clauses, both in terms of the restrictiveness of type and form of participants in the deverbal clause, and in terms of inflectional categories. Regardless of inflectional restrictions, verbal number (§6.6) is unrestricted.

The most restrictive form lacks a subject NP and is additionally unmarked for subject. Any non-subject participants in the clause are kept to a minimum and are not case-marked. Viewpoint aspect (§7.1) is not possible, but aspectual suffixes (§7.5.2) are.
(16.37) (a) **Te kwobo kumasy sisw-u.**

1SG be.ignorant.of bow scrape-NZR

‘I don’t know how to carve a bow.’

(b) **Wo efiyenu taun pin-u.**

3SG not.want\3SGS town one.goes-NZR

‘He did not want to go to town.’

Usually in cases where deverbal clauses are required in a construction, they are interchangeable with non-verbal predicates (§11), with no additional marking.

16.5.1.1 Subject-marked deverbal clauses

Subject-marked deverbal clauses are less restricted forms of deverbal clauses. Subject NPs can occur within the clause, and case marking is not restricted.

(16.38) (a) **Ereye=feno-fi-u=b, yeb**

do.like.that=leave-3DU=S-NZR=COM|ADV then

won yeb won.

[PFV]go.up[1|3SGS] then [PFV]go.up[1|3SGS]

‘When they did it like that and left her, she then went up.’

(b) **Te kafok-war-a, ay**

1SG fear-1|2SGO:VTR-1SGS:NZR 2SG

pi-f-mu=m

one.goes-2SGS:VOL:FUT=OBL NEG.MOD

‘I’m worried about you, (so) you can’t go.’

The full set of subject inflections combined with the nominaliser is given in Table 16.1. Exceptional forms are shown in bold. Note that for some cells in the paradigm, the combination is expressed by portmanteau morphs (first and third singular, and third plural). Second person singular and plural forms differ from subject marking counterparts -f (singular) and -m (plural) outside of deverbal marking with the addition of an initial a segment.

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<td>SG</td>
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<td>-wo</td>
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<tr>
<td>DU</td>
<td>-rai-u</td>
<td>-mi-u</td>
<td>-fi-u</td>
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<tr>
<td>PL</td>
<td>-r/t-u</td>
<td>-am-u</td>
<td>-sa</td>
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Table 16.1: The combination of subject marking and nominalisation
The first person singular is usually an unmarked form of the stem, and the third person singular is a rounded version of the stem (§2.5.1.3, §6.2.1). For consonant-final roots, these cells are syncretic in the absence of nominalisation, as rounding does not alter the stem.\textsuperscript{16} So, by fusing subject marking with the nominaliser, these portmanteau morphs both differentiate the subject-marked deverbal clauses from the non-subject-marked forms described in the previous subsection, and additionally they “recover” the distinction lost to syncretism for consonant-final verbs in Momu (§6.4). Compare the perfective form in (16.39a), with the deverbal form in (16.39b).

\begin{align*}
\text{(16.39) (a)} & \quad \text{on} \\
& \quad [\text{pfv}\text{see.one}\text{1}\text{|3}\text{sgS}] \\
& \quad \text{‘I/she/he saw it.’} \\
\text{(b)} & \quad \text{on-a=b} \\
& \quad [\text{pfv}\text{see.one-}\text{1}\text{sgS}\text{:nZR=}\text{com}\text{[ADV]}] \\
& \quad \text{on-o=b} \\
& \quad [\text{pfv}\text{see.one-}\text{3}\text{sgS}\text{:nZR=}\text{com}\text{[ADV]}] \\
& \quad \text{‘when I saw it / when s/he saw it’}
\end{align*}

The third plural form is most commonly -\textit{sa}, but for some speakers, the non-portmanteau form -\textit{si} (3\textit{plS}) + -\textit{u} (\textit{nZR}) is also acceptable. It is not clear at the present stage of analysis if the non-portmanteau form has a specific distribution, as it is rare.

The second singular and plural subject forms are irregular. The plural form -\textit{am} is identical to the form used for plural imperatives (§10.3.3.1). I treat both of these as single morphs, but they differ from their regular counterparts only in that they are preceded by an \textit{a} segment.\textsuperscript{17}

The second singular deverbal clause is used exclusively as an impersonal form in some special adverbial construction types (§15.5.3, §15.7.1).

These subject and nominaliser combinations are identical to the right edge of the realis progressive (§7.4.2).\textsuperscript{18} Compare the example below with (16.39b) above.

\textsuperscript{16}The syncretism of first and third person singular subject marking is readily identifiable in many examples in this thesis. Where there is no additional marking that clarifies the subject, these are marked as [\textit{1}|\textit{3}\text{sgS}] in glossing.

\textsuperscript{17}I have no diachronic explanation for why the \textit{a} segment shows up, not just in the irregular second person forms, but also in the first singular and third plural portmanteau morphs.

\textsuperscript{18}The realis progressive is the combination of a proximity marker \textit{n}/\textit{y} ‘distal/proximal’, the imperfective \textit{a(i)-}, a verb stem, and the combinations of subject marking and nominalisation as described in this section.
The realis progressive (§7.4.2) is found in a subset of complement clauses (§16.2) and in relative clauses (§15.1). For CTPs that limit the complement to deverbal clauses with subject marking, a realis progressive is often acceptable. In other subordinate clauses, no progressive form is possible. The status of the subordinate clause as realis/irrealis is usually born by the subordinator, with irrealis usually being indicated by the restrictive (§15.6, §16.2).

16.6 Sentence-like clauses

Sentence-like clauses are clauses which have the appearance of a main clause, but possibly lack the full range of categories that are found in main clauses. Nevertheless, these are clauses that could reasonably stand alone as sentences.

Aspectual categories are unrestricted in subordinate clauses that allow the sentence-like forms discussed here. The exception is that the overall reality status of the sentence may limit some clauses to either the realis or irrealis progressive.

Modal marking (§12.1.1), if allowed at all, is overwhelmingly limited to the volitional future for real clauses, and the hypothetical future for unreal clauses (§16.6.2). Modal predicates (§12.1.2) do not occur in embedded contexts, with the exception of the inceptive =meni. This can be embedded within temporal adverbial clauses; both the comitative (§15.3) and completive (§15.4).

Sentence-like subordinate clauses occur in their least restrictive form as complements to a subset of complement-taking predicates (§16.1.1, §16.1.2, §16.1.5, §16.1.6). More restricted forms occur in relative clauses (§15.1) and (marginally) in conditional restrictive adverbial clauses (§15.6). The more restricted bare stems occur in comitative adverbial clauses (§15.3), completive adverbial clauses (§15.4) and complements to the inceptive (marginal) CTP (§12.1.2.4).
16.6.1 Bare stem

Bare stem forms are identical to the past perfective main clause form of the verb. Aspetual distinctions are available, but the progressive is not.

Bare stem forms are used with the marginal inceptive CTP (§12.1.2.4, §16.1.4). The bare stem form used in comitative adverbial clauses (§15.3) cannot be marked imperfective (instead a deverbal form must be used). The bare form used in completive adverbial clauses (§15.4) can be marked imperfective.

16.6.2 Subjunctive and indicative

For some sentence-like complements, a subjunctive or indicative mood is realised by the form of the progressive used, by the choice of modal marker, or by the choice of subordinator (§16.2). This mood system appears to be in decline (§12.1.1).

The realis progressive and volitional future are used in real or indicative clauses, and the irrealis progressive and hypothetical future are used in unreal or subjunctive clauses. I have not found any other modal marker in a subordinate clause, except for the most unrestricted clause types.

16.6.3 Unrestricted

The most unrestricted of subordinate clause types are limited to complements to utterance CTPs (§16.1.1). The subordinate status of these complements is questionable at times, and possibly better considered loosely paratactic.
Appendix A

Texts

This appendix gives four example texts taken from the 48 texts used in preparing this thesis. The four texts are:

“A Christmas gathering” by Bernard, §A.1 on the next page.

“Childbirth” by Monica and Antonia, §A.2 on page 568.

“How Julie came to adopt Teresa” by Julie, §A.3 on page 575.

“Steven’s Ancestor story” by Steven Arame, §A.4 on page 583.

This sample was chosen to balance gender, show a spread of ages. I do not have exact ages, but from youngest to oldest are: Julie, Monica, Bernard and Steven.

The texts demonstrate different genres. Bernard’s story is a recollection from his childhood. Monica and Antonia’s story details the facts and procedures around having a baby. Julie recounts an important personal story of how she adopted her daughter when the child’s biological mother died during childbirth. Steven’s story is an origin myth, and ends with a genealogy that ties his family to that origin. The texts are less representative than the overall sample in that they are shorter than the average text collected, for reasons of space, but were chosen because they were amongst the most frequently cited in this thesis.

Conventions

Throughout these texts I comment on items of interest. Comments are woven between the lines of text, between square brackets (e.g., [comment]). Starred elements are comments specifically relating to the starred element in the text.
(e.g., [*comment on word*]). Utterances and their corresponding translation are numbered. At times, where there are multiple short utterances, these are joined together. The intention with the numbering is to help identify points within joined utterances. Comments may also occur inline with the translation.

The representation of names is true to the respective orthographies. For instance, Tipindi is the closest representation to Momu Tipinyi that I can give using an English orthography. The exception is for place names such as Sissano that have an accepted spelling in English.

Tok Pisin loanwords or code-switching is indicated in the gloss for each morph. Tok Pisin morphs are prefixed with TP, for instance TP:life for laif.

### A.1 Christmas gathering (bernard-christmas)

Recorded 26th November 2005, at lower Mori village. Bernard, Simon, and later Francis were present. Recorded by Tom Honeyman.

Bernard tells the story of his grandfather’s brother, Tipindi, who was given stewardship over Mori and the surrounding villages by the Australian patrol officers. Bernard recounts how Tipindi would organise big feast for Christmas. He would direct all the people to gather the food, eat together and sing.

(1) Sayire, te kubti menyi, ofuy ai-ar emse. So 1sg long.ago INTENS elder IMPF-do.to[1|3SGS] like.that

(1) So, long ago, all the elders were living a life like so.


(2) The lives of the elders, their lives were playing out.

(3) Yime, yef yerybu, Tipinyi* anow. man grandfather 1PL:COM:GEN Tipindi big

(3) There was a man, a grandfather to us all, the big man, Tipindi.
(4) Nanamuy, stik eru no-wo=ne, Australia
  foreign TP:stick that give.one:3GIO-3GGS:NZR=FOC Australia
  nanamuy, say.to-3GIO:VTR[1|3GGS] 2G place big=OBL
einta-f-mamu-a.”
  be.watch.over-2GGS-??-EMPH

(4) Foreigners gave him a special stick, the Australians, they said to him
“you will watch over this place.”

(5) Olsem, Mori=m eyer, lukautim-ar
  TP:so Mori=OBL do.like.that[1|3GGS] TP:look.after-do.to[1|3GGS]
eru, Mori, Savamuy, Mumuru, ere=m
that Mori Savamuy Mumuru like.that=OBL
lukautim-ar -wanem-, einta.
  TP:look.after-do.to[1|3GGS] TP:oops be.watch.over\3GGS

(5) So, he watched over Mori, and the places he watched over, Mori,
Savamuy, Mumuru, he watched over them, he watched over them.

(6) Em. (7) Mebke nu fiiki, efe uw-u-a, (8)
  un star just close song sing-NZR-EMPH moon
  eru-a, ues=m, ues nebem, nebem
  that-EMPH moon=OBL moon two two
  wu-fi-sen eru, salim-ta-mu.
  INAN:there.be-3DU-S-COMPL that TP:send-do-VOL.FUT

(6) Um. (7) When Christmas came close, it was a time for singing, and (8)
that month, at that time, two months (before Christmas), there was two
months to go and he would send everyone out.

(9) Ye-nin-mu  “fes eru ary anu nu
  say.to-3PLO:VTR[1|3GGS]-VOL.FUT enough that 2PL this already
  oku=m nepru~nepru ar-m-mu ues anu.”
bush=OBL take.one\3GGS~ITER do.to-2PLS-VOL.FUT moon this

(9) He would say to them, “That’s it, you will go around the bush this
month.”

(10) Ues afa eru-o, ye-nin-mu,  “ary anu
  moon other that-EMPH say.to-3PLS:VTR-VOL.FUT 2PL this
  oku=m ina-m-mamu, ... Mori.”
bush=OBL many.go-2PLS-?? Mori

(10) At a certain month, he would say to them, “You will now go to the
bush ...you Mori people.”
11. *Mony eru netyin Savamuy, Mumuru, inari* talk that throw one [3SGS] Savamuy Mumuru ??

“oku=m ina~ina=ta-gam.”

bush=OBL many,go~ITER=do-PL:IMP

(11) He ordered (lit. threw talk) Savamuy, Mumuru, “inari (meaning unclear) You will go around the bush.”

12. “Nu pum-ar-t-mu eru. (13) Yerebu, just gather-do.to-1PLS-VOL.FUT that 1PL:COM:GEN

kuwu=m ikar-t-mu eru.”

food=OBL do.well-1PLS-VOL.FUT that

(12) “We’re going to gather together. (13) We will make/find food.”

13. “Pum-ar-r kuwu a=m ku-wu-er. (15)

TP:gather-do.to-1PLS food here=OBL consume-NZR-EMPH

Anow menyi, fefeyu anow ta-r-mu anu-a.”

big INTENS play big do-1PLS-VOL.FUT this-EMPH

(14) “We gather and eat food here. (15) We will have enormous fun.”

14. *Eru ere oku=m yeb nepru~nepru* and.so bush=OBL then take.one [3SGS]~ITER


(16) And so, they went around the bush. (17) He sent them.


“Makumene ary an=ti ina-m-mamu.”

Makumene 2PL this=DIR many,go-2PLS ??

(18) To the Makumene clan, Tipindi would say to them, “You Makumene will go this way.”

[Bernard uses the untranslatable modal -mamu several times in this text, in what appears to be a stylistic flourish when imitating Tipindi.]

19. “Arebu nikswu=ti. (20) Yepore bye=ti

2PL:COM:GEN Nik=DIR Yepore whatsit=DIR

ina-m-mu.”

many,go-2PLS-VOL.FUT

(19) “You are (searching) towards the river Nik. (20) You will go there.”
“Farsisu bar eru=ti a-nepru-sen, Makumene Farsisu with that=DIR IMPF-take.one\3SGS-COMPL Makumene bar Farsisu bar kefe an=ti a-nepru, Nyine=ti, with Farsisu with some this=DIR IMPF-take.one\3SGS Nyine=DIR Finfare=ti, Sene Usu=ti.
Finfare=DIR Sene Usu=DIR

(21) "The Farsisu will go that way, and some of the Makumene and Farsisu will go this way, (searching) towards the river Nine, and the stream Finfare, and between Sene and Usu."

(22) Nepu teno=m nepru. meat hunt=OBL take.one\3SGS meat just pi=ai-ten, ye-nin-mu "Ues GO.FUT=IMPF-kill.many say.to-3PLO:VTR[1\3SGS]-VOL.FUT moon faskaney anu ane." one this like.this

(22) They went searching for animals. (23) They were killing animals and he would say to them “One month (to go) now.”

(24) Afa anu a=m finis-ta, afa anu a=m, other this here=OBL TP:finish-do\3SGS other this here=OBL wik afa finis-ta-sen, afa anu a=m TP:week other TP:finish-do\3SGS-COMPL other this here=OBL finis-ta-sen, wik anu nebem ef. TP:finish-do\3SGS-COMPL TP:week this two and one

(24) A week went by, and another, another week went by and another, and three weeks passed.

(25) Orait, ef eru ere afa, "eru na-pye-m-mamu. Okay and one and so other that many.-come-2PLS-??
Fekob na-pwe-m-mu." Eru ere place many.-come-2PLS-VOL.FUT and so fe=na-pwe-si-mu.
INTENS=many.-come-3PLS-VOL.FUT

(25) Okay, on that third week, (he said) “Now you will come. (26) Come to the village.” And so they came quickly.

(27) Nepu=m ai-te-si-mu: yeswo, muy, ku, meat=OBL IMPF-kill.many-3PL-VOL.FUT pig cassowary dry yeswo ku, muy ku, ninya ku somo ku, wokw pig dry cassowary dry tree.kangaroo dry kangaroo dry 3SG:RE
They would be killing animals: pigs, cassowaries, (and then producing) dried pork, dried cassowary, dried tree kangaroo, dried ground kanagaroo, that’s it.

Usmes-ta-momu eru-e! many-INCH-NEG that-EMPH
Tyi=tye-pees-si-mu eru nu
 carry many TRANS > many-arrive-3PLS-VOL.FUT that just
fekob=m-e. place=OBL-EMPH

It was a huge pile (of meat)! They would carry it all to the village.

They brought (the carcasses), put them down, and all the elderly and frail watched over them.

The elders, they cut up the meat.

*[This reduplicated form is a reduction of ‘tety’, and not the same morpheme as found in ‘te-pwen’ before it, which is itself a reduced form of the plural transitivising prefix ‘tye-’]*

They would give them many [ofu biyo (meaning unclear)] and they were eating all over the place, and they were making sago jelly.

And then now (he said), “Now you will make sago jelly.”
They made sago, and then this week, “You’ll tidy the village.”

They cleaned the village, (TP klinim "cleaned" whoops! ) and they cleared out the grass.

The village, they swept and raked it.

And so, they cleared the road to Sumo (Sumuy), and the road to Mafoka, they cut it all the way.

The road to Savamuy, the road of the Mumuru people, they cut it, they completely cleared it, and they brought them, and then he says “that’s enough.”

And now they will make sago jelly.
At this point, Bernard is interrupted when Francis wanders in during the recording.

\[(41)\] \textit{esy=m kaani-si-mu eru.}  \textit{(42) E} \textit{sy=m sago.jelly=OBL cook-3PLS-VOL.FUT that sago.jelly=OBL kaani-si-mu momu-e! cook-3PLS-VOL.FUT NEG[EXCLM]-EMPH} \textit{(41) they will make sago jelly.} \textit{(42) They will make sago jelly. (no!)}

\textit{(43) Mumuru \textit{mu=bu, Savamuy \textit{mu=bu, Yifsyre}}
Mumuru women=PROP Savamuy women=PROP Yifsyre[Mafoka] \textit{mu=bu, Sumuy \textit{mu na-pwen, esy a-kaani-si,}}
women=PROP Sumo women many.-come sago.jelly IMPF-cook-3PLS a-kaani-si, a-kaani-si, esy u esy u! IMPF-cook-3PLS IMPF-cook-3PLS sago.jelly fried sago.jelly fried}
\textit{(43) The women of Mumuru, of Savamuy, of Mafoka, and of Sumo came,} and they were making sago jelly, and fried sago, over and over.

\textit{(44) Say-, \textit{kab ere, ine, mweke kwu ane nu}}
so morning like.that um garden food like.this just \textit{ota=t\textit{ye-pwen}}
pull.up many=TRANS>many-come like.that=OBL
\textit{(44) So, the next morning, um, they harvested the vegetables.}

\textit{(45) Muepe, nebesy, Mori \textit{nu ya o, na-pwe-si,}}
taro sweet.potato Mori just ?? ?? TRANS>one-come-3PLS \textit{kukokoko ikar-si nu \textit{ere=m, babar-si eru.}}
platform do.well-3PLS just like.that=OBL gather-3PLS that
\textit{(45) Taro and sweet potato, the Mori people \textit{[ya o (meaning unclear)]}, they} brought it, and they made a wooden platform, and they piled it all up.

\textit{(46) \textit{Eru ere Mori na-pwe=, Savamuy, Mumuru}}
and.so Mori many.-come Savamuy Mumuru \textit{na-pwe=fes=m babar=ai-kuw-tu-mu eru.}
many.-come=enough=OBL gather=IMPF-consume-DISTR-VOL.FUT that
\textit{(46) And then, Mori came, Savamuy, and Mumuru came, and gathered and} they would be eating now.

\textit{(47) \textit{Eru ere ake fefeyu ai-ar-u=ne efke uw-tu,}}
and.so TP:okay play IMPF-do.to-NZR=FOC song sing-DISTR \textit{kwu* ai-kuw-tu, nepu ku eru yeh, esy nepu ku}}
food IMPF-consume-DISTR meat dry that then sago.jelly meat dry

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eru yeb twu-meta.
that then come.down\,3SGS-EPI\,FUT

(47) And then, they were playing, and sang, the were eating, the dried meat then, sago and dried meat, they were practically swallowing it, all over the place.

[*\textit{kwu} is the nominalised form of consume \textit{\textquoteleft kuw\textquoteright}]

(48) Maksiiki $a=m$ i-sa.
mark.stick here\,=\,OBL plant\,-\,3PLS\,\,NZR

(48) They planted a marker stick in the ground (to indicate the height of the pile of food).

(49) A-barbar-si a-babar-e efke eru usyi;
IMPF\,-\,gather\,-\,3PLS IMPF\,-\,gather\,-\,EMPH song that sing\,\,3PLS
Mumuru usyi, Savamuy usyi, Mafoka
Mumuru sing\,\,3PLS Savamuy sing\,\,3PLS Mafoka
na-pwe=usyi, Sumuy na-pwe=usyi, sayire nepu
many\,-\,come=sing\,\,3PLS Sumo many\,-\,come=sing\,\,3PLS so meat
eru ere.
and.s.o

(49) They gathered and sang: Mumuru sang, and Savamuy sang, and Mafoka came and sang, Sumo came and sang, and so, then on to the meat.

(50) Nepu $ku=m$ yeb tapwa=nerni=ta-si-mamu.
meat dry\,=\,OBL then cut\,=\,bring.down\,=\,do\,-\,3PLS\,-\,??

(50) They cut up the dried meat (at each house).

(51) Mumuru=ne, Savamuy=ne, na-pwe=eka-nin-si
Mumuru=FOC Savamuy=FOC many\,-\,come=help\,-\,3PLO\,\,VTR\,\,3PLS
ere nepu ku ib na-pwe=ta-si Mori=m
like.\,that meat dry together many\,-\,come=do\,\,3PLS Mori=OBL
eka-nin-si ya\,-\,ta-sa, Mafoka=bu.
help\,-\,3PLO\,\,VTR\,\,3PLS D-IMP\,-\,do\,-\,3PLS\,\,NZR Mafoka=PROP

(51) As for Mumuru and Savamuy, they helped bring the meat, with Mafoka.

(52) Nepu ku-r. (53) Wokw ane nu aney-ta ere.
meat dry\,-\,EMPH 3SG\,\,RE like\,\,this just big\,-\,INCH like\,\,that

(52) Dried meat. (53) (The pile) is huge now.
How could you eat it all? Your teeth would go blunt with this dried meat!

And then, okay, afterwards, Tipindi might say to everyone, “That’s enough – this meat.”

He told them to deal out the meat and they would come sing.

And as for sweet potato soup, rice.

[Bernard is here contrasting old staple foods with new staples, but using the generally accepted term for rice (sometimes combined with ‘nanamuy’). He is not referring to sago jelly here.]

Now we, such foreign foods, now we eat many foreign foods.

But before, it was sweet potato soup (that we ate), and taro soup, we would be eating banana, sweet potato, sugarcane.
And so they would haul around the dried meat and deal it out, and break it up.

All (the people) of Mumuru, Savumuy, Mafoka and Sumo, once they had dragged in a huge pile of meat, then they were dealing it around.

They dealt it all out to each house.

Bernard is particularly fond of using reduplicated forms. Here is one of the few examples of a reduplicated nominal in my corpus.

Okay, everyone all together, they eat, and (then it is time for) the last song: they wanted to sing a song, and so they can sing.

And then it would be finished. “And so that’s enough” (said Tipindi)
“Ane ina-yam-o.” Eru ere nu, fes eru.
this many.go-PL:IMP-EMPH and.so just enough that

“So, you go now.” So, that’s the end (of the story).

A.2 Childbirth (ma-childbirth)

29th November 2005, at lower Mori village. Monica, Antonia, and Antonia’s son Stuart are present. Recorded by Fiona Honeyman.

Monica and Antonia explain procedures relating to childbirth. Each turn is labelled M and A respectively. They explain that women give birth in the bush, with the support of other women. Once a baby is born, they return to their house. They correct any disfigurements caused by birth trauma. The husband cooks for the wife while she recovers. Initially the mother and child stay in the house. When the child is big enough, he or she will be able to leave the house and run around.

(1) M: Sai-yerebu momse-rai-mu ere nu. (2)
so 1PL:COM:GEN talk-1DU$-VOL:FUT like.that just
Yery, nu mony eru, fukob=m a-r-ta-t-u.
1PL just story that place=OBL ANIM:be-at-1PLS-STVZR-1PLS-NZR
(1) M: So, let’s talk now. (2) For us, this story is of being in the village.

(3) Yery mu, baso nenwu wu-ta-r-u. (4)
1PL women child belly INAN:be-at-STVZR-1PLS-NZR
Eru=m momse-rai-mu. (5) Ay sisy ere. that=OBL talk-1DU$-VOL:FUT 2SG also like.that
(3) For we women, we get pregnant (lit. children are in our bellies). (4) We will talk about this. (5) You (talk) too (Antonia)!

[Note that unborn children are inanimate as indicated by the choice of existential verb.]

(6) A: Eru ere yeb, on-e yeb, mu baso nenwu
and.so then see-SG:IMP then women child belly
wu-si-ta-sa.
INAN:be-at-3PLS-STVZR-3PLS-NZR
(6) A: And so then, look, women get pregnant.

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[One of the interesting features of this text is the repeated main clause use of deverbal clauses, to indicate habitual acts.]

(7) Monica momse-rai-mu many yeko eru. (8) Baso=m
Monica talk-1DU:S-VOL:FUT story true that children=OBL
tyi-ta-r-u-a. (9) Baso
give.birth.to many-STVZR-1PLS-NZR-EMPH children

(7) Monica and I will talk about this. (8) We give birth to children. (9) We give birth to children.

(10) Mu tyi-ta-sa amse wone
women many.-give.birth.to-STVZR-3PLS:NZR like:SG:IMP
yerebu.
1PL:COM:GEN

(10) The women that give birth to babies, that’s us.

1PL women give.birth.to many-STVZR-1PLS-NZR

(11) M: We women give birth.

(12) A: Yery mu tyi-ta-r-u. (13) Baso
1PL women give.birth.to many-STVZR-1PLS-NZR child
nenwu=m wu-sen, nenwu=m
belly=OBL INAN:be.at[3SGS]-COMPL belly=OBL
wu-sen eru, yeb ina-ta-r-u
INAN:be.at[3SGS]-COMPL that then many.go-STVZR-1PLS-NZR
oku=m.
bush=OBL

(12) A: We women give birth. (13) Once pregnant, once in the belly, we go to the bush.

(14) M: Baso wob papyer-esen,
child 3SG:COM kick[1|3SGS]-COMPL

(14) M: Once the baby itself starts to kick,

(15) A: Baso payer-se=oku=m yeb ina-r-mu.
child kick-COMPL=bush=OBL then many.go-1PLS-VOL:FUT

(16) Oku=m ina-r=ar-r-sen, baso eru
bush=OBL many.go-1PLS-do.to-1PLS-COMPL child that
Once baby kicks, we will go to the bush. Once we go to the bush, the baby kicks.

M: Bike tya tyin...
rubbish.bin RCO carry.many[1][3SG]
M: I carry a basket and other things...

A: Bike tya eru tyi-t-meta.
rubbish.bin RCO that carry.many-1PLS-EPI,FUT
A: We might carry a basket and other things.

Tyi-t-u=ne ina=oku=m
carry.many-1PLS-NZR=FOC many.go=bush=OBL
a-r-sen eru baso eru papyer-sen,
ANIM:be.at-1PLS-COMPL that child that kick[1][3SGS]-COMPL
nari-t-u=ne, baso eru
give.birth.to.one-1PLS-NZR=FOC child that
nari-t-sen, mu afá eru ere baso peru,
give.birth.to.one-1PLS-COMPL woman other and.so child small
pwe=ye-man-o.

Having carried (those things), once we go stay in the bush, and once the baby kicks, having given birth to it, once we give birth to the child, (once) a woman (gives birth) to a baby, she* comes and talks to us.

*It is a little unclear who is being spoken about here. Monica and Antonia seem to take different viewpoints. It jumps between during or prior to the birth, and also a thread eventually develops where someone happens to visit a house, only to find that the mother is not there.]

M: Pi=on-esen.
one.goes=see[1][3SGS]-COMPL
M: Once someone goes and visits her.

A: Pu=on-ese=fiky=m.
one.goes=see[1][3SGS]-COMPL=house=OBL
A: Once someone visits her at the house.
M: Yey-en say.to-3SGO:VTR[1|3SG] mother only

M: He/she says to him/her “(Where’s) Mum?” (says the visitor)

A: “Mi oku=m pin ere.”
   mother bush=OBL one.goes[1|3SG] like.that

A: “Mum has gone to the bush.” (a child replies)

Eru ere and.so mu kefe=m
and.so some=OBL

“Mi oku=m
one.goes=say.to-3PLO:VTR[1|3SG]-VOL.FUT mother bush=OBL
pi=y-ai-wo.”
yeb ina-si-mu.

And so, s/he will go say to some women, “Mum has gone to the bush.”
and then they will go.

Ina-si-sen, nasif-si
many.go-3PLS-COMPL look.after-3PLS
a-si-mu.

Once they have gone, they will stay and look after her.

Nasif-si a-si-sen eru baso eru,
look.after-3PLS ANIM:there.be-3PLS-COMPL that child that
narin-sen, mu eru, baso
give.birth.to.one[1|3SG]-COMPL woman that child
narin, yeksu tekopwan.
give.birth.to.one[1|3SG] umbilical.cord cut.across[1|3SG]

Once they stay and look after her, the child, once she gives birth to it...
the woman gave birth to the child, and cut the umbilical cord.

M: Fyi absi-si. (28) Fyi absi-si, fiky
water wash.one-3PLS water wash.one-3PLS house
niny, nowon=oto-si, 
kaksiye-si — sibi tya above TRANS>one:go.up=put.one-3PLS fix.up-3PLS nose RCO
eru sibi kefe fafo, o iba o —
that nose some long TP:or flat TP:or
erewe-now ete-feno-si-mu.
do.like.that-come.across\3SGS put.one.leave-3PLS-VOL.FUT

M: and they wash the child. (28) They wash the child, they carry it into
the house and put it down, they fix up the child—many noses (of newborns), some are long, or flat(tened)—and they will carry it and put it there.

[When a child is born, they may be knocked about a little during the birth. The women warm their hands by the fire and then “shape” the child’s face.]

(29) Masu eru fyi fwas-esen, eru yeb mother:SG:POSS that water bathe[1\3SGS]-COMPL that then
pwe=naakenu [one.]comes=be.accompanied.by.one\3SGS
ai-mu eru. (30) Oke.
ANIM:there.be[1\3SGS]-VOL.FUT that TP:okay

(29) Once its mother has washed herself, she will now stay with the child.

(30) Okay.

(31) A: Naakenu be.accompanied.by.one\3SGS ai, eru ere
be.accompanied.by.one\3SGS ANIM:there.be[1\3SGS] and.so
baso eru pi=ai-mu.
child that one.goes=ANIM:there.be[1\3SGS]-VOL.FUT

(31) A: She stays with (the child), and the child will stay there now.

(32) Naakenu y-ai-wo,
be.accompanied.by.one\3SGS D-[IMPF]ANIM:there.be-3SGS:NZR
masu fiky=m y-ai-wo.
mother:SG:POSS house=OBL D-[IMPF]ANIM:be-at-3SGS:NZR

(32) She is with (the child), and (the child’s) mother is in the house.

(33) Mu kefe eru ere kwu=m a-kaani-si-mu,
women some and.so food=OBL IMPF-cook-3PLS-VOL.FUT
te-pwe=tu ai-ar-si-mu.
TRANS>many-come=give.many:3SGIO IMPF-do.to-3PLS-VOL.FUT

(33) Some women will then be cooking food, and they will be repeatedly bringing (food) for her.

(34) Baso eru=m te-pwe=,
child that=OBL TRANS>many-come= mother:SG:POSS=OBL
a-tu-si-mu.
IMPF-many.-give:3SGO-3PLS-VOL.FUT mother:SG:POSS
ai-kuw-esen,
IMPF-consume\3SGS-COMPL

(34) They bring it to the child, and they will be giving (food) to its mother.

(35) Once its mother is eating,
M: Baso fiy ai-no-mu
cold breastmilk IMPF-give:one:3SG\SGS-VOL.FUT

M: She will be breastfeeding the child.

A: Baso=m yeb fiy=m
child=OBL then breastmilk=OBL
IMPF-give:one:3SG\SGS-VOL.FUT

A: She will then be breastfeeding the child.

Yefu eru=ne kwu kaanu-mu=m
husband:SG:POSS that=FOC food cook\SGS-VOL.FUT=OBL
onfa.
NEG.MOD

As for her husband, he won’t be able to cook food.

[Antonia changes her mind here: husbands do cook for their wives after a baby is born.]

Ei-yefu kaanu ai-ta
oops! husband:SG:POSS cook\SGS IMPF-do\SGS
kwu-u=ne. (40) Masu=ne, yesy
consume\SGS-NZR=FOC mother:SG:POSS=FOC only
ai-meta.
ANIM:there.be[1|3SGS]-EPI.FUT

(39) Her husband cooks, and feeds her. (40) (The child’s) mother just has to sit still.

(41) M: Mo yesy ai-mu. (42) Baso na
yet only ANIM:there.be[1|3SGS]-VOL.FUT child TP:now
pana ere.
get.one\SGS like.that

(41) M: She will just sit. (42) The child only now gets (solids).

A: Baso eru na pana. (44) Aaa...
child that TP:now get.one\SGS Ah

A: The child only now gets (solids). (44) Aaa...

M: Baso seskuwer-u=se.
child become.strong[1|3SGS]-NZR=RSTR

M: If the child gets strong now.
The child gets strong. (47) The umbilical cord breaks off, and then—

M: Masu wob kaanu-mu.  
mother:SG:POSS 3SG:COM cook\3SG:VOL.FUT

M: (The child’s) mother herself will cook.

A: Masu wob yeb kaanu-mu.  
mother:SG:POSS 3SG:COM then cook\3SG:VOL.FUT

consume:3DUS-VOL.FUT

A: (The child’s) mother will cook food. (50) The mother cooks food first, and she and her husband will eat.

M: Yeb kifyi-mu ere ne- then consume:3DUS-VOL.FUT like.that and

M: They will eat, and-

A: Yeb kifyi-mu ere.  
then consume:3DUS-VOL.FUT like.that

A: They will eat.

M: Kifyi a-ta-fi-mu eru baso nu consume:3DUS IMPF-do-3DUS-VOL.FUT that child already seskuwer-e.  
become.strong[1\3SGS]-EMPH

M: They will be repeatedly eating food—the child is already strong.

Baso seskuwer-u=ne, eru narin child become.strong[1\3SGS]-NZR=FOC that carry.one[1\3SGS]  
oko=m tu ai-ta-mu eru, ground=OBL come.down\3SGS IMPF-do\3SGS-VOL.FUT that  
nams. cleared.area

(54) The child being strong, it will be carried down to the ground, and will be walking around the clearing.
The umbilical cord has broken off for that child. (56) And then, they are there. (57) They go on, and the child gets big.

(58) (If it was) a child that was small, then its mother (still) stays (with it) in the house.

(59) And (when that child) grew up, they came down to the ground and were walking around. (60) She carried it down, and they they were walking about on the ground. (61) That’s all.

A: That’s all (there is to the story).

A.3 How Julie came to adopt Teresa (Mabgi) (julie-teresa)

10th December 2005, at lower Mori village. Julie, Ita, Barbara, Joseph and Emily are present. Recorded by Fiona Honeyman.

Julie tells the story of how Teresa’s mother died not long after she was born, and how she came to adopt Teresa. Julie rushes to the coast with the sick mother and her family seeking medical help, but she dies along the way. They decide that Julie will be the one to look after Teresa. Julie brings
Teresa back to the village, and gives her powdered milk. At the time, Julie’s husband is working for the logging company. When Teresa is struggling, the company takes them all back to their base camp so that Teresa can get some medical care. When she is string again, they return to the village.

(1) *Te nu* mony *Mabkiy=*u *momsen-mu* ere,  
1SG just story *mabkiy*=SG:GEN talk[1|3SGS]-VOL.FUT like.that  
*masu* sukn̓u e=m.  
mother:SG:POSS be.sick\3SGS that[REL]=OBL

(1) I will talk about Mabgi’s story, about her mother that was sick.

(2) *Masu* sukn̓u=ba, ano̓w sugnu=m  
mother:SG:POSS be.sick\3SGS=COM big be.sick\3SGS=OBL  
ta, ner naakni a-r,  
do\3SGS 1PL Sgbe.accompanied.by ANIM:there.be-1PLS  
pi=pan.  
GO:FUT=be.sunrise

(2) When her mother was sick—she was really sick—we stayed with her until the sun came up.

(3) *Nery* yeb nar-, *ner* yeb *nari=nepi-t.*  
1PL then (carry.one) 1PL then carry.one=take.one-1PLS  
Anow sugnu=ta.  
big be.sick\3SGS-STVZR

(3) We took her away. (4) She was really sick.

[Julie uses an irregular first person plural pronoun ner(y), instead of yery. She is the only speaker I encountered who did this.]

(5) *Nery* nari=na-pwe-t=bas, pi=fukob Sumuy  
1PL carry.one=many.-come-1PLS=LNK GO:FUT=place Sumo  
eru=m. (6) *Na-peeni-t.*  
that=OBL many.-arrive-1PLS

(5) We took her and we went to Sumo (Sumuy). (6) We arrived (at Sumuy).

(7) *Na-peeni-t=ba,* yeb sen. (8) *Yeb*  
many.-arrive-1PLS=COM then one.dies[1|3SGS] then  
*sen=ba,* Sumuy fukob=m.  
one.dies[1|3SGS]=COM Sumo place=OBL

(7) When we arrived, she died. (8) She died in Sumo village.
Sumo village is about an hour downriver from Mori village.

(9) Pot=m yeb netyi-t.  (10) Pot
TP:boat=OBL then float-1PLS TP:boat
netyi=nepi-r=ba, netyi=nepi-t fyi=m,
float=take.one-1PLS=COM float=take.one-1PLS river=OBL
pot=m.
TP:boat=OBL
(9) We then floated her on a boat.  (10) We floated her away on a boat, we floated her down the river in a boat.

(11) Pot=m fyi=m netyi=nepi-t,
TP:boat=OBL river=OBL float=take.one-1PLS
woky-pi=eru ere, Ufa.
go.downriver-EXH=and.so Ufa
(11) We floated her down the river in a boat and, went downriver, to Ufa.

(12) Ufa skub eru ere-a, pot afa ere yeb
Ufa area and.so-EMPH TP:boat other like.that then
pwen.
[one.]comes[1|3SGS]
(12) To Ufa village, and another boat came.

(13) Pot eru Saiten=b, Pais Maiyo=b, na-pwe-fi.
TP:boat that Saiten=COM Pais Maiyo=COM many.-come-3DU
(13) That boat, Saiten, and Pais Maiyo, they came (with a boat).

(14) Oke miyu au ere, pot Saiten=u=m
okay mother body like.that TP:boat Saiten=SG:GEN=OBL
wor.
go.down[1|3SGS]
(14) Okay, the body of mother, went down into Saiten’s boat.

(15) Pot Saiten=u=m wor-t=ba nery yeb
TP:boat Saiten=SG:GEN=OBL go.down-1PLS=COM 1PL then
ina-t, na te-ya pa-ya mi-ya, mi
many.go-1PLS and 1SG-EMPH father-EMPH mother-EMPH mother
anow-e, eru ner pot Saiten=u=m wor-t.
big-EMPH that 1PL TP:boat Saiten=SG:GEN=OBL go.down-1PLS
(15) We went into Saiten’s boat and we took off: me, father, mother, big mother, we went into Saiten’s boat.
We got in, and we took her away. We floated towards the sea. We floated (downriver) to the sea. We floated towards the sea, and arrived at Sissano. It was the middle of the night.

We took her into (a house): (starting) in the afternoon, we carried her arriving at night at the house.

When we arrived at the house, (the body) stayed (there) until the sun came up.

(The body) stayed with us there until sunrise, her body stayed until sunrise, morning until afternoon, and close to nighttime we buried her (i.e., It the day after she died that she was buried, at nighttime).
(24) Fifyer ye bapeeni-r, fifyer bapeeni-t=ba, afternon then bury-1PLS afternoon bury-1PLS=COM mesi=ki-r-pan, key afa. again=sleep-1PLS-until.sunrise hand[day] other
(24) We buried her in the afternoon, we buried her in the afternoon and, we slept until sunrise, another day.

(25) Key afa ki-r-pan-t=ba, mon mu hand other sleep-1PLS-until.sunrise-1PLS=COM talk woman Mabkiy=u=m yeb momse-t. Mabgi=SG:GEN=OBL then talk-1PLS
(25) We slept another day, and we talked about Mabgi (Teresa).

(26) Her elder parents, we all talked. (27) They wanted to take her (Teresa/Mabgi).

(28) Te wakfw-ar, te panai-mu-ye! (29) Ni wakf-a-si (te pa-) ni pana-si-mu. I was firm: I would take her. They were firm: (I) they would take her.

(29) Eru (tesi=kar ei-) mesi=kab ki-r-pan. and.so again=?? oops again=morning sleep-1PLS-until.sunrise
(30) Te wakf-ar, te panai-mu. (31) Eru 1SG strong.do.to[1|3SGS] 1SG get.one[1SGS]=VOL.FUT-EMPH
1SG=OBL indicate.to.one-3PLS 2SG woman INTENS just pi=a-uk-f-mu.” GO.FUT=IMPF-adopt-2SGS-VOL.FUT
(30) I was firm: I would take her. (31) They said to me “you are the right woman to be looking after her.”

(32) Eru ere (mesi=kar ei-) mesi=kab ki-r-pan. and.so again=?? oops again=morning sleep-1PLS-until.sunrise
(33) Mesi=kab ki-r-pan-t=Be, eru ere te again=morning sleep-1PLS-until.sunrise-1PLS=COM and.so 1SG Mabkiy ere yeb narin. Mabgi like.that then carry.one[1|3SGS]
And so (kar (mispronounced kab)] then we slept again until sunrise.
We slept again until morning, and then I carried Mabki (back).

When I carried Mabgi, we came back to the village. We will come to the village now.

We came to, and left Ramo, we came to and left Sumo, we came across to the other side of the river, we came upriver to the school.

The (now defunct) school is in Sumo 3, which is the closest Sumo village to Mori.

We arrived at the school and then came upriver arriving at Mafoka.

We arrived at Mafoka, and after that we arrived at the village.

breastmilk=COM

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We arrived at the village, and from that point on I was looking after Mabgi, using powdered milk.

I was exclusively giving her foreign milk.

I was giving foreign milk to Mabgi, and she was smiling now.

Her father went to work. (Her adoptive father) Luke. He went to work for the company.

He was working. And then foreigners came and got us.

I carried Mabgi, and we jumped in a car and took off, to the company compound.

When went and stayed, and I was looking after Mabgi with foreign milk.
Mabkiy pin eru=m yeb fuku mabta kirinyu
Mabgi one.goes[1|3SGS] that=OBL then chest ?? be.slide
come-do \3SGS

Mabgi would slide back and forth across the breast (fuku (possibly alternate form of fukufo ‘breast/chest’).

Ebsī=b ta, nery yeb na-pwe-rai fukob=m.
leg=COM do \3SGS 1PL then many.-come-1DU\S place=OBL

(When) she walked around using her legs, we came (back) to the village.

Pufku pwenin ai-ta-wo=b eru
get.up \3SGS [one.]stands IMP\F-do-3SGS:NZR=COM that
nib fukob na-pwe=na-peeni-rai,
3PL:COM[1PLS] place many.-come=many.-arrive-1DU\S
ai-ta-wo
IMP\F-do-3SGS:NZR 1SG foreign breastmilk and so
a-noi eru.
IMP\F-give.one:3SGIO[1SGS] that

When Mabki began to walk, we came back to the village: she was walking (because of) the foreign milk that I had been giving her.

[I’m not sure why Julie uses a third person plural pronoun here.]

U esy tya=m kuw-o=b,
sago sago.jelly RCO=OBL consume \3SGS-3SGS:NZR=COM 1SG
nanamuy fiy eru yeb fonwoi. (53) A- kwu
foreign breastmilk that then leave[1SG] um food
tya=s y-a-tu-ya.
RCO=RSTR D-IMP\F-give.many:3SGIO-1SGS:NZR

When she ate sago, I stopped the foreign milk. (53) Um, I was giving her food (i.e., solids) only.

Aty o nebesy o, wasi menya, aty
banana TP:or sweet potato TP:or pawpaw ripe banana
menya, te y-a-tu-ya
ripe 1SG D-IMP\F-give.many:3SGIO-1SGS:NZR
y-ai-kuw-o.
D-IMP\F-consume \3SGS-3SGS:NZR

Bananas or sweet potato, ripe pawpaw, ripe bananas... I was giving them to her and she was eating them.
A.4 Steven’s ancestor story (steven-tumbuna)

20th January 2006, at lower Mori village. Steven, Bernard, and Simon are present. Recorded by Tom Honeyman. Lightly edited to remove Bernard prompting Steven with the names of some of the plants and other ceremonial objects.

Steven tells an “Ukumosy.” Ukumosy is a story concerning the history of ancestral people. This is a mythology of the origins of Mori and the surrounding villages. Long ago, the men in the area didn’t know how to deliver babies. They would cut open pregnant women and take their babies. These babies would grow up and repeat the process. God, looking down from heaven sees this and sends two men down to fix things up. The men gather up tools and magical items and show Mwano and Bembe how to deliver her child. When the men see this they are a mix of emotions. Some are angry and some are happy.

The two men from heaven tell Bembe and her family to dig a hole in the ground and hide. Possibly in an act of vengeance, God sends a cloud down over the men and kills them all. This family then learns many things form the two men, and ultimately go on to found all the villages in the area.

The story ends with a genealogy for Steven’s family starting from these progenitors, and finishing with his eldest son Kiape (Paul).

Note that this is a story of Mori village, and so the names of people don’t always fit within the phonology of Momu, and certain special objects may not be Momu names. The “oye” song is a song tradition of the Pin (Womo) speaking people. The story is an abridged version, so at times there are details that have been left out, making the story line a little confusing to follow.

(1) Te nyi ukumos momsen-mu, tebu
1SG ancestor story talk[1|3SGS]-VOL.FUT 1SG:COM:GEN

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Mori=m.  
Mori=sg:gen=obl ancestor story that neg-emph ye-nin-mu.
talk.to-3pl:o:vtr[1|3sg:s]-vol.fut

(1) I will tell an ancestor story, of me and of Mori village.  (2) The ancestor story I will talk of is about “Momu”.

[“Momu” and “Pin” are both language names. “Pin” (Womo) is the original language of Mori village.]

(3) Oke.  (4) “y-o-wo”
TP:okay d-[imf]:inan:there:be-3sg:s:nzr
ye-nin-mu.  (5) Tok ples=b talk.to-3pl:o:vtr[1|3sg:s]-vol.fut TP:language=com
ye-nin-a=ne momsen-mu.  (6) “Saino.”
talk.to-3pl:o:vtr-1sg:s:nzr=foC talk[1|3sg:s]-vol.fut Pin:No

(3) Okay.  (4) I will say (in Momu language:) “it is.”.  (5) (And) I will talk using the original language of the village.  (6) (In Pin language:) “No”.

[The autonym “Momu” follows an areal pattern for naming languages after the word for “no”. Although Steven can’t speak Pin, he relates his ancestry back to Pin speakers. Here he is demonstrating that this is a story about the time before Mori became a Momu speaking village. I am uncertain what the origin of the term Pin is. It is not the word for no (Sain). In ethnologue the language is called Womo. I have also heard it referred to as Wuremof.]

(7) “Sain kogo.”  (8) Pin.  (9) “Pin”
Pin:No Pin:there.is Pin Pin
n-o-wo.  (10) “Pin kogo.”
px-[imf]:inan:there:be-3sg:s:nzr Pin Pin:there.is
(7) (in Pin language:) “There is ‘no’”.  (8) The “Pin” language.  (9) Here is the “Pin” language.  (10) (In Pin: ) “Here is the ‘Pin’ language.”.

(11) Em ol samting, ol samting “nogat”, ya!
TP:it TP:all TP:something TP:all TP:something TP:no oops!
(12) “Pin kogo.”  (13) Oke.
Pin Pin:there.is TP:Okay

(11) (in Tok Pisin:) It’s all about “no”, oops!  (12) “Pin kogo” (in Pin: there is Pin).  (13) Okay.
(14) **Mi go nau kolim-**, te nyi mon
   TP: I TP: will TP: now TP: call 1SG ancestor story
   momsennu, story nyi monwu. talk[1|3SGS]-VOL.FUT TP: story ancestor story:SG:GEN
   (in Tok Pisin:) I will name-, (in Momu:) I will tell an ancestor story, a story of ancestors.

(15) **Ukumos nyi monwu, sori, ukumos nyi**
   story:SG:GEN

(16) **eru-o, nyi ukumos eru-o, Mori=m**
   that-EMPH ancestor story that-EMPH Mori=OBL
   kamafim-ar Samararu=m kamafim-ar,
   TP: create-do.to[1|3SGS] Samararu=OBL TP: create-do.to[1|3SGS] Onei=m kamafim-ar-e, ere=m
   Onei=OBL TP: create-do.to[1|3SGS]-EMPH like.that=OBL
   momsennu.
   talk[1|3SGS]-VOL.FUT
   (16) The (story), the ancestor story is of the origin of Mori, of Samararu, of Onei; I will talk of these.

(17) **Mafoka=m kamafim-ar, Nori=m**
   Mafoka=OBL TP: create-do.to[1|3SGS] Nori=OBL
   kamafim-ar, ere=m momsennu.
   TP: create-do.to[1|3SGS] like.that=OBL talk[1|3SGS]-VOL.FUT
   (17) (It is) of the creation of Mafoka, of Nori; I will talk of them.

(18) **Ukumos eru anu, yime anow-e, yime anow menyi, oko**
   story that here man big-EMPH man big INTENS ground
   a=m ikar-u=ne, niny e=m ikar,
   here=OBL do.well[1|3SGS]-NZR=FOC above there=OBL do.well[1|3SGS] yime anow.
   big man.
   (18) The story here is of an important man, a really important man, who, having made the earth, he made the heavens: the big man.

(19) **Nem wobu-a, abu wobu-a, Lolo.**
   TP: name 3SG:COM:GEN-EMPH name 3SG:COM:GEN-EMPH Lolo

(20) **Lolo baso fesnyi.**
   Lolo child one
His name...his name is Lolo. Lolo has one child. Baso yes kamaf-ta. child only TP:be.create-do \3SG child only only only kamaf- \ TP:create only come.across \3SG

The child just (in Tok Pisin:) appeared. (in Momu:) The child just appeared.

That (man), his name is Mwano. There was this Mwano, and he married a woman. That-EMPH ANIM:there.be[1|3SG]-NZR=FOC woman then marry \3SG

That woman was Bembe. (She) was of another clan, that woman. Okay, there was that woman.

Ancestors long ago, they told “ukumosy” stories. When they were like this, pregnant women, they would take the child. [Instead of the woman delivering the baby, the men would cut her open, take the child and leave her to die.]
Baso eru-o, pana-esen-mu eru
child that-EMPH SG:get[1][3SG]-COMPL-EMPH woman that
kokar-si-mu.
build.platform-3PLS-VOL.FUT

(In order to get the child) Once taken, they would make a platform for
the woman.

Okay, they make a bed for the woman, then like this, once they made a
bed, now having taken the child and cut the umbilical cord, they would be
adopting that child.

The (child) they have adopted, once it grows (into a man), that man
could marry another woman again (repeating the cycle).

[In other words, there was a practice where, instead of naturally delivering
babies, the men would kill their wives and take the babies. Those babies once
grown up, would repeat the process.]
(35) I don’t know their names, those two men. (36) Once I have gone to Onei, they could tell me.

(37) *Oke yime eru, ti-fi eru yeb anafkye-fi.*

TP: okay man that come.down-3DU$ that then fix.up-3DU$

(37) Okay, those men, they came down to fix things up.

(38) *Bekubeku oko=u pun-fi-u=ne, simek-ya,*

things ground=SG:GEN PL:get-3DU$-NZR=FOC leaves-EMPH same,

wobu-ya, kamku-ya,
ginger-EMPH hooked.branch-EMPH vine.sp-EMPH

pana-fi-u=ne yeb nerni-fi-u=ne,

SG:get-3DU$-NZR=FOC then TRANS>one:come.down-3DU$-NZR=FOC

eyeb, saspar-fi yeb baso yeb karim-ar.

then make.good-3DU$ then child then TP: deliver.do.to[1|3SGS]

(38) They collected earthly things: decorative leaves, ginger, a hooked branch, vine rope; having got it and brought it down, they fixed things up and delivered the child.

[The two men have come down from heaven, and are showing them how to use various objects found on earth to sucessfully deliver a baby.]

(39) *Baso karim-ar eru, baso menebu.* (40)

child TP:deliver-do.to[1|3SGS] that[REL] child boy

*Mu eru, yime eru, mwano=b, wok si=mu,*

woman that man that Mwano=COM 3SG:RE also=woman

*afa=nu, fob na eru napwa-si ne baso another=already day TP:now that split.open-3PLS TP:and child nu.*

already

(39) The child that they delivered was a boy. (40) The (previous) wife, the men, (the woman) with Mwano,) previously they split another woman open and he (adopted) another child.

(41) *Afa munebo nu y-o-wo.* (42)

another girl already D-[IMPF]INAN:there.be-3SGO:NZR

Wob aru sisy yeb nenesyi.

3SG:COM that also then TRANS>one:come.across:3PLS

(41) There was another girl. (42) They brought her into (the world) too.
And so, the two (Mawano and Bembe) brought her, and when they were there, oops! (I mean) when that woman was there, the two men came down.

Those two men that I just told you about. Having come down, they, having came down and fixed things up, they talked to (her).

[I’m not entirely certain who the speech is directed at here.]

They came down and said ‘our cassowary has come down here, with swake feathers and cockatoo feathers, ah, and with a ‘kam’ gourd and ‘womoy gourd,’ I sent them down.”
Okay (they all said) [speaker corrects self] she said, “having killed the big man (i.e., cassowary) and then slept, [speaker corrects self and repeats] having pierced him and slept, they took him, [speaker corrects self] I mean they left, and are hunting for food, and come (came) to me.”

(48) “Nenwu to=m napwa-si-mu, na baso
belly 1SG:GEN=OBL split.open-3PLS-VOL.FUT and child
a=m n-o-wo pana-si-mu.”
here=OBL PX-[IMPF]INAN:there.be-3SGO:NZR SG:get-3PLS-VOL.FUT
(48) (She said to the two men:) “They will break open my belly, and they will take this child here.”

(49) Na yime eru ti-fi anafkye-fi. (50) Eru-r
and man that come.down-3DU S fix.up-3DU S that-EMPH
ating, yime anow on wu-ta.
TP:perhaps man big see[1|3SGS] STANCE-ST VZR
(49) And the two men came down and fixed things up. (50) I think God must have recognised this.

(51) Yenu=bu “Nu mu anu=m n-a-ta-sa
say\3SGS=COM already woman this=OBL PX-IMPF-do-3PLS:NZR
nebem na oimnita-sa.”
two TP:and be.ruined-3PLS:NZR
(51) When he (God) said: “They are doing this [i.e., cutting them open] to these women and (the women) are ruined [i.e., killing them].”

(52) Yime eru emse, yeb salim-ta-tu. (53) Ti-fi-u=ne yeb anafkye-fi.
man that like.that then TP:send-do-come.down\3SGS
come.down-3DU S-NZR=FOC then fix.up-3DU S
(52) The man (God) indicated this to the two men, and he sent them down.
(53) (So) they came down and fixed things up.

(54) Yime nebem eru, ti-fi momsа-fi-u=ne,
man two that come.down-3DU S talk-3DU S-NZR=FOC
oke, yey-e-fi,
TP:okay say.to-3SGO:VTR-3DU S
(54) The two men, they came down, and talked and, okay, They told her:
“You should dig a hole first and cut the base of a tree, and having done so, bring your husband and child and the other girl, and you should then say to them that, in this hole, the two will get ready water, food, taro, and things.”

(They continue) “Having prepared the things, then they should put the two of them inside.”

[Steven possibly means three, not two. The parents and the girl stay in the hole. The child stays outside.]

Na

Okay, and then they will stay there. And, this is because this cloud will descend and cover them up. It will thunder and cover them up.”
And so, when she directed them (Mwano and the children) to do so and left them, and (in turn) the two men had directed her and left, (the two men) went up (to heaven).

Oke, ye-nin-e "Baso pwen-o."

Okay, she said to them, “bring the child.” The two came, and the husband said, “I will stay to decorate the child with beads.”

[It is possibly the little boy delivering the quoted speech above, not Bembe.]

The child spoke, and he (the father) decorated him (the boy).

He decorated the child with leg bands, and other things: a penis gourd and a bone belt, and once (the child) stayed, he sang, and grew tired of it all.

They understood what the child might think. Like that, he spoke to the child like that and left him.
Ere, yeb won-fi. \textsuperscript{(66)} A-fi-\textit{u}=\textit{ne} like.\textit{that} then go.\textit{up}-3\textit{DU}\textsubscript{\textit{US}} ANIM:there.be-3\textit{DU}\textsubscript{\textit{US}}-NZR=FOC fi\textit{ki}~fi\textit{ki}=m a-ta-sa \textit{eru} yeb won-fi. close~close=OBL IMPF-do-3\textit{PLS}:NZR that then go.\textit{up}-3\textit{DU}\textsubscript{\textit{US}} \textit{The two men went up to heaven.} \textit{(66) Having stayed up there...the time (first came) near, and then they went up.}

Won-fi \textit{a-won-fi-\textit{u}=be,} \textit{yime} go.up-3\textit{DU}\textsubscript{\textit{US}} 3\textit{SGO}:see-3\textit{DU}\textsubscript{\textit{US}}-NZR=\textit{COM} man na-pwe=na-peeni-si. \textit{(69) Yime na-pwe=on-si} \textit{mu} \textit{eru} PL-come=PL-arrive-3\textit{PLS} man PL-come=see-3\textit{PLS} woman that baso nemkyen. \textit{(70) Yime eru nafkye-fi. child} give.birth[1|3\textit{SGS}] man that fix.up-3\textit{DU}\textsubscript{\textit{US}} \textit{When they went up and saw him (God), all the men (the ones who went hunting) arrived (returning from hunting for a feast). (69) The men came and saw that the woman had given birth to the child. (70) Those two men had fixed up everything [without killing her by cutting her open].

\textit{[Bembe is still alive after successfully delivering the boy. The men are a mix of emotions upon discovering this.]}

\textit{Orait, yime eru yeb an-ta, kefe na-pwe-si eru} \textit{TP:okay man that then like.\textit{this}-do some} PL-come-3\textit{PLS} that amku-er-si, yeb su-o tepa-si, kefe ignore-3\textit{SGO}:VTR-3\textit{PLS} then spit-emph spit-3\textit{PLS} some monferimony-e-si, baky-er-si, \textit{Kefe inuya-si, yell.at-3\textit{SGO}:VTR-3\textit{PLS} ridicule-3\textit{SGO}:VTR-3\textit{PLS} some laugh-3\textit{PLS} na-pwe=yey-e-si “\textit{emsu-ya.”}} PL-come=\textit{say.to-3\textit{SGO}:VTR-3\textit{PLS} good-EMPH} \textit{(71) Okay, The men behaved like this: some came and ignored her, then some spit on her, some shouted at her, taunted / swore at her, some laughed at her, (some) came and said that it was good.}

\textit{Eru ere sapey yeni-si.} \textit{(73) Eru tyeknu} \textit{and.so good say-3\textit{PLS} that PL:be.accompanied.by\textbackslash 3\textit{SGS} ai-\textit{wo}=\textit{b} na-pwe-si na-peeni-si. ANIM:there.be-3\textit{SGS}:NZR=OBL PL-come-\textit{PLS} PL-arrive-\textit{PLS}} \textit{(72) And so they said it was good. (73) When they stayed with her, they had all arrived.}

\textit{Kwu tya tgi=tye-pwe-si} \textit{nepu tya.} \textit{(75) Food RCO PL:carry=\textit{TRANS}>many-come-3\textit{PLS} meat RCO}
They brought things like food and meat. (75) Food and other things.

Okay, they wanted to sing a song, and so would they sing an “Oye” song.

When they were singing the Oye, thunder struck, at night.

There was a thunderclap, and as for that child (the boy), he was singing, with all the many men.

So now, they alone: the husband and wife, and the girl, they stayed inside, under the ground.

And so, thunder and lightning struck. (81) It was thundering.

D-IMPF-be,noisy  D-IMPF-do-3SGS:NZR many
Lightning struck all over the place. Lots of it.

Oke, bye, nakafe sisy yery tu

TP:okay whatsit smoke also 1PL come.down\3SGS

Oko anu

cover-3SGO:vtr[1\3SGS] ground this

INTENS=become.black-STVZR=lose\3SGS

Okay, um, smoke also came down and covered us. The area was left in darkness.

They said “what is this?” And so, the ground then, thundered just once.

It thundered. The people were cooked.

It covered them over and killed them all.
wife having stayed—they stay perhaps, while it was still noisy, and then when they went up, when it finished and they went up—the area was cleaned out?

(92) *Fuku klin-ta=ba oko pantu=ba.* — place TP:clean-do=COM ground be.sunrise=COM


TP:week two TP:or that-EMPH cloud go.up[1|3SGS]=COM

(92) when place was cleaned out and the sun rose—after waiting how many days? Probably two weeks?—and the cloud lifted.

(93) *Eru ere yeb nefyi syoko fu-fi* and.so then come.across:3DU S door open-3DU S

*nefiu-u=ne yeb on-fi.* come.across:3DU S-NZR=FOC then see-3DU S

(93) And so they came out, they opened the door and came out and saw.

(94) *Baso ofu, oke same, oke wobu, ofu eru,* child beads TP:okay ginger TP:okay hooked.branch beads that *bekubeku eru-a, ofu-er-fi eru fe= things that-EMPH decorate-3SGO-3DU S that[REL] INTENS= nefyi pun-fi ofu-er=ba pun-fi*

come.across:3DU S PL:get-3DU S decorate-3SGO:VTR=COM PL:get-3DU S

*yeb tyi=wofyi, mesis.* then PL:carry=go.across:3DU S again

(94) The child’s beads, okay, ginger, okay, the hooked branch, the beads, and other things that they decorated the child with; they came out and collected (those things), and decorated the child, and the two took everything inside again.

(95) *Wofyi a-fi-u=ne, orait kamyi go.across:3DU S ANIM:there.be-3DU S-NZR=FOC TP:okay cloud eru won=be, yeb finis-ta.*

that go.up[1|3SGS]=COM then TP:finish-do\13SGS

(95) Having gone in and waited, when the cloud went up, it was finished.

(96) *Eru yime eru nebem te nu aby-e-tai* that man that two 1SG just name-3SGO:VTR-stvzr[1SGS]

*aru, yeb anyer-yu, Mwano=b, Pempe=be baso yeb* that then do.like.this-EMPH Mwano=COM Bembe=COM child then
The two that I named before, they then did it like this: Mwano and Bembe, they had a child.

Baso eru nari-fi, nem wobu, Samba.

Eru Samba eru mu afa pana Yofo, mufu that Samba that woman another sg:get\3sgS Yofo wife:poss wobu.

The child the two had, its name was Samba. (98) That Samba, he married Yofo, his wife.

Yofo pana-wo=ne, a-fi-u=ne, bebeku Yofo sg:get-3sgS:NZR=FOC ANIM:there.be-3DU=SZ-NZR=FOC things eru ikata-fi-u=ne, bebeku tya tino-si. that do.well-3DU=NZR=FOC things RCO PL:give:3PLO-3PLS

Having married Yofo and stayed, and having gotten everything together, they (the two men in heaven) gave (Samba and Yofo) things:

Bekubeku efeke uw eru, same bebekuk eru, things song sing\3sgS that[REL] ginger things that aworo kwase, ubuko, efeke mu, eru male.magic female.magic song.magic women that tu-fi, Samba=m. PL:give:3SGO-3DU Samba=OBL

The things that are sung, the magic ginger things, men’s magic, women’s magic, women’s song-healing practices; they (the two men from heaven) gave them to Samba.

Wo niny a=m ai-wo=b, orait 3sg above here=OBL ANIM:there.be-3SGS:NZR=COM TP:okay tu-fi-u=ne, yeb, pet PL:give:3SGO-3DU=NZR=FOC then TP:bed wokim-ar-si-u=ne, kukoko siska-si-u=ne, TP:make-do.to-3PLS-NZR=FOC platform make.platform-3PLS-NZR=FOC bebekuku ai-wor-u=ne, yeb ketya-ti-si nukwu things IMPF-go.down-NZR=FOC then lose.come.down-3PLS vine yefke=b. vine.sp=COM

When he [one of the two men?] stayed on top, okay, having given
them to him and made a platform, having made a platform and put things on it, they lowered it down (from heaven), using a vine rope.

(102)  
\[ \text{Ni tit-nin-si-u=ne, eru ere yeb} \]  
\[ 3\text{PL tie-PL:VTR-3PLS-NZR=FOC and.so then a-nerni-si.} \]

(103)  
\[ \text{Yen-i-si “yar-mi oko=m} \]  
\[ \text{impf-sg:bring-down3PLS say-3PLS go.down-2DU\$ ground=OBL} \]  
\[ \text{painyi-mi-u-o yeb i-e-ta yar-mi.” pin-2DU\$-NZR-EMPH then pull-3SGO:VTR-STVZR go.down-2DU\$} \]

(102) They tied together many ropes, and then they lowered the bed down.  
(103) They said “you two go down and pin (the rope) to the ground, and lower it down.”

(104)  
\[ \text{Oko=m na-peeni-fi, i-e-ta} \]  
\[ \text{ground=OBL pl-arrive-3DU\$ pull-3SGO:VTR-STVZR} \]
\[ \text{yar-fi-u=ba.} \]

(105)  
\[ \text{Eru ere, i-e-ta} \]  
\[ \text{go.down-3DU\$-NZR=COM and.so pull-3SGO:VTR-STVZR} \]
\[ \text{yar-fi-u=ba yefke eru ketya.} \]
\[ \text{go.down-3DU\$-NZR=COM vine.sp that lose\$3SGS} \]

(104) They arrived at the ground (and when) they lowered it down.  
(105) And then, when they pulled the rope, it dropped.

(106)  
\[ \text{Ketya-si=ba, nu momu eru, kos mesis won-u.} \]
\[ \text{lose-3PLS=COM already NEG that path again go.up-NZR} \]

(106) When they dropped (the rope), there was no longer a way to get back up (to heaven) again.

(107)  
\[ \text{Lo wanem kos won-fi=er, kos} \]  
\[ \text{TP:for TP:whatever path go.up-3DU\$=that[REL] path won-si=er, yes won-si-ta-sa bye} \]
\[ \text{go.up-3PLS=that[REL] only go.up-3PLS-STVZR-3PLS:NZR whatsit niny kwo niny, ak=ne nu tu-u eru yefke=b} \]
\[ \text{above tree above RE=FOC just come.down-NZR that vine.sp=COM byar-fi, kosy nu momu.} \]
\[ \text{send-3DU\$ path just NEG} \]

(107) Whatever path that they went up, (or) just going up on something, on a tree, in turn, there was no way of sending down a rope, there was no path. [i.e., they tried in vain to go up to heaven again, but failed.]

(108)  
\[ \text{Oke tu=ai-u=ne} \]  
\[ \text{TP:okay come.down\$3SGS=ANIM:there.be[1|3SGS]-NZR=FOC} \]
\[ \text{Samba yeb anyer, tit narin,} \]
\[ \text{Samba then do.like.this ancestors SG:begat[1|3SGS]} \]
Okay Samba having come down and stayed (on earth), he did it like this: he fathered the ancestors, the elders of Mafoka.

He had Mukop, the elder of Mori. He had Sok, the elder of Samararu. Ancestors like that.

He fathered the people of Onei, the elders of Onei. He fathered Wiri of Sera. Okay Tiu was a woman of Sumo.

She was the last born. Of 5. 2 and 2 and 1.

He made the ancestors thus: I will tell how Mukop did it. He had Kiaepe.

Orait Wiri like that then then 3SG:RE also then
Sok, he had Komondo. (121) Okay Wiri, he too had children.

I don’t know, I’ll just bring it that point (unfinished). (123) I can’t tell you about some.

They belong to other men. (125) I’ll tell you of my ancestors now.

He did this... Kiape did this: he had Mafu, he had Mitni, he had Kenisi.

Okay, then Kiaro did this: he had Mafu. (128) And Kenisi too, he had Naise and he had Awili.

Kiaro then did this: he had Arame, ahh! sorry, Mafi had Arame, Arame had Fako, Fako then had Kiape.
[Arame is Steven’s father, Fako is Steven, and Kiape is Steven’s first born son Paul.]

(130) Nu fes eru, ngi ukumos to-r.
   already enough that ancestor story 1SG:GEN-EMPH

(130) That’s all, my ancestor story.
Appendix B

Index of Texts

In this appendix I give a brief synopsis for each referenced text this thesis. The titles correspond to the source labels used in examples. The date of recording, speaker(s), other people present, and recorder are all given. The ID can be used to locate the source materials in both the PARADISEC and ELAR archives.

antonia-river

Recorded: 2005-11-06, Mori village
ID: FB2-008
Speaker: Antonia
Present: Monica, Fiona (recorder)
Synopsis: Antonia tells the story of life living by a river that floods every time it rains upriver. The story is at times told from the perspective of the river, shifting back and forth at whim.

antonia-sings

Recorded: 2005-12-28, Mori village
ID: BH1-014
Speaker: Antonia
Present: Monica, Fiona (recorder), Tom
Antonia sings a song in Momu about the arrival of Christianity in the area. The song is a “spirit song”, composed by Martin, from Savanui village.

**Bernard Cassowary**

Recorded: 2005-11-10, Mori village  
ID: TH1-005  
Speaker: Bernard  
Present: Simon, Francis, Tom (recorder)  
Synopsis: Bernard tells the story of hunting for and shooting a cassowary. The story is told shortly after he returned from the hunting trip.

**Bernard Christmas**

Recorded: 2005-11-26, Mori village  
ID: TH1-008  
Speaker: Bernard  
Present: Simon, Tom (recorder), Francis  
Synopsis: (Full text available on page 558)

**Bernard Clemen**

Recorded: 2005-10-16, Mori village  
ID: TH1-003  
Speaker: Bernard
Present: Clemen, Tom (recorder), Fiona

Synopsis: Bernard tells an origin myth about good and bad people being cast down from heaven to earth.

bernard-garden

Recorded: 2010-08-16, Mori village
ID: TH3-004
Speaker: Bernard
Present: Tom (recorder), Fiona
Synopsis: Bernard explains the procedures for preparing, planting out and harvesting a garden plot.

bernard-reciprocals

Recorded: 2010-08-16, Mori village
ID: TH3-006
Speaker: Bernard
Present: Tom (recorder), Fiona
Synopsis: Bernard describes the contents of several videos showing various reciprocal actions (per Evans et al., 2004).

bernard-tumbuna

Recorded: 2005-11-19, Mori village
ID: TH1-007
bm-crow-jackal

Recorded: 2010-08-18, Mori village
ID: TH3-008
Speaker: Bernard and Monica
Present: Tom (recorder)
Synopsis: Bernard and Monica arrange pictures into a story and then run through it (per Carroll, Kelly and Gawne, 2011). This task was used as a “warm up” for the much larger social cognition picture task (per San Roque et al., 2012).

bm-frog-story

Recorded: 2008-10-09, Mori village
ID: TH2-004
Speaker: Bernard and Monica
Present: Tom (recorder)
Synopsis: Bernard and Monica describe the contents of a picture book about a boy who loses his frog, and his search (accompanied by his dog) to find it (Mayer, 1969).
cut-and-break-part1 and cut-and-break-part2

Recorded: 2010-08-25, Mori village
ID: TH3-010
Speaker: Monica, occasionally Bernard
Present: Tom (recorder), Fiona
Synopsis: Monica, with Bernard occasionally adding comments, explains the contents of several videos showing various cutting and breaking acts (per Bohnemeyer, Bowerman and Brown, 2001).

denis-mother

Recorded: 2008-10-11, Savamui
ID: TH2-005
Speaker: Denis
Present: Tom (recorder)
Synopsis: Denis explains the circumstances around his mother’s recent death. While out assisting a candidate running for the elections, Denis is told while in Barupu that his mother has died. Upset, Denis returns to the village, but they have already buried her.

do-not-be-afraid

Recorded: circa 1973
Speaker: Kamu
Present: recorder unknown
Synopsis: The parable of the rich fool. Sourced from the global recordings network (GRN, 2015).
ferdi-savamui

Recorded: 2006-01-10, Savamui village
ID: TH1-015
Speaker: Ferdi
Present: Yarin, Bernard, Tom (recorder)
Synopsis: Ferdi explains how he ended up moving from Nibike to Savamui village. While away in Vanimo, an important family member dies in Sera. Ferdi flies in to help bury him. After this he decides to move to Savamui as he has relatives (including Yarin) who live there.

ferdi-tumbuna

Recorded: 2008-10-18, Savamui village
ID: TH2-003
Speaker: Ferdi
Present: Tom (recorder)
Synopsis: Ferdi tells a story about Tuak(fan) and Wokfae. They meet while out hunting, and Wofkae gives him food. Tuak shows him how to cultivate sago and other good foods. Tuak hides his good looks by wearing a false skin, and Wofkae's sister is rude to Tuak. When Tuak reveals himself the ground shakes. The story ends when Wofkae gives his sister to Tuak.

flerwick-jaklin

Recorded: 2005-10-15, Mori village
ID: FB2-003
Speaker: Flerwick
Present: Fiona (recorder)
Synopsis: Flerwick tells the story of how Jaklin’s mother Solostika died during childbirth.

**flerwick-tumbuna**

Recorded: 2005-10-17, Mori village
ID: TH1-004
Speaker: Flerwick
Present: Tom (recorder)
Synopsis: Flerwick tells the story of the first man Yanei, how he connects to Flerwick’s own genealogy.

**julie-teresa**

Recorded: 2005-12-10, Mori village
ID: FB2-009
Speaker: Julie
Present: Ita, Barbara, Joseph, Emily, Fiona (recorder)
Synopsis: (full text available on page 575)

**kaspar-fire**

Recorded: 2005-11-30, Mori village
ID: BH1-012
Speaker: Kaspar
Present: Many people from Mori and the surrounding villages
Synopsis: Kaspar demonstrates lighting a fire by pulling a vine under a split log.

kaspar-kokomo

Recorded: 2010-09-09, Mori village
ID: TH3-012
Speaker: Kaspar
Present: Keti, Monica, Glenda, Ann, Ian, Fiona (recorder), Tom (recorder)
Synopsis: Kaspar tells the story of the life of a hornbill (kokomo), from the perspective of a Kokomo.

ma-childbirth

Recorded: 2005-11-29, Mori village
ID: FB2-005
Speaker: Monica, Antonia
Present: Stuart, Fiona (recorder)
Synopsis: (full text available on page 568)
ma-frog-story

Recorded: 2008-08-30, Mori village
ID: TH2-001
Speaker: Monica, Angela
Present: Tom (recorder)
Synopsis: Monica and Angela describe the contents of a picture book about a boy who loses his frog and his search (accompanied by his dog) to find it (Mayer, 1969).

ma-kaspar

Recorded: 2005-11-24, Mori village
ID: FB2-004
Speaker: Monica, Antonia
Present: Fiona (recorder)
Synopsis: Monica and Antonia imagine a trip to visit Kaspar.

monica-customs

Recorded: 2005-12-03, Mori village
ID: FB2-006
Speaker: Monica
Present: Antonia, Teresa, Roslyn, Stuart, Fiona (recorder)
Synopsis: Monica describes traditional methods of cooking.
monica-flood

Recorded: 2005-12-06, Mori village
ID: FB2-007
Speaker: Monica
Present: Fiona (recorder)
Synopsis: Monica describes the last time that lower Mori was washed away in a large flood.

monica-garden

Recorded: 2010-08-16, Mori village
ID: TH3-005
Speaker: Monica
Present: Fiona (recorder)
Synopsis: Monica describes gardening practices.

monica-reciprocals

Recorded: 2010-08-17, Mori village
ID: TH3-007
Speaker: Monica
Present: Fiona, Tom (recorder)
Synopsis: Monica describes the contents of several videos showing various reciprocal acts (per Evans et al., 2004).
monica-song

Recorded: 2005-12-28, Mori village
ID: BH1-017
Speaker: Monica
Present: Fiona, Tom (recorder)
Synopsis: Monica sings a love song.

peter-oiye

Recorded: 2008-10-25, Savamui village
Speaker: Peter
Present: Bernard, John, Tom (recorder)
Synopsis: Peter tells the origin of the Oye song. The story is about three sisters who are witches, and a man. The man keeps the women trapped in the bottom of a well. In return for food, they give him the freshwater lobsters that they catch. One day, they escape and destroy his gardens. He eventually catches one of them, Yofo, and locks her in cage. Yofo tricks his son into the cage. When he can’t find the boy, he burns down the cage and kills Yofo and his son. The dark stain found on a particular bamboo species is said to be her blood.

picture-task-part1, picture-task-part2, picture-task-part3

Recorded: 2010-09-30, Mumuru village
ID: TH3-013
Speaker: Monica, Antonia
Monica and Antonia, describe some pictures and create a story around them, according to the task laid out by San Roque et al. (2012). In the first session, they describe the contents of the pictures and arrange them. In the second, Monica gives a third person retelling of the story they create. In the third run, for part of the session, Monica tells the story from a first person perspective. The story is of a man who drinks, accuses his wife of cheating, beats her, and gets thrown in jail. When he gets out of jail he apologises.

**rich-fool**

Recorded: circa 1973, possibly recorded at Amanab station
ID: TH4-100
Speaker: Esey
Present: Unknown
Synopsis: A translation of the parable of the rich fool (GRN, 2015). This story was translated line by line from a Tok Pisin version and then stitched together into a tighter recording. The result is sometime a little too literal in translation, or results in a text that lacks higher pragmatic organisation. The style is thus quite different from what I would consider a standard text. Nevertheless, there are several interesting forms and constructions within this text, and it demonstrates several older, or more western dialect features of Momu.

**savamui-picture-task**

Recorded: 2010-08-31, Savamui village
ID: TH3-011
Speaker: John, Timothy, Ferdi, Ignas
Present: Fiona (recorder), Tom (recorder)

Synopsis: An incomplete run of the social cognition picture task (per San Roque et al., 2012).

**simon-kana**

Recorded: 2006-01-26, Mori village

ID: TH1-021

Speaker: Simon

Present: Bernard, Tom (recorder)

Synopsis: Simon tells the story of a well known rascal relative of his (deceased at the time of telling) who got drunk one day and chased after his mother’s-in-law.

**simon-spear**

Recorded: 2005-11-11, Mori village

ID: TH1-006

Speaker: Simon

Present: Bernard, Tom (recorder)

Synopsis: Simon recounts a time he took several boys hunting, and a stray spear fell and got caught in the shoulder of Stan. The boy (now an adult) took a long time to recover, and it was the last time Simon took any boys off hunting with him.
space-game

Recorded: 2005-12-27, Mori village
ID: FB2-012
Speaker: Monica, Antonia
Present: Fiona (recorder), Tom (recorder)
Synopsis: Monica and Antonia sit with a barrier between them. Antonia has several items arranged on a piece of cardboard in front of her. Monica has a set of identical items. Antonia tells Monica how to arrange the items so that they are identically laid out.

steven-hotel

Recorded: 2005-12-17, Vanimo
ID: FB2-011
Speaker: Steven Arame
Present: Luke, Fiona, Tom (recorder)
Synopsis: Steven describes the contents of a hotel room.

steven-luke

Recorded: 2005-12-17, Vanimo
ID: FB2-010
Speaker: Steven, Luke
Present: Fiona (recorder), Tom
Synopsis: Steven tells an imaginary tale where he directs Luke to the stores in town to buy some things.
steven-tumbuna

Recorded: 2006-01-20, Mori village
ID: TH1-017
Speaker: Steven, Bernard
Present: Simon, Tom (recorder)
Synopsis: (full text available on page 583)

topological-relations

Recorded: 2010-08-24, Mori village
ID: TH3-009
Speaker: Bernard, Monica
Present: Fiona, Tom (recorder)
Synopsis: Monica asks Bernard where certain objects are in relation to others as shown in a series of pictures (per Bowerman, 1992).

yarin-customs

Recorded: 2008-10-25, Savamui village
Speaker: Yarin
Present: Bernard, Timothy, Peter, Tom (recorder) and others
Synopsis: Yarin describes traditional male initiation and marriage customs.
yarin-fight

Recorded: 2008-10-25, Savamui village
ID: TH2-009
Speaker: Yarin
Present: Bernard, Timothy, Peter, Tom (recorder) and others
Synopsis: Yarin describes the details of a fight in his grandparents generation between Savamui and (One(lei speaking) upper Mafoka / Amsuku village.

yarin-savamui

Recorded: 2006-01-10, Savamui village
ID: TH1-014
Speaker: Yarin
Present: Ferdi, Bernard, Tom (recorder)
Synopsis: Yarin describes how the patrol officers shifted Savamui to be closer to the coast, to make it easier for them to access. Yarin alternates between Tok Pisin and Momu in this story.

yarin-tumbuna

Recorded: 2006-01-10, Savamui village
ID: TH1-012
Speaker: Yarin
Present: Ferdi, Bernard, Tom (recorder)
Synopsis: A genealogy.
Appendix C

Comparative and Historical Asides

C.1 A Comparison with Baibai

Baron (1983b) was the first to note sound correspondences between Momu and Baibai. To do this, he used data from a survey he conducted, alongside data collected in an earlier survey by Loving and Bass (1964). I have tried here to supplement this with data from Laycock (n.d.[b]). The key realisation made by Baron in uncovering likely cognates was that the synchronically active (and randomly motivated) metathesis of consonants obscures many correspondences.

The Baron word list contains only 100 items. Laycock’s data contains about 200 items but I could only correctly align a fraction of that. This discussion is based on 42 cognate forms. Given this, standard criteria for applying the comparative method (e.g. Rankin, 2004) dictates that this should only be regarded as a preliminary comparison. I will note when correspond-

\[^{1}\text{The Laycock data is noted when used, in order to flag it as possibly unreliable. Laycock’s notes included minimally-indexed partially-phonetic transcriptions, very frequently without translations. Working backwards from notes on Momu, I aligned a known language against an unknown one and calibrated it using the data in Baron (1983b), where translations are provided. Working with the Momu data (which Laycock recorded twice, in two different locations), I recorded a number of (what I assume to be) mis-transcriptions and extrapolated from there. For instance, I could see that he frequently transcribed } r \text{ as } nd. \text{ Sometimes the same form would be repeated with } r \text{ in one case and } nd \text{ in the other. I have corrected the Baibai forms where the correspondence especially makes sense, but have also been quite cautious with use of the data, only to supplement that which I could work out from Baron’s data.}\]
ences are well attested. Examples do not always exhaust all occurrences demonstrating a correspondence, as I try to present only one correspondence at a time to simplify presentation. Nevertheless, the total number of items in a given example can be taken as a rough measure of confidence in the correspondence.

My analysis of the phonology of Momu is more advanced than of Baibai. I suspect that phonetic detail is missing from the Baibai data. The data are non-primary as well. Baron did not have access to modern word-processing to transcribe in IPA, and instead applied his own orthography. The implication in this orthography is that there is a 7 or 8 vowel system in Baibai, and while lacking a bilabial stop, Baibai has a slightly larger consonant inventory with a velar nasal and an alveolar lateral approximant. I have converted Baron’s orthography used to transcribe Baibai into a graphemic representation using IPA symbols matching those that he provides in a hand-written key (thus the grapheme $y$ in Momu is compared to the IPA-like grapheme $j$ in Baibai). I cannot say whether the data is written in a loose phonetic or phonemic transcription.

I have provided both phonemic and loose phonetic detail in Momu to compare against the Baibai data. The phonetic transcription for Momu is minimal in order to compare like with like. Additionally, I follow Rankin (2004) in making a judgement that for the present study, sub-phonemic detail in Momu is a distraction to the analysis. Vowel length is an important feature in Momu that aligns with vowel quality, but it is mostly missing in the Baibai data. For this reason I have not provided it, alongside less useful sub-phonemic details like nasalisation, labialisation and palatalisation.

Baron sometimes transcribed the data with an $h$ and sometimes without. The implication in doing so is that the absence of an initial $h$ before an $a$ implies the presence of a phonetic glottal in the Bailey data. If this is the case, then this complicates the $#g : ø$ correspondence (§C.1.2) as there are data where both cognates are $a$-initial. At any rate, the phonological contrast in Momu clearly relates to the loss of the initial $g$. For the contrast to have arisen independently in Baibai seems unlikely. And so I have assumed that the absence of an initial $h$ does not always imply the presence of a glottal stop in these cases, and have translated Baron’s orthography accordingly.
Table C.1: Correspondences between Momu and Baibai

C.1.1 Momu $VbV$ : Baibai $VmbV$, Momu $\#b$ : Baibai $\#b$

Intervocalic bilabial trills in Momu correspond to pre-nasalised stops in Baibai:

<table>
<thead>
<tr>
<th>Momu</th>
<th>Baibai</th>
</tr>
</thead>
<tbody>
<tr>
<td>“star”</td>
<td>mebke [mɛbke]</td>
</tr>
<tr>
<td>“gourd”</td>
<td>nibe [nibe]</td>
</tr>
<tr>
<td>“name”</td>
<td>abu [abu]</td>
</tr>
<tr>
<td>“fat”</td>
<td>sibu [snu]</td>
</tr>
<tr>
<td>“two”</td>
<td>nebem [nəbəm]</td>
</tr>
</tbody>
</table>

The only problematic correspondence is if you accept “cloud/sky” kamgi [kambi] as cognate with nagajmbi in Baibai. In the context of a following glide, the nasal is partially denasalised in the Momu form giving a phonetic correspondence of [mb] to mb. It may be this specific context, otherwise not present in the correspondence set, that explains the anomaly.

It appears from the data that word-initial bilabial trills do not correspond to a pre-nasalised stop in Baibai. There is a paucity of data on this point, all given in (C.2), but it appears that the Momu bilabial trill may correspond to a bilabial stop in initial position.

<table>
<thead>
<tr>
<th>Momu</th>
<th>Baibai</th>
</tr>
</thead>
<tbody>
<tr>
<td>“who”</td>
<td>bue [bu.e]</td>
</tr>
<tr>
<td>“what”</td>
<td>bekue ~ byɛ(kue) [bɛkwe ~ bɛjɛ(kwe)]</td>
</tr>
<tr>
<td>* “pig”</td>
<td>yeswo [jɛswɔ]</td>
</tr>
</tbody>
</table>

“Who” and “What” correspond roughly and are related forms (there is a set of $b$-initial question words, and a corresponding set of $m$-initial question words in Momu (§3.5.3)). Initial pre-nasalised bilabial stops in Baibai are rare across the data too, with the (non-cognate) form for “pig” mbɔro being the only instance across the 100 word wordlist.

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Laycock (n.d.[b]) recorded several forms with an initial mb, most of which I was unable to match to translations. He did record the form of “star” (See (C.1)) as mbembokaʔ, raising the possibility that instead the initial mb in Baibai corresponds to m in Momu, but I have several cognate forms where an m corresponds directly to m, initially and otherwise. It is possible that the situation may be more complex given the possible cognate “cloud/sky” in (C.1). The initial b in the Baibai is also in the context of a phonemic glide or phonetic high vowel, which may be conditioning the effect.

C.1.2 Momu ø [ʔ] : Baibai g

A phonetic glottal stop (present on all vowel-initial words in Momu) corresponds with an initial g in Baibai:

<table>
<thead>
<tr>
<th>Momu</th>
<th>Baibai</th>
</tr>
</thead>
<tbody>
<tr>
<td>“axe”</td>
<td>abe [ane]</td>
</tr>
<tr>
<td>(C.3)</td>
<td>“mosquito”</td>
</tr>
<tr>
<td>“sago jelly”</td>
<td>esy [ʔosj]</td>
</tr>
<tr>
<td>“betelnut”</td>
<td>emsi [ʔomse]</td>
</tr>
</tbody>
</table>

There are less data to support it, but it appears that intervocalic g or k are also elided. The data below seems to support this only in the context of a following high vowel however.

<table>
<thead>
<tr>
<th>Momu</th>
<th>Baibai</th>
</tr>
</thead>
<tbody>
<tr>
<td>(C.4) “hand”</td>
<td>key [ktj]</td>
</tr>
<tr>
<td>“breast”</td>
<td>fiy [fij]</td>
</tr>
</tbody>
</table>

Intervocalic k is preserved in the context of a following e.

<table>
<thead>
<tr>
<th>Momu</th>
<th>Baibai</th>
</tr>
</thead>
<tbody>
<tr>
<td>(C.5) “star”</td>
<td>mebke [meŋakr]</td>
</tr>
<tr>
<td>“bird of paradise”</td>
<td>swake [swakr]</td>
</tr>
</tbody>
</table>

But otherwise corresponds with r in Baibai (see next section).

---

2 Usy ‘mosquito’ is more commonly esmwa in Eastern Momu.
3 Note that k corresponds with r in Baibai (§C.1.3).
C.1.3 Momu k : Baibai r

k in Momu, corresponds with r in Baibai, except when followed by e (see the previous section). 4

<table>
<thead>
<tr>
<th>Momu</th>
<th>Baibai</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;many&quot;</td>
<td>kwobo [k(^w)(w)(a)]</td>
</tr>
<tr>
<td>“egg”</td>
<td>hako [ak(o)]</td>
</tr>
<tr>
<td>“tobacco”</td>
<td>kakfyi [kako(f)]</td>
</tr>
<tr>
<td>“house”</td>
<td>fiky [fik(j)]</td>
</tr>
<tr>
<td>“bow”</td>
<td>kumasy [gumasi(j)]</td>
</tr>
<tr>
<td>“corpse”</td>
<td>mekete [mak(a)t(e)]</td>
</tr>
<tr>
<td>“smoke (fire pit)”</td>
<td>kameso [kames(o)]</td>
</tr>
</tbody>
</table>

My chosen citation form for “tobacco” masks the frequent and seemingly unmotivated metathesis of k particularly with f in Momu. If I had chosen the form that Baron (1983b) uses (kafki) the correspondence would have been less clear. The forms for “corpse” and “fire pit” correspond if one allows for this metathesis.

C.1.4 Other consonants

All other consonants in clear cognates correspond. Momu n corresponds with Baibai n, m with m, f with f, s with s, p with p. Baibai as transcribed included the graphemes l and ng (assumed to be a velar nasal). These only occurred in non-cognate forms or in presumed affixes not otherwise carried over to Momu. Obviously further work is needed, but it seems that these sounds might have been introduced via borrowed morphology.

There are two cases of Momu r corresponding with Baibai t. 5 Note that in Momu r and t are nearly allophonic, having only slightly overlapping distributions, and in some cases are in free variation in Momu (§2.1.2).

<table>
<thead>
<tr>
<th>Momu</th>
<th>Baibai</th>
</tr>
</thead>
<tbody>
<tr>
<td>“you (pl.)”</td>
<td>ary [ar(j)]</td>
</tr>
<tr>
<td>“we”</td>
<td>yerebu [yere(b)u]</td>
</tr>
</tbody>
</table>

4 Laycock transcribed dasmo as ndasumo.
5 Note that for “we” I am choosing to compare what Baron (1983b) labels the inclusive form in Momu (which I call the comitative-emphatic or possessive form, with what he labels the exclusive form in Baibai.
C.1.5 Vowels

For the most part, the non-high vowels correspond without issue. Momu $a$ corresponds with Baibai $a$, and $e$ with $e$. $o$ requires further explanation in the context of back vowels, as do the high and mid-high vowels. Glides within diphthongs correspond without issue.

The data here become quite messy as it is not always clear whether Baron has transcribed phonetic or phonemic forms. To my ears, the Momu data as given by Baron has collapsed several different short vowels into a single schwa vowel, and so this may be true of the Baibai data as well. The Baibai data contains many schwas, and these often correspond to differing reduced or full vowels in Momu.

The way in which the data are transcribed implies the use of the same orthography as Momu, making the same vowel distinctions (8 different phonemic vowels, and more allophones). If this is true, then apart from having a likely 7 vowel system (with a possible additional central vowel), then Baibai also exhibits final devoiced high vowels equivalent to the devoiced glides of Momu. The single example is $k\ddot{e}s\ddot{i}$ which in Barons orthography is written $kehsy$. This roughly translates as “one”. It is possibly a mistake, as Laycock (n.d.[b]) does not transcribe any devoiced vowel in Baibai. Conversely he rarely picks up on devoiced vowels in Momu. Both sources include final schwas which might be candidates for variant forms or allophones.

C.1.5.1 Back vowels

The data for the back vowels are particularly variable. This might have been a result of transcription error. For the most part back vowels correspond with back vowels, as shown in (C.8) and (C.9). Note that $u$ and $o$ in Momu vary in that $u$ has many allophones while $o$ does not (M: Momu, B: Baibai):
In the context of \( w \), there is a synchronic process in Momu that transforms front vowels to back ones (§2.5.2). It has been argued by Baron (1983c)\(^6\) that \( anow \) is underlyingly \( anew \) and this makes the correspondence between \( o \) and \( e \) in (C.10) clear. The remaining correspondences are difficult to account for however, except that there is a loose connection between them in the context of \( w \) or \( k \).

\[\text{(C.10)}\]

<table>
<thead>
<tr>
<th>Momu</th>
<th>Baibai</th>
</tr>
</thead>
<tbody>
<tr>
<td>M ( u ) [( o )] : B ( o ) “woman”</td>
<td>( mu ) [( mo )] ( mo )</td>
</tr>
<tr>
<td>M ( u ) [( o )] : B ( o ) “animal”</td>
<td>( nepu ) [( n\acute{a}po )] ( n\acute{a}po )</td>
</tr>
<tr>
<td>M ( u ) [( o )] : B ( u ) “mosquito”</td>
<td>( usy ) [( \acute{f}us\grave{\jmath} )] ( gusi )</td>
</tr>
<tr>
<td>M ( u ) [( u )] : B ( o ) “bow”</td>
<td>( kumasy ) [( gomas\grave{\jmath} )] ( romas )</td>
</tr>
<tr>
<td>M ( u ) [( u )] : B ( o ) “tongue”</td>
<td>( fune ) [( fun )] ( fon(\acute{\kappa}yo) )</td>
</tr>
<tr>
<td>M ( u ) [( u )] : B ( o ) “stone”</td>
<td>( wune ) [( wune )] ( won(\eta\acute{r}) )</td>
</tr>
<tr>
<td>M ( u ) [( u )] : B ( u ) “name”</td>
<td>( abu ) [( an\grave{u} )] ( ambu )</td>
</tr>
<tr>
<td>M ( u ) [( u )] : B ( o ) “fat”</td>
<td>( sibu ) [( sin\grave{u} )] ( sombu )</td>
</tr>
</tbody>
</table>

The correspondence between \( kwo \) and \( re \) for “tree” is difficult to argue for, but I tentatively place them as cognates. \( K \) and \( b \) in Momu both apply labialisation to following vowels, and in the case of \( kwo \) this labialisation might have been the source of the \( w \). To get from \( re \) to \( kwo \) would require

\[\text{Baron (1983c, p7), working from an analysis of rounding of a final high vowel spreading leftwards (§2.5.1.3) represents a deduced underlying form for many \( ow \) sequences in his work. For instance the form \( anow \) ‘big’ is represented as \( anew \) throughout, and the corresponding surface form is [\( an\grave{ow} \)]. Baron used underlying forms for representing some forms in the data in Baron (1983b). This in some cases, makes the correspondence with Baibai cognates clearer, but although likely, raises the question of whether Baron may have mixed underlying analyses into the Baibai data as well.}\]
three steps: with the above documented Momu \( k : \) Baibai \( r \) correspondence (§C.1.3), we can posit an intermediary state \( ke \). The preference for labi-alisation would have triggered the rounding of the vowel, producing \( k(\text{w})o \). Finally, the lowering of the vowel is the most difficult to account for. In the context of the variability of back vowels given above, it seems plausible, but more work is needed.

The remaining pairs in (C.10) are also problematic, as the correspondence is in the opposite direction. Clearly further work and more data are needed to clarify the situation, but there is clearly an interaction conditioned by an unknown variable.

C.1.5.2 High and mid-high front vowels

Momu \( Y \) corresponds fairly cleanly with a high front vowel in Baibai. Finer detail for vowel length is missing from the data, but would clearly help.

(C.11)\(^7\) gives examples of word-initial and final \( yi \) sequences in Momu corresponding to Baibai \( i \). For “snake” a final \( yi \) corresponds to \( ja \) in Baibai.

<table>
<thead>
<tr>
<th>Momu</th>
<th>Baibai</th>
</tr>
</thead>
<tbody>
<tr>
<td>M ( yi \ [i] : B \ i \</td>
<td>“water” ( fyi \ [\text{fi}] )</td>
</tr>
<tr>
<td>M ( yi \ [i] : B \ ji \</td>
<td>“tobacco” ( kakfyi \ [kakafi] )</td>
</tr>
<tr>
<td>M ( yi \ [i] : B \ j \</td>
<td>“man” ( yime(\text{ny}) )</td>
</tr>
<tr>
<td>M ( yi \ [i] : B \ ji \</td>
<td>“snake” ( menyi \ [\text{mani}] )</td>
</tr>
</tbody>
</table>

(C.12) gives examples of diphthongs in Momu. I have elsewhere analysed “shoot” as being underlyingly \( ny \), with an epenthetic vowel added to make \( niy \). Unlike in (C.11), the full vowel in \( ni(tu) \) is not realised as \( yi \). Forms like \( ny \) are rare in Momu and should possibly be excluded at this stage of analysis. This same (phonetic) diphthong is also present in \( fiy \), but it is clear in this case that the sequence arose from the deletion of the \( k \) (without knowing whether epenthetic vowels also occur in Baibai or not). In the same way, a diphthong is formed in Momu by the elision of \( g \) in \( regi \).

\(^{7}\) The data for “snake” in (C.11) is drawn directly and unconfirmed from Baron (1983b), where he notes that it is a specific snake species in Momu and the generic term in Baibai. \( Meni \) is transcribed as \( m\text{vni} \) in Baron’s orthography. To replace the schwa (Baron’s \( v \)) with an \( e \) is an arbitrary decision on my part. I do not have a phoneme that corresponds directly with schwa in Baibai. I have also not assumed the denasalising effects of the glide on the preceding nasal.
(C.12) gives examples of the correspondents to the devoiced glide in Momu. While we saw in (C.11) that a final i in Baibai would correspond to yi in Momu, in the data below we see correspondence with Momu y. Unfortunately, there is not enough data to explain the difference.

For “house” the correspondence is to a schwa in Baibai. I assume this is an allophone conditioned by a trill or tap.

(C.13) gives examples of the correspondents to Momu i. For most of the data, i corresponds with schwa in Baibai. In all these examples the vowel is reduced in Momu and is quite schwa-like. In the opposite direction, there are other lexemes in Baibai that are transcribed with schwas that correspond with Momu e, which has the allophone [ə] in these cases. Without listening to original recordings, however, it is impossible to determine if Baibai really does collapse what in Momu are a collection of short vowels into a single schwa-like phoneme.

(C.14)\(^8\) gives examples of the correspondents to Momu \(i\). For most of the data, \(i\) corresponds with schwa in Baibai. In all these examples the vowel is reduced in Momu and is quite schwa-like. In the opposite direction, there are other lexemes in Baibai that are transcribed with schwas that correspond with Momu e, which has the allophone [ə] in these cases. Without listening to original recordings, however, it is impossible to determine if Baibai really does collapse what in Momu are a collection of short vowels into a single schwa-like phoneme.

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\(^8\)Baron (1983b) notes that the Baibai form \(\text{pan}\) is most likely suffixed with some kind of future marker. Based on comparisons with other verb forms, I have bracketed off the marker.
C.2 The modal inflection -mamu

There is an inflection -mamu which I presume to be some kind of modal marking. It clearly exists in older texts but is longer in use in the area where I conducted fieldwork. Here I simply compile all the information that is available on the form.

I suspect that this form was formerly the interrogative or subjunctive counterpart to the volitional future. I presume that the volitional future has subsumed this function (in combination with interrogative marking, §10.3.2), which has rendered -mamu redundant. In the absence of any further data, I base this hypothesis on the (former) parallel relationship between the epistemic future (in the declarative) and hypothetical future (in the interrogative) (see §12.1.1, and especially Table 12.1 on page 392).

This form appears sporadically throughout the older Global Recordings Network texts (§1.5, §2.6.2) from 1973. While not expanding upon it, or giving any examples, Baron (1984) also lists the form amongst the others discussed here in his unpublished grammar notes.9

In the instances from the Global Recordings Network text “rich-fool”, uses include setting up unreal possibilities like that in (C.15a). Synchronically, speakers of eastern Momu use the hypothetical future -me (§12.1.1.3) for such a construction. In (b) the utterances have a roughly subjunctive flavour, but the translation of this section of the text was difficult for my informants.10 (c) shows that -mamu could be used with the modal negative onfa (§12.1.2.2, §12.2.2), which heavily restricts modal marking otherwise.11 In this way it is similarly as flexible as the volitional future -mu (§12.1.1.1).

(C.15) (a) Fenyib fesis age=anub sen-f-mamu. Bekubeku
night again like.this=now one.dies-2sgS-?? things
abu=m nu wu-meta. Bu
2sg:com:gen=obl just inan:there.be[3sgs]-epi.fut who

9Baron groups the form with the volitional future -mu, and correspondingly groups the epistemic future and hypothetical future together. Given that the relationship between the epistemic future and hypothetical future is of roughly complementary distribution across declarative and interrogative uses, by analogy -mamu might have corresponded to interrogative use. Synchronically the volitional future is used in both domains, however.

10The text appears to deviate from the Tok Pisin transcript used for these texts (GRN, 2015). As such I am also unable to contextualise the prompts for the utterances in (C.15b).

11Synchronically, the meaning expressed in (C.15c) (inability) would be achieved with the volitional future in combination with the modal negative.
yeb na-me=fa?
then get.one-HYP.FUT=YNQ
‘Now, (supposing) on this night you die. Your things will remain. Who might get them?’

(b) Ay zizaz=m yey-e-f, bekubeku sabu
2SG Jesus=OBL say.to-3SGO:VTR-2SGS things bad
abu yeb wata-mamu-a. ?? eru=ne
2SG:COM:GEN then remove-??-EMPH ?? that=FOC
ako ai-ua-sen, usmes-ta-mamu ere.
last.born ANIM:there.be-??-COMPL many-INCH-?? like.that
‘You must tell Jesus to remove all your sins. (inaudible) Once the last born is there, (it) will become plentiful.’

(c) Fekob God=u muyime ten-mamu=m
place God=SG:GEN people many.die[1|3SGS]-??=OBL
onfa.
NEG.MOD
‘You cannot die in heaven.’

One of my main informants, Bernard, used the form seven times across two texts. In discussions afterwards, he explained that it was a flourish on his part and that the form could be used interchangeably with -mu ‘volitional future.’ Six of the seven instances were in a single text, “bernard-christmas” (§A.1). These instances were reports of the speech of an ancestor giving commands to various groups of people to prepare for a Christmas gathering, as in (C.16). This imperative may align with the that used in (C.15b). Five of these six are direct reported speech. For these instances, I assume that Bernard was adopting the style of this ancestor, rather than it being an otherwise valid synchronic use of -mamu.12

(C.16) Tipinyi yeni ‘Makumene ary an=ti ino-m-mamu.’
Tipinyi say[1SGS] clan.name 2PL this=DIR many.go-2PLS-??
‘Tipinyi said “You Makumene will go this way.”’

No other informants that I worked with used the form, not even the more conservative speakers from Savamui Village.

12The final use was in the opening of a session with two speakers in the text “bm-crow-jackal”. I assume this use was a kind of hypercorrection, as Bernard had just been chided playfully by his interlocutor for lapsing into Tok Pisin.
C.3 Diachronic aside on the polysemy of \textit{na-}

In some cases there is a limited degree of polysemy between a plural intransitive form (e.g., \textit{napwen} ‘many come’) and a singular transitivised form (e.g., \textit{napwen} ‘bring one’). It is interesting that the same morpheme derives alternate forms that express different number values, but it is possible to hypothesise why such a development may have occurred.

The singular transitivising \textit{na-} and the plural intransitive \textit{na-} most likely have grammaticalised from a single serial verb construction using the verb \*\textit{na} ‘get’ (prior to the development of verbal number).\textsuperscript{13} A \textit{GET} verb is a source of valence increasing morphology or constructions in many serial verb languages (Aikhenvald, 2006, p13), and indeed is a common source for causatives, instruments and patients (Heine and Kuteva, 2002, pp286–290). While the likely source of the singular transitivising form \textit{na-} is clear, the plural form \textit{tye-} is at present unclear. The plural correspondent of \textit{(pa)na} ‘get one’ has the two forms \textit{pun} ‘get many’ and \textit{popra(i)} ‘get many’, neither of which can be related to \textit{tye-}.

How the same form came to be grammaticalised as a singular distinction in the case of the transitivising prefix and a plural distinction in the case of the intransitive plural can be explained by a semantic division in their application and how this was integrated into the clause. First I assume that \textit{GET} had two uses in serialisation: to gather a person in order for them to participate in an activity, and to gather an object in order to perform an activity upon it. In both cases, the serial verb construction that preceded the grammaticalisation was likely of the form \textit{get X (and) do-Y}. I propose that a human referent \textit{X} combined with the (intransitive) motion-based activities, and that a non-human referent \textit{X} combined with transitive activity verbs centrally concerned with altering \textit{X} (e.g., \textit{TRANSPORT}, \textit{CUT}, \textit{PROCESS} and so on).

In the case of an intransitive do-\textit{Y}, the human referent of \textit{X} came to be incorporated into the set of referents for the subject of do-\textit{Y}. Most likely this started with motion verbs and then generalised to the other intransitive verbs (e.g., ‘I get them and go’ > ‘we go’). This construction still exists syn-

\textsuperscript{13}Na means ‘marry’ in my main field site of Mori village, where they use the separate lexical form \textit{pana} to mean ‘get one’. Older and/or more conservative speakers in Savamui and Mumuru villages use \textit{na} for both ‘marry’ and ‘get one’, but recognise \textit{pana} as a form younger speakers have adopted.
chronically using the accompanitive verb pair *naakni/tyekni* ‘accompanied by one/many’ (§13.2.4.1) or even *pana/pun* ‘get one/many’.

In the case of a transitive do-Y, the non-human referent of X came to be incorporated into predication as the inanimate object of do-Y. As is the case synchronically, I assume that transitive verbs frequently lacked explicit means of marking valence, but this came to mark explicit transitive status. A secondary effect of this grammaticalisation is the strong tendency for transitivised verbs to select for non-human objects. There is a serial verb construction in Momu that does exactly this, via the verb pair *pana/pun* ‘get one/many’. It is a common way for introducing multiple participants into a complex predication (§13.3.3).

### C.4 The deictic distinction in the progressive

There are two possible sources for the progressive in Momu. In notes on aspect in Western Momu, Baron (1984) briefly mentions a progressive form quite different to that in Eastern Momu. The example is given below (with third person subject marking added to the gloss):

(C.17) **Eria ku(-wa).**

*be sleep*\_3SG(-EMPH)

‘He is sleeping.’

(Baron, 1984, p19)

No further details are given, but this is most unlike the progressive in Eastern Momu. If the first two segments are lost then this resembles the distal form *(er)ia → ya-*. However, this provides no explanation for the proximal form.

The alternative explanation is that the deictic distinction arose from motion verbs. This involves reconstructing basic motion verbs from the spatial verbs. The data are given in (C.18), with relevant segments in bold.

Common to the cislocative terms is the segment *n*. Common to the translocative terms is the segment *w*. Some of my informants used what they referred to as an older form beginning with *ya* instead of *wo*. If this

---

14 *Eria* bears some resemblance to the distal manner demonstrative *ere* which frequently gets marked with an emphatic -*a*. Not only does the manner demonstrative not get used in the same position in my corpus, it also has a proximal counterpart *ania* which is not made clear as a possible counterpart in Baron’s notes. I therefore conclude that it is a separate lexical item not found in Eastern Momu.

15 Swapping the initial segments in *won* and *wow* to *yan* and *yaw* also extends to the verb *wor/yar* ‘go down’.

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is the earlier state for the translocative form, then this gives us the initial $y$-.

\[
\begin{align*}
\text{nua} & \quad \text{come up(river)} & \quad \text{won/y\text{an}} & \quad \text{go up(river)} \\
\text{kow} & \quad \text{come down(river)} & \quad \text{woky} & \quad \text{go down(river)} \\
\text{now} & \quad \text{come across} & \quad \text{wow/y\text{aw}} & \quad \text{go across} \\
* \text{n-} & \quad \text{COME} & \quad * \text{y-} & \quad \text{GO}
\end{align*}
\]

This then gives us (presumably reduced) forms that correspond to the deictic distinctions in Momu.

This grammaticalisation pathway would be similar to Nez Perce (Deal, 2008), as mentioned in §7.4.2.1.

**C.5 Grammaticalised accompanitive as an areal feature**

Aikhenvald (2006, p32) argues that comitative applicatives may be a common grammaticalisation of accompanitive SVCs. For instance, part-way along the grammaticalisation path, Paamese has an accompanitive SVC where the accompaniment verb does not occur outside of SVCs (Crowley, 1987). In Tetun Dili, there is a comitative preposition $ho$ which is cognate with the SVC forming prepositional verb$^{16}$ hó in Tetun Fehan (Hajek, 2006).

In the area in which Momu is spoken, there are a number of languages with an accompanitive prefix or SVC. In the Kwomtari family languages Kwomtari and Biaka, and in the Warisic languages Waris and Imonda there are constructions expressing accompanitive senses, but not in the Warisic language Amanab (Minch, 1992). In all cases they apply only to animate accompaniers. Some of the languages then have constructions that apply to inanimate accompaniers as well.

In Kwomtari there is a single prefix $ife$- which adds an animate patient to the event without expressing person or number. Honsberger et al. (2008, pp110–111) label it an accompanier prefix, but it seems clear from their examples that the prefix is a more general valence increasing device (albeit one that applies only to animate patients). This prefix does not appear to pattern in a similar fashion to the accompanitive in Momu.

$^{16}$“Prepositional verb” is a label that recognises that grammaticalisation of a comitative is perhaps underway in Tetun Fahan. Objects to prepositional verbs do not have the same degree of freedom as full verbs (Hajek, 2006).
In Biaka there is an accompaniment SVC similar to Paamese in that it cannot occur alone in a mono-verbal predication. It is fairly restricted as it can only apply as a suffix to verbs of motion. The verb in serialisation patterns interestingly with respect to cross-indexation. When the number of the accompanier is singular, there is no number marking and the subject is not cross-indexed. Subject cross-indexation is carried by the final verb in serialisation. However, when there is a plural accompanier, the verb is marked plural with a suffix -ti, and cross-indexes the subject, in agreement with the final verb (Hamlin, 1998).

The Warisic languages Waris and Imonda both have accompaniment prefixes which alternate for the number of the accompanier (Brown, 1990; Seiler, 1985). In Imonda, the prefix uai-/uõn- marks a singular or plural accompanier, while in Waris the marker is wai-/won-. The accompanier NP is marked with the goal marker -m in Imonda, or the dative -m in Waris, both of which may be cognate with the oblique =m in Momu. In this way, Imonda, Waris and Momu all mark the accompanier NP in the same way that a mono-verbal transitive predication would mark an object. Seiler argues that the singular variant uai- and the verbal classifier uai- do not relate synchronically to a verb, but puts forward a possible relation to the phrasal uau li ‘sleep, lie’.\footnote{Seiler was reluctant to define elements of Imonda as either SVCs or arising from SVCs, but later work has reanalysed the verbal classifiers as SVCs (or ultimately arising from SVCs) (Foley, 1986; Foley and Olson, 1985).}

So it seems that the accompanitive is a grammaticalised prefix in Some Warisic languages, most likely originating from an SVC. The origin and distinctions made by these languages are the most similar to the way in which the accompanitive works in Momu.
Appendix D

Baibai materials

D.1 Momu and Baibai verb paradigms

Table D.1 shows two verb paradigms taken from Baron (1983b) shown side by side with my own transcription of the same verbs in Momu. Baron tentatively argues that the oe at the end of the verb forms is not part of the person/number inflection on the these verbs.

<table>
<thead>
<tr>
<th></th>
<th>'go'</th>
<th>'see'</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Momu</td>
<td>Baibai</td>
</tr>
<tr>
<td>SG</td>
<td>pin</td>
<td>ponoē</td>
</tr>
<tr>
<td>2</td>
<td>pi-f</td>
<td>pōfoē</td>
</tr>
<tr>
<td>3</td>
<td>pin</td>
<td>pōkōe</td>
</tr>
<tr>
<td>PL</td>
<td>ina-t/r</td>
<td>ponoē</td>
</tr>
<tr>
<td>2</td>
<td>ina-m</td>
<td>pōmōe</td>
</tr>
<tr>
<td>3</td>
<td>ina-si</td>
<td>pāsoē</td>
</tr>
</tbody>
</table>

Table D.1: Momu and Baibai ‘go’ and ‘see’ verbs (Baron, 1983b)

Table D.2 shows data taken from Laycock’s fieldnotes. These data are taken from field notes and not a published source, so I am unclear about transcription practices. There is no corresponding audio either to check on transcriptions or translations. In particular it appears that TAM and interrogative mood were not controlled for in elicitation. Forms with a question mark may be interrogative. As such these data serve only to supplement the Baron data. Note that Baron’s data records syncretism of first singular and plural subjects, but that this is not apparent in Laycock’s notes.
Table D.2: Momu and Baibai ‘come’ and ‘eat’ verbs (Laycock, n.d.[b])

Laycock’s notes also include the ‘go’ paradigm, shown in Table D.3. I have swapped the cells for 1pl and 2pl. Based on data in Table D.2, I assume that they were accidentally confused in elicitation.

Table D.3: Baibai ‘go’ paradigm (Laycock, n.d.[b])
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