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## **Tomoip morphological sketch**

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**Abstract:** This paper provides description and analysis of the morphology of Tomoip, an Austronesian language spoken on the island of New Britain in Papua New Guinea. The nominal morphology of Tomoip includes clitics and affixes that designate grammatical number, narrow the semantics of the noun, and indicate possession, among other functions. The verbal morphology includes clitics and affixes that index subject arguments, encode mood, and signal or increase valency. This paper also provides description of adjectives, numerals, quantifiers, pronouns, and several function words and particles in the language.

**Keywords:** Tomoip, Oceanic, Austronesian, New Britain, Papua New Guinea, morphology

## 1. Introduction

Tomoip is an Austronesian language spoken on the island of New Britain in Papua New Guinea.<sup>1</sup> Wordlists for the language have been recorded by Parkinson (1907), Grace (1955a; 1955c), Lindrud (1980), Rath (1980), Ross (1980), and Barlow & Killian (2023a). Aspects of its grammar are treated briefly in Ross (1988) and in Reesink (2005). A description of its phonology is given in Barlow & Killian (2023b), which also provides more background on the history of scholarship on the language. The following description of Tomoip morphology is based on research I conducted with Simon Mangil, a Tomoip speaker who was born in Milim village, Pomio District, East New Britain in 1967. Recorded elicitation sessions were conducted in October and November 2022 in the provincial capital Kokopo, where Simon Mangil was temporarily residing. In addition to these recordings, I have also considered the available data from previous researchers, including a brief but very helpful handwritten “grammar outline” that Malcolm Ross (n.d.) has generously shared with me.

As Tomoip phonology is treated in Barlow & Killian (2023b), it may suffice here to present the consonant and vowel inventories (Table 1 and Table 2).

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**Table 1. Tomoip consonants**

	<b>Labial</b>	<b>Coronal</b>	<b>Palatal</b>	<b>Velar</b>	<b>Glottal</b>
<b>Voiceless stops</b>	p	t		k	
<b>Voiced stops</b>	b	d		g	
<b>Nasals</b>	m	n		ŋ	
<b>Fricatives</b>	β	s	j		h
<b>Trill</b>		r			
<b>Lateral</b>		l			

**Table 2. Tomoip vowels**

	<b>Front</b>	<b>Central</b>	<b>Back</b>
<b>High</b>	i		u
<b>Mid</b>	e		o
<b>Low</b>		a	

Stress is generally penultimate, with affixes but not clitics counting for purposes of stress assignment.

The basic word order for intransitive clauses is SV, and the basic word order for transitive clauses is SVO. It is possible, however, for subject arguments to be omitted (i.e., “pro-drop”). In content questions, the question word occurs in the same place in the clause as expected from a statement (i.e., “in situ”). Polar questions are indicated by intonation and context alone, without any interrogative particle or change in word order.

## 2. Nominal morphology

In the following subsections I describe several morphemes that occur in noun phrases. Nouns in Tomoip are generally one or two syllables long. Some common nouns may receive prefixes, such as class term prefixes, which specify the semantics of the referent (§2.3) or, possibly, diminutive or augmentative prefixes (§2.4). A small set of nouns, consisting of kinship terms (§2.5.4) and some body-part terms (§2.5.5), receive possessive suffixes, which index the person and number of the possessor. Otherwise, possession is generally indicated by a possessive classifier that follows the possessor and precedes the possessum (§2.5.1, §2.5.2, §2.5.3). Common nouns may be preceded by a number-marking proclitic, which indicates whether the referent is singular, dual, or plural (§2.1). Proper nouns may be preceded by a personal noun marker (§2.2). Demonstratives follow nouns, either as enclitics or as free forms (§2.6). Adnominal numerals (§5) and quantifiers (§6) also generally occur after the noun they modify. Finally, adjectives follow the nouns they modify, as well as any demonstratives, numerals, or quantifiers, if present (§4).

## 2.1 Number markers

Nouns in Tomoip do not inflect for gender or case. Number, however, can be indicated by one of three number-marking proclitics that can identify a common-noun referent as being singular, dual, or plural in number (cf. Ross 1988: 292–293; Reesink 2005: 171; Barlow & Killian 2023a: 66–67, 77–78). The forms of the number markers are given in (1).

(1) Number markers (for common nouns)

<i>ne=</i>	‘SG’	(allomorphs: [ne=], [n=], [m=], [ŋ=])
<i>ro=</i>	‘DU’	
<i>e=</i>	‘PL’	

The singular marker *ne=* exhibits four allomorphs (2). Whereas the form [ne=] seems to be productive and can potentially occur before any common noun, the allomorphs [n=], [m=], and [ŋ=] only occur before monosyllabic common nouns. The first segment of such monosyllabic common nouns generally conditions which of the nasal allomorphs is used, although some degree of variability has been observed (3).

(2) Allomorphs of the singular marker *ne=*

<i>ne=</i>	can occur before any segment (?)
<i>n=</i>	generally before alveolar or palatal consonants: /t, d, s, j/; also before vowels (?)
<i>m=</i>	generally before labial consonants: /p, b, m/
<i>ŋ=</i>	generally before velar or glottal consonants: /k, g, h/

(3) Monosyllabic nouns with phonologically conditioned allomorphs of *ne=* ‘SG’

<i>n=tek</i>	‘post [SG]’
<i>n=diŋ</i>	‘thorn [SG]’
<i>n=sal</i>	‘path [SG]’
<i>n=ju</i>	‘fire [SG]’
<i>m=per</i>	‘stone [SG]’
<i>m=beŋ</i>	‘night [SG]’
<i>m=men</i>	‘bird [SG]’
<i>ŋ=kur</i>	‘louse [SG]’
<i>ŋ=glie</i>	‘shield [SG]’
<i>ŋ=ha</i>	‘sun [SG]’

While this allomorphy is perhaps unsurprising, since it accords with crosslinguistically common processes of nasal assimilation, there is no synchronic phonological process operating here. It may be the case that the [N=] allomorphy only occurs in older, somewhat lexicalized forms and that the allomorph [ne=] is the only productive singular marker. Indeed, it seems to be able to function as an alternative to the [N=] allomorphs. For example, although the typical singular marker for *pe* ‘fish’ is the allomorph [m=] (i.e., *m=pe* ‘fish [SG]’), I have also recorded this noun pronounced with [ne=] (i.e., *ne=pe* ‘fish [SG]’). Similarly, in addition to *ŋ=ho* ‘ash [SG]’, I have recorded *ne=ho* ‘ash [SG]’.

At the same time, it seems that these nasal allomorphs are capable of being reanalyzed as part of the stem. Indeed, I have recorded the form *e=ŋho* ‘ash [PL]’ as well as the expected form *e=ho* ‘ash [PL]’; the former form suggests a reanalysis of the initial [N=] as being part of the root. Similarly, for the form *le* ‘nit’ (singular: *n=le* ‘nit [SG]’), I have recorded as the plural form both *e=le* ‘nit [PL]’ and *e=nle* ‘nit [PL]’, the latter again suggesting reanalysis.

On the other hand, it is also possible that some nouns that begin with nasals can be reanalyzed as containing prefixes. For example, for *nuje* ‘water’, I have recorded the plural form *e=uje* ‘water [PL]’ as well as the expected plural form *e=nuje* ‘water [PL]’. Of course, the initial [n=] of this root could have its ultimate origins in a prenominal number marker or article.

I hypothesize that the emergence of the frequently occurring allomorphs of *ne=* ‘SG’ with monosyllabic nouns was motivated by a preference for disyllabic noun structure (cf. Blust 2007a for similar phenomena occurring in other Austronesian languages). Tomoip has apparently undergone sound changes resulting in the loss of syllables, sometimes accompanied by gains in consonant clusters or diphthongs. The monosyllabic nouns with assimilatory nasal singular marking perhaps acquired these proclitics—which are always pronounced syllabically—as a form of compensatory lengthening when sound changes rendered the words no longer disyllabic. This presumably happened at a time when there was productive nasal assimilation, a process that does not regularly occur in the synchronic grammar of the language.

It may even be possible to identify lexical strata among monosyllabic nouns, depending on whether the noun has the singular marker *ne=* or *N=*. We may consider, for example, the noun *kaŋ* ‘moon, month’, which does not reflect Proto-Oceanic (POC) \*pulan ‘moon, month’ (cf. Blust, Trussel & Smith 2023). This noun generally occurs with the singular marker: notably, despite being monosyllabic, the noun receives the marker *ne=* (i.e., *ne=kaŋ* ‘moon [SG]’ and not †*ŋ=kaŋ*). I presume, then, that this word entered the lexicon after the assimilation of the nasal in *ne=* ‘SG’ to the place of articulation of the initial consonant of monosyllabic nouns. Indeed, it seems to be a loanword from the neighboring non-Austronesian language Sulka (cf. Parkinson 1907: 779: <a kienho> ‘Mond’ [‘moon’]; Lindrud 1980: 178: <aŋeŋho> ‘moon’). Interestingly, a reflex of POC \*pulan ‘moon, month’ seems to occur as an archaism in Tomoip: unlike the ostensibly newer form *kaŋ* ‘moon, month’, the older form *pu* ‘moon, month’ seems to exhibit the nasal assimilation of the preceding number-marking proclitic. It is only attested in the phrase *motom mpu* ‘menses, menstruation’ (literally ‘month[ly] blood’).

Similarly, I suspect that the noun *pap* ‘dog’ is a loanword, perhaps from Kuanua (cf. Meyer 1961: 303: <pap> ‘Hund’ [‘dog’]). Whereas other rather common monosyllabic fauna terms in Tomoip exhibit nasal assimilation in their number-marking proclitics, *pap* ‘dog’ is always marked as *ne=pap* ‘dog [SG]’ (and never as †*m=pap*). Examples of monosyllabic fauna terms with (historically) assimilatory singular markers are given in (4) (cf. Blust, Trussel & Smith 2023 for the reconstructed POC forms).

(4) Monosyllabic fauna terms with assimilatory singular-marking proclitics

<i>ŋ=kum</i>	‘crab sp. [SG]’	< POC *qumwaŋ ‘hermit crab’
<i>ŋ=kur</i>	‘louse [SG]’	< POC *kutu ‘louse’
<i>n=le</i>	‘nit [SG]’	< POC *lisa ‘nit’
<i>m=buo</i>	‘pig [SG]’	< POC *boRok ‘pig’
<i>m=pe</i>	‘fish [SG]’	< POC *paya ‘kind of small fish’ (?)
<i>m=me</i>	‘rat, bandicoot [SG]’	< POC *mwajar ‘bandicoot’ (?)
<i>m=men</i>	‘bird [SG]’	< POC *manuk ‘bird’ (?)

Although the assimilatory allomorphs may no longer be productive, it seems that the preference for disyllabicity that helped give rise to them is still operative. Ross (1988: 293–297) attributes the presence or absence of the marker *ne=* to the semantics of the noun (namely, mass nouns lack it, whereas individual nouns exhibit it), a distinction that is found in certain languages of New Ireland and Bougainville; however, based on my data, it seems that syllable count is a better indicator of presence or absence of these markers: monosyllabic nouns essentially never occur without a number-marking proclitic (or a class term prefix, §2.3), whereas multisyllabic nouns frequently occur unmarked.<sup>2</sup> Thus, number-marking appears to be optional for multisyllabic nouns.

There is a small set of nouns that seem to exhibit irregular number allomorphy, whereby the singular stem begins with [n] whereas the plural stem begins with [h] (5).

(5) Irregular nominal number (?)

<i>ner</i>	‘rain [SG]’	<i>her</i>	~ <i>e=her</i>	‘rain [PL]’
<i>nobeŋ</i>	‘lime [SG]’	<i>hobeŋ</i>	~ <i>e=hobeŋ</i>	‘lime [PL]’
<i>nodie</i>	‘spear [SG]’	<i>hodie</i>	~ <i>e=hodie</i>	‘spear [PL]’
<i>nolo</i>	‘woman [SG]’	<i>holo</i>	~ <i>e=holo</i>	‘woman [PL]’
<i>kotik</i>	‘child [SG]’	<i>herek</i>	~ <i>e=herek</i>	‘child [PL]’
<i>nobuŋ</i>	‘man [SG]’	<i>horek</i>		‘man [PL]’

It is not clear whether the forms beginning with [h-] (but lacking the proclitic *e=* ‘PL’) are inherently marked for plural number. This seems at least to be the case for the suppletive forms *herek* ‘child [PL]’ (singular: *kotik* ‘child’) and *horek* ‘man [PL]’ (singular: *nobuŋ* ‘man’).<sup>3</sup> However, for the other forms, it may be necessary to include the plural marker *e=* ‘PL’ in order to mark them as plural, the form beginning with [h-] being in fact the bare stem. It may be the case that, historically, some forms beginning with [h-] lost this initial consonant when prefixed by the singular marker (e.g., \*n-holo (?) > *nolo* ‘woman [SG]’). For example, there appears to be free variation in the presence versus absence of initial [h] in the word *hasi* ~ *asi* ‘some, something’. However, both these forms contrast with a clearly related but apparently non-synonymous word, *nasi* ‘another’. The loss of initial [h] may be the continuation of a general trend of lenition of \*k > h > Ø. This is suggested in part by some apparently etymologically related forms. For example, *nodie* ~ *hodie* ‘spear’ may be compared with a semantically similar form that Grace (1955a: 85) records: <kɔdʲe> ‘shoots (bow)’. Similarly, the noun *nobi* ‘buttocks’ would seem to be related to the noun *kobi* ‘bottom, base’.

Alternatively, it is possible that *no-* ‘SG’ and *ho-* ‘PL’ are fossilized prefixes (although the alternation found in *ner* ~ *her* ‘rain’—which lacks [o]—would remain unexplained). The element [ho] is also found in the cardinal numeral *horo* ‘two’, the second half of which, [ro], clearly derives from POC \*rua ‘two’ and is also found synchronically as the dual-marking proclitic *ro=* ‘DU’ (§5). It is not clear, however, whether there is a meaningful connection between the numeral ‘two’ and these plural nominal forms.

<sup>2</sup> Ross (1988: 296) gives the unaffixed form <mau> ‘banana’ (i.e., ‘bananas in general’); however, in my data, this monosyllabic noun is never pronounced unaffixed. I have recorded the following forms of the noun: *m=mao* ‘banana [SG]’, *ro=mao* ‘banana [DU]’, *e=mao* ‘banana [PL]’, *buŋ-mao* ‘banana fruit’, *ka-mao* ‘banana plant’, and *ra-mao* ‘banana leaf’.

<sup>3</sup> However, the attestation of *e=herek* ‘child [PL]’ alongside *herek* ‘child [PL]’ suggests that redundant (overt) plural marking is possible on the suppletive plural stem.

It is perhaps also worth noting that all these nominal forms with apparent alternations of *h-* and *n-* have mid vowels as their second element. Perhaps part of the explanation of these forms has to do with a process of prothesis, given Tomoip's apparent aversion to word-initial mid vowels (Barlow & Killian 2023b: 73, 75–76).

The noun *nobuŋ* 'man [SG]', in addition to having a suppletive plural, is unusual in exhibiting the dual form *robuŋ* 'man [DU]', suggesting perhaps a reanalysis of [no-] as a singular marker. Similarly, Ross (n.d.: 5) reports *rolo* 'woman [DU]' in addition to *nolo* 'woman [SG]'. Perhaps the initial [no-] found in the singular forms of 'man' and 'woman' has its ultimate origins in POC \*tinoni 'person, people' (cf. Ross & Osmond 2016: 48). This is, however, speculative.

In addition to these, the nouns *nalpun* 'child' and *nalum* 'child' both appear to exhibit alternative forms that lack the initial [n-], although there is no clear difference in number between the forms. That is, along with *nalpun* 'child', there is *alpun* 'child'; and along with *nalum* 'child', there is *alum* 'child', as well as *halum* 'child'. These are difficult forms to assess. First, it is not clear whether the final [-n] of (*n*)*alpun* 'child' is part of the stem or is a possessive marker (i.e., /(n)alpu-n/) (see §2.5.4). It may also be the case that this form is a compound (i.e., /(n)al pun/ or /(n)al pu-n/). Likewise, the noun (*n*)*alum* 'child' may also be a compound (i.e., /(n)al um/).

The marker *ne=* 'SG' most likely derives from the POC article \*na (cf. Crowley 1985). As mentioned, this marker seems largely to function as a way of preserving disyllabicity. Since it alternates with the more clearly number-marking forms *ro=* 'DU' and *e=* 'PL', it seems safest to consider *ne=* 'SG' to be a number marker as well, albeit one that is probably optional for multisyllabic nouns (and which perhaps serves only minimal number-marking function with many monosyllabic nouns).

Another function of the marker *ne=* is to nominalize verbs or adjectives (6).

(6) Nominalizing function of the singular marker *ne=*

- |     |                  |   |
|-----|------------------|---|
| (a) | <i>rpek</i>      | 'to cry'  |
|     | <i>ne=rpek</i>   | 'worry, problem, concern'                               |
| (b) | <i>mamsie</i>    | 'heavy'   |
|     | <i>ne=mamsie</i> | 'problem' (cf. Tok Pisin: <i>hevi</i> 'heavy; problem') |

Ross (n.d.: 5) gives examples of *ne=* 'SG' deriving agent nouns as well as action and state nouns (orthography mine) (7).

(7) The singular marker *ne=* deriving actions, states, and agents (adapted from Ross n.d.: 5)

<i>ne=radel</i>	'walking'	< <i>radel</i> 'to walk'
<i>ne=mer</i>	'death'	< <i>mer</i> 'to die'
<i>ne=rβio</i>	'fight, warrior'	< <i>rβio</i> 'to fight'
<i>ne=ro</i>	'worker'	< <i>ro</i> 'to work'

## 2.2 Personal noun marker

Proper-noun referents, on the other hand, regardless of number, can be indexed by a prenominal personal name marker *a* 'PERS' (8).

## (8) Prenominal personal marker (for proper nouns)

*a* ‘PERS’

Ross (1988: 293), remarking on this morpheme, notes:

... the Tomoip personal article is *a*, as in the South-West New Britain network, rather than *e*, as on much of New Ireland, and this provides grounds for wondering whether there has been an input into Tomoip from a language of the South-West New Britain network.

Reesink (2005: 170–172) discusses the possible role of contact in the presence of the articles *a* ‘SG’, *o* ‘PL’, and *ë* ‘PROPER NOUN’ in Sulka.

### 2.3 Class term prefixes

There is also a set of prenominal markers that seem to carry semantic information. Although referred to as “quantity markers” by Ross (1988: 293–298) and Reesink (2005: 154, 171), my data have not revealed any quantity-marking function of these morphemes. Rather, they seem closest to what Grinevald (2000: 59–60) calls “class terms”—that is, “classifying morphemes which participate in the lexicogenesis of a language”; they are “of clear lexical origin and show varying degrees of productivity”; unlike classifiers, “they are typically not used in quantifying expressions”. I have identified four rather frequent class terms in Tomoip (9).<sup>4</sup>

## (9) Class term prefixes

<i>buŋ-</i>	used for fruits, round things, bunches
<i>ka-</i>	used for trees, long things, plants
<i>la-</i>	used for baskets, open things, pieces
<i>ra-</i>	used for leaves

The Austronesian origins of these four terms are fairly clear. The prefix *ka-* almost certainly derives from POC \**kayu* ‘tree or shrub’ (cf. Evans 2008: 71), and the prefix *ra-* almost certainly derives from POC \**raun* ‘leaf’ (cf. Evans 2008: 103). Indeed, Ross (2008: 43–50) describes how other Oceanic languages use similar prefixes to derive plant terms (alongside prefixes derived from POC \**puqu(n)* ‘base of tree’ and POC \**mala-* ‘resembling’). The prefix *buŋ-*, which is also used in Tomoip plant terminology, may derive from POC \**puŋu* ‘bunch or cluster of fruit or nuts’ (cf. Evans 2008: 116), perhaps with additional influence from POC \**puaq* ‘fruit’ (cf. Evans 2008: 115). Finally, the prefix *la-* seems to derive from POC \**laka* ‘basket’ (cf. Osmond & Ross 1998: 78).

Notably, however, the synchronic Tomoip terms for these four concepts are formally different from these prefixes. General terms relating to fruit include *kure* ‘seed, fruit’ and *mita* ‘fruit; meat of coconut, areca nut, pandanus; pulp of a palm or tree; innards’, the latter of which may be a loan from Sulka (cf. Parkinson 1907: 778: <*ka mīt*> ‘Frucht’ [‘fruit’]; Reesink 2005: 173: <*a miet*> ‘fruit’). The word used to refer to bunches is *ki* ‘whole, entire; bunch (e.g., of coconuts, areca nuts, bananas)’. There is only one general term referring to trees: *uβe* ‘tree’. There

<sup>4</sup> See Næss (2006: 283–285) for description of a similar phenomenon in Äiwoo.



are several terms referring to baskets: *ral* ‘basket’, *ɲorat* ‘basket’, and *larat* ‘basket’, the last of which may itself contain the prefix *la-*. The initial [la-] of the third form would thereby alternate with the initial [ɲo-] of the second form, although [ɲo-] is not known to have any meaning of its own (but see below). These forms may also reflect borrowing from Sulka (cf. <a rat> ‘basket’, Reesink 2005: 174). The general term for leaves is *ro* ‘leaf’, obviously similar to the class term *ra-* but with a notably different vowel quality. Regarding class terms, Grinevald (2000: 59) notes the following:

One of the most common semantic domains of class terms is that of the plant world where languages specify the difference between trees and fruits by a compounding process *X-fruit/round* vs *X-tree/long-rigid*.

This certainly rings true for these prefixes, as illustrated by some of the contrastive examples of plant terms given in (10).

(10) Plant nouns with class term prefixes

<i>bunbiria</i>	‘breadfruit’	<i>kabiria</i>	‘breadfruit tree’	<i>rabiria</i>	‘breadfruit leaf’
<i>bunmao</i>	‘banana fruit’	<i>kamao</i>	‘banana plant’	<i>ramao</i>	‘banana leaf’
<i>bunhian</i>	‘yam tuber’	<i>kahian</i>	‘yam plant’	<i>rahian</i>	‘yam leaf’
<i>bunbu</i>	‘areca nut’	<i>kabu</i>	‘areca palm’	<i>rabu</i>	‘areca leaf’
<i>bulme</i>	‘coconut’	<i>kalme</i>	‘coconut palm’	<i>ralme</i>	‘coconut leaf’

The form *bulme* ‘coconut’ illustrates the allomorph [bu-] of the class term *bun-*. This form also occurs in *buti* ‘breast’ and in *bunali* ‘galip nut’.<sup>5</sup> There may also be allomorphs [bul-] and [bur-], although this is uncertain. This prefix is subject to fossilization and thus may be reanalyzed as part of the root, as suggested by the recorded forms *bunbulme* ‘coconut fruit’ and *bunbuti* ‘breast’. On the other hand, Grace (1955a: 84) records <ti> ‘breast’ and Ross (1980: A3) records <eti> ‘breast’ (presumably plural), suggesting that the unprefixated form does (or did until recently) still exist for some speakers.

This class term can also be used productively to suggest the roundness or bunch-like nature of a referent (11).

(11) Productive uses of the class term prefix *bun-*

<i>bun-hotel</i>	‘egg’	<i>bun-home</i>	‘sweet potato’
<i>bun-luta</i>	‘island (round)’	<i>bun-gomil</i>	‘cloud (round)’
<i>bun-bale</i>	‘house (round)’	<i>bun-kaŋ</i>	‘moon (full)’
<i>bun-kapar</i>	‘white ants (in a group)’	<i>bun-kur</i>	‘lice (in a group)’
<i>bun-kulau</i>	‘drinking coconut’	<i>bun-mani</i>	‘money (coin)’

Thus this prefix, as well as the other class term prefixes, can be used even with recent loanwords, such as *kulau* ‘drinking coconut’ and *mani* ‘money’, both of which have been borrowed from Tok Pisin. Here, the form *bun-mani* ‘money (coin)’ can be contrasted with *ra-mani* ‘money (paper)’.

<sup>5</sup> Reesink (2005: 155) gives the form <Bung-kangali> ‘canarium almond’, suggesting perhaps reanalysis of the root by either his or my consultant.

Thus, the class term prefix for leaves (here used metaphorically) can also be used productively, as in the examples given in (12).

(12) Productive uses of the class term prefix *ra-*

<i>ra-βoi</i>	‘mango leaf’	<i>ra-lie</i>	‘ginger leaf’
<i>ra-heblik</i>	‘stinging nettle leaf’	<i>ra-piel</i>	‘cordyline leaf’
<i>ra-mani</i>	‘money (paper)’		

The class term prefix for trees can also be used productively, including with plants besides trees, as well as with any long (especially long and thin) referent (13).

(13) Productive uses of the class term *ka-*

<i>ka-mamiok</i>	‘papaya tree’	<i>ka-mabiu</i>	‘island lychee tree’
<i>ka-he</i>	‘stick’	<i>ka-ton</i>	‘rattan cane’
<i>ka-hodie</i>	‘spear’	<i>ka-tak</i>	‘post’
<i>ka-luta</i>	‘island (long)’	<i>ka-sal</i>	‘path (narrow)’
<i>ka-ju</i>	‘fur’	<i>ka-ju</i>	‘lit piece of firewood’

It may be noted that *ka-ju* ‘fur’ derives from *ju* ‘hair’, whereas, *ka-ju* ‘lit piece of firewood’ derives from the homophonous word *ju* ‘fire’.

Finally, when the class term for baskets is used productively, it usually suggests either that the referent has an open shape or that it is incomplete or broken (14). It seems to occur in some more fossilized lexical items as well (15).

(14) Productive uses of the class term *la-*

<i>la-kula</i>	‘shell’	<i>la-ηoesoŋ</i>	‘bamboo flute’
<i>la-soŋ</i>	‘slit gong’	<i>la-henio</i>	‘broken tusk’
<i>la-tek</i>	‘split piece of a post’	<i>la-lme</i>	‘coconut half (half a shell)’
<i>la-home</i>	‘piece of sweet potato’	<i>la-bale</i>	‘unfinished house’

(15) Fossilized uses of the class term *la-*

<i>larat</i>	‘basket’	(there is no attested word †/rat/) <sup>6</sup>
<i>labuhe</i>	‘canoe’	(from <i>buhe</i> ‘belly’?)
<i>lanjom</i>	‘container, box’	(from <i>ηom</i> ‘eye’?)
<i>lalma</i>	‘hand, arm’	(from * <i>la-lma</i> ?)

Thus, class term prefixes may become fossilized, ultimately no longer being analyzable, as I hypothesize to be the case with the [la-] in *lalma* ‘hand, arm’, assuming an etymology from POC \**lima-* ‘forearm and hand’ (cf. Osmond & Ross 2016: 160). The form [lma] is not pronounceable in Tomoip. When used productively, however, these prefixes may be employed to specify the meaning of more general nominal roots, such as *mao* ‘banana’ or *lme* ‘coconut’, that latter of which is, like [lma], unpronounceable on its own. This usage is indeed reminiscent of one of the functions

<sup>6</sup> The form /rat/ ‘basket’ is likely an areal loan (cf. Reesink 2005: 155).

of numeral classifiers as attested in some Oceanic languages (cf. Lynch, Ross & Crowley 2002: 73–74). Prefixes like *buŋ-* thus, in a sense, can functionally replace the singular marker *ne=* ~ *N=* in that they generally imply a single referent. However, the class term prefixes are formally distinct from number-marking proclitics. First, the class term prefixes can bear stress whereas the number-marking proclitics cannot. Second, it is possible for the two forms to cooccur, as in *ne=ka-hoa* ‘rope [SG]’, *e=bu-lme* ‘coconut fruit [PL]’, or *e=ra-mao* ‘banana leaf [PL]’. Another feature that makes these class terms unlike numeral classifiers is that they are not required to occur with numerals; indeed, whereas number markers and class terms both precede the noun, numerals follow the noun (16) (cf. §5).

(16) The noun *mao* ‘banana’ with different number markers, class terms, and numerals

- |  |  |
|--|--|
| (a) <i>m=mao</i><br>SG=banana<br>‘(a/the) banana (plant/fruit/etc.)’         | (b) <i>ne=mao</i><br>SG=banana<br>‘(a/the) banana (plant/fruit/etc.)’    |
| (c) <i>buŋ-mao</i><br>CLASS-banana<br>‘(a/the) banana fruit’                 | (d) <i>buŋ-mao denan</i><br>CLASS-banana one<br>‘one banana fruit’       |
| (e) <i>ro=mao</i><br>DU=banana<br>‘two bananas’                              | (f) <i>ro=mao horo</i><br>DU=banana two<br>‘two bananas’                 |
| (g) <i>e=mao</i><br>PL=banana<br>‘(the/some) bananas’                        | (h) <i>e=mao meutu</i><br>PL=banana many<br>‘many bananas’               |
| (i) <i>e=mao horo-m-detu</i><br>PL=banana two-and-another<br>‘three bananas’ | (j) <i>e=mao horo-mo-horo</i><br>PL=banana two-and-two<br>‘four bananas’ |
| (k) <i>ka-mao</i><br>CLASS-banana<br>‘(a/the) banana plant’                  | (l) <i>e=ka-mao</i><br>PL=CLASS-banana<br>‘(the/some) banana plants’     |

Class terms can cooccur with number-marking proclitics, which—as proclitics—attach to the beginning of the noun phrases, in such instances thus preceding the class term prefixes (17).

(17) Class terms cooccurring with number markers

- |   |   |
|---|---|
| (a) <i>hoa</i> ‘vine; rope’<br><i>ka-hoa</i> ‘vine; rope’<br><i>ne=ka-hoa</i> ‘vine; rope [SG]’ | (b) <i>bu</i> ‘areca’<br><i>ka-bu</i> ‘areca palm’<br><i>ne=ka-bu</i> ‘areca palm [SG]’ |
| (c) <i>he</i> ‘stick’<br><i>ka-he</i> ‘stick’<br><i>e=ka-he</i> ‘stick [PL]’                    | (d) <i>ro</i> ‘leaf’<br><i>ra-ro</i> ‘leaf’<br><i>ne=ra-ro</i> ‘leaf [SG]’              |

(e)	<i>mali</i>	‘sword grass’	(f)	<i>piel</i>	‘cordyline’
	<i>ra-mali</i>	‘sword grass’		<i>ra-piel</i>	‘cordyline leaf’
	<i>e=ra-mali</i>	‘sword grass [PL]’		<i>e=ra-piel</i>	‘cordyline leaf [PL]’
(g)	<i>ηoesoŋ</i>	‘bamboo flute’	(h)	<i>ηorat</i>	‘basket’
	<i>la-ηoesoŋ</i>	‘bamboo flute’		<i>la-ηorat</i>	‘basket’
	<i>e=la-ηoesoŋ</i>	‘bamboo flute [PL]’		<i>e=la-ηorat</i>	‘basket [PL]’

Thus, while similar in some ways to classifiers, the class term prefixes do not indicate quantity per se, nor do they necessarily occur with numerals (and when they do, they do so on the opposite side of the noun).

Of these four class term prefixes, *bu(l,r,η)-* seems the most likely to have derived from a sort of classifier. The allomorph [bu-], as found in *buti* ‘breast’, might point to an origin in the POC generic classifier \*puaq (cf. Lynch, Ross & Crowley 2002: 73). An earlier Tomoip classifier \*bu (?) might have at some point merged with a class term derived from POC \*puŋu ‘bunch or cluster of fruit or nuts’, although this is speculative. At any rate, the form [buŋ] appears to behave more like a prototypical classifier morpheme when it serves as part of the numeral ‘one’, which has several allomorphs (§5).

It is also possible that former classifiers (or class terms) have become fossilized elements in nouns, no longer analyzable as separate morphemes. For example, the initial [ŋo] in *ηorat* ‘basket’ (cf. *larat* ‘basket’, with potentially fossilized class term *la-*) was most likely at some point a separate morpheme, now of unknown meaning. It may also be present in the form *ηoma* ~ *ηom* ‘eye’ (perhaps derived from POC \*mata ‘eye’). Capell (1971: 268), following Grace’s (1955a) notes, but presumably misreading <ŋ> for <n> (as well as introducing other errors), writes:

... the possessive suffixes to nouns are AN [i.e., Austronesian]: *nomton*, *nomtoŋ*, *nomtan*, ‘I, your, his eye’. The root is here PAN [i.e., Proto-Austronesian] \*mata, with a prefix *no-* (that seems to point to some sort of noun classing) and the normal PAN suffixes of possession.<sup>7</sup>

## 2.4 Diminutive and augmentative prefixes

Possibly occupying the same morphological position as the four class term prefixes are two other prefixes about which little is known. Based on limited data, however, they seem to function as a diminutive marker and an augmentative marker, respectively, and are glossed accordingly: *kur-* ‘DIM’ (18) and *da-* ‘AUG’ (19).

(18) Examples of the diminutive prefix *kur-* ‘DIM’ (?)

<i>kur-si</i>	‘male piglet’	(< <i>si</i> ‘male pig’)
<i>kur-sal</i>	‘small path’	(< <i>sal</i> ‘path’)
<i>kurper</i>	‘narrow’	(with fossilized prefix <i>kur-</i> ?)
<i>kurtiktik</i>	‘sparrow’	(with fossilized prefix <i>kur-</i> ?)

<sup>7</sup> The actual forms as presented in Grace (1955a: 84) are as follows: <ŋomtoŋ> ‘my eye’, <ŋomtom> ~ <ŋomake> ‘your eye’, and <ŋomtan> ‘his eye’.

(19) Examples of the augmentative prefix *da-* ‘AUG’ (?)

<i>da-jame</i>	‘big crocodile’	(< <i>jame</i> ‘crocodile’)
<i>da-simui</i>	‘ <u>that</u> fog’	(< <i>simui</i> ‘dust; fog’; deictic and/or emphatic force?)
<i>da-lme</i>	‘what a coconut!’	(< <i>lme</i> ‘coconut’; e.g., a particularly sweet one)
<i>da-kulik</i>	‘big’	(< <i>kulik</i> ‘big’; emphatic?)

As suggested by the translations of the forms *da-simui* ‘that fog’ and *da-lme* ‘what a coconut!’, the prefix *da-* seems to have demonstrative or exclamatory force, at least in some contexts.

## 2.5 Possession

In possessive constructions, the possessor follows the possessum. As Reesink (2005: 182–183) describes, Tomoip distinguishes between alienable and inalienable possession. Furthermore, within the category of alienable possession, there is further differentiation between alimentary and non-alimentary possession (and, beyond that, there is a distinction between edible and drinkable possession within the category of alimentary possession). Alienable possession is indicated with indirect possession constructions, whereby a possessive classifier immediately follows the possessum. The possessive classifier receives a pronominal suffix, unless there is a specified third-person possessor. Table 3 presents the forms of the possessive classifiers as marked with person/number suffixes.

**Table 3. Possessive classifiers (for alienable possession)**

	General	Edible	Drinkable
<b>1SG</b>	aniŋ ~ niŋ ~ anojo ~ nojo	agoŋ ~ goŋ ~ hejo	almajo
<b>2SG</b>	anem ~ nem ~ anke ~ nke	ahem ~ hem ~ heke	almake
<b>3SG</b>	anon ~ non	ahan ~ han	alman
<b>1DU.EXCL</b>	[anka]	aika	?
<b>1DU.INCL</b>	[anta]	aita	?
<b>2DU</b>	?	aikuma	?
<b>3DU</b>	andoro	[aidoro] ~ hedoro	?
<b>1PL.EXCL</b>	ankem	aikem	?
<b>1PL.INCL</b>	ansier	aisier	?
<b>2PL</b>	[ankom]	aikom ~ hekom	?
<b>3PL</b>	[andi]	aidi	?
<b>With noun (SG only?)</b>	ano ~ no	ahe	alma

The last row of Table 3 shows the form of the classifier when used alone without any possessive suffix. This occurs with (singular) non-pronominal possessors. It is not known what is used with non-singular non-pronominal possessors. The question marks in the table indicate that there is no available information on what form is used for these categories. The forms in brackets are based on Ross (n.d.: 2').<sup>8</sup> Tildes represent attested alternations among forms. There are likely additional

<sup>8</sup> Ross’s (n.d.) transcriptions, however, sometimes indicated nasal assimilation in the general possession classifiers (cf. Reesink 2005: 182), which is something that I have not observed as a regular process in Tomoip. For example, Ross (n.d.: 2') gives <aŋ-ke> ‘POSS.GEN-2SG’, <aŋ-ka> ‘POSS.GEN-1DU.EXCL’, <aŋ-kem> ‘POSS.GEN-1PL.EXCL’, and

alternations that are used but are not attested; for example, I suspect that [ahejo] could be used for ‘POSS.ED-1SG’ and that [aheke] could be used for ‘POSS.ED-2SG’, but I have no direct evidence of this.

### 2.5.1 Alienable possession: general possessions

Alienable possession for general possessions (usually implying non-comestibles) is indicated by a postnominal classifier that takes the form *ano-* ~ *ane-* ~ *ani-* ~ *an-*, to which a pronominal ending is suffixed.<sup>9</sup> Alternative versions of the singular forms without the initial [a] have also been recorded (i.e., *no-* ~ *ne-* ~ *ni-* ~ *n-*). Examples of alienable possession for general possession are presented in (20) through (23).

- |      |  |                               |      |   |                              |
|------|--|-------------------------------|------|---|------------------------------|
| (20) | <i>m=per</i><br>SG=stone<br>‘my stone’ | <i>ano-jo</i><br>POSS.GEN-1SG | (21) | <i>m=per</i><br>SG=stone<br>‘my stone’                | <i>ani-ŋ</i><br>POSS.GEN-1SG |
| (22) | <i>bale</i><br>house<br>‘my house’     | <i>no-jo</i><br>POSS.GEN-1SG  | (23) | <i>e=tek</i><br>PL=excrement<br>‘your [SG] excrement’ | <i>an-ke</i><br>POSS.GEN-2SG |

It is not clear what if any distinction exists between the presence and absence of the initial [a] in the possessive classifier, although there is a strong tendency for the forms with initial [a] to occur when following consonant-final nouns (cf. Ross n.d.: 2'). There is no attestation of the non-singular forms occurring without initial [a]. I have not found any distinction between the choice of different possessive forms for 1SG and for 2SG possessors; I suspect that the older possessive forms are (*a*)*ni-ŋ* ‘POSS.GEN-1SG’ and (*a*)*ne-m* ‘POSS.GEN-2SG’, and that the forms with the endings *-jo* ‘1SG’ and *-ke* ‘2SG’ result from analogical extensions of the pronominal forms from other paradigms (cf. §7).

For a non-pronominal possessor, the classifier *ano* or *no* occurs between the possessum and the possessor without any suffixation (24). At least this is the case when the referent is singular. I do not have data on non-singular non-pronominal referents.

- |      |   |                        |                        |
|------|---|------------------------|------------------------|
| (24) | <i>bale</i><br>house<br>‘Lapal’s house’ | <i>ano</i><br>POSS.GEN | <i>Lapal</i><br>[name] |
|------|---|------------------------|------------------------|

### 2.5.2 Alienable possession: edible possessions

Alienable possession for edible possessions is indicated with a postnominal classifier of the form *ahe-* ~ *aha-* ~ *ago-* ~ *ai-*, to which a postnominal ending is suffixed. The form *ai-* only occurs with non-singular classifiers. As is the case for the forms of the general classifier, the singular forms of

<an-kom> ‘POSS.GEN-2PL’; he does, however, also once write such a form without apparent assimilation: <a-n-kem> ‘POSS.GEN-1PL.EXCL’ (Ross n.d.: 10).

<sup>9</sup> Ross (1988: 274) represents the form of the general possessive classifier as <anV->; Reesink (2005: 182) gives it as <aN->—that is, without a final vowel and with a nasal that assimilates to the place of the following consonant. Although there are allomorphs of the classifier that lack a final vowel, I have not witnessed any nasal assimilation.

the edible classifier also sometimes occur without an initial [a] (i.e., *he-*, *ha-*, *go-*). Examples of alienable possession for edible possessions are presented in (25) through (28).

- |      |  |      |   |
|------|--|------|---|
| (25) | <i>hotel ago-ŋ</i><br>egg POSS.ED-1SG<br>'my egg'              | (26) | <i>e=bu go-ŋ</i><br>PL=areca POSS.ED-1SG<br>'my betel nut'          |
| (27) | <i>m=mao ha-n</i><br>SG=banana POSS.ED-3SG<br>'his/her banana' | (28) | <i>e=mao ai-kom</i><br>PL=banana POSS.ED-2PL<br>'your [PL] bananas' |

As suggested by the occurrence of the edible possessive marker with the noun *bu* 'areca nut', the "edible" category in Tomoip extends beyond foodstuffs to include all things that are chewed (such as betel nut), as well as things that are smoked (such as tobacco). For a non-pronominal possessor of an edible possession, the unaffixed classifier *ahe* is used (29).

- |      |                            |               |
|------|----------------------------|---------------|
| (29) | <i>e=mao ahe</i>           | <i>deβi-n</i> |
|      | PL=banana POSS.ED          | sister-3SG    |
|      | 'his/her sister's bananas' |               |

The edible possessive classifier can be used without any expressed possession as a dummy object for the verb *in* 'to eat' when no food item is overtly expressed, as in (30) and (31).

- |      |   |
|------|---|
| (30) | <i>jo ta=in go-ŋ mosi lo bale</i><br>1SG REAL=eat POSS.ED-1SG inside PREP house<br>'I am eating inside the house.' (literally 'I am eating my edible possession ...')               |
| (31) | <i>Pita t=in ha-n aŋa de Beti</i><br>[name] 3SG.REAL=eat POSS.ED-3SG DEM PREP [name]<br>'Peter is eating there with Betty.' (literally 'Peter is eating his edible possession ...') |

### 2.5.3 Alienable possession: drinkable possessions

There also appears to be a drinkable classifier, of the form *alma-*, although I have only limited data concerning its behavior with different possessors or with different drinkable possessions. I have observed the following forms: *alma-jo* 'POSS.DRINK-1SG', *alma-ke* 'POSS.DRINK-2SG', and *alma-n* 'POSS.DRINK-3SG'. The unaffixed form used for non-pronominal possessors seems to be *alma*. Examples of alienable possession for drinkable possessions are presented in (32) through (35).

- |      |  |      |   |
|------|--|------|---|
| (32) | <i>nuje alma-jo</i><br>water POSS.DRINK-1SG<br>'my water'        | (33) | <i>kap alma-jo</i><br>cup POSS.DRINK-1SG<br>'my cup'          |
| (34) | <i>nuje alma-ke</i><br>water POSS.DRINK-2SG<br>'your [SG] water' | (35) | <i>nuje alma-n</i><br>water POSS.DRINK-3SG<br>'his/her water' |

Example (33), which illustrates the Tok Pisin loanword *kap* ‘cup’ being used with the drinkable possessive classifier, might suggest that drinkable possession can be extended to containers that hold liquids, although I have too little information here to say for sure.

Also, I should note that, although my data on the drinkable possessive classifier are limited, the existence of such a form is supported by a brief mention of it by Johnston (1983: 33, fn.2):

It is instructive here to note that TOM [i.e., Tomoip], a near-neighbour of SWNB [i.e., Southwest New Britain] languages, to the northeast, is unique in New Britain for exhibiting the POC \*ma- “drinkable” possessive prefix. Its forms are *al-* “kin”; *ma-* “inalienable”; (aŋ) “edible”; *al-ma* “drinkable”.

See Pawley (1973: 163–164) for the proposal of a POC possessive marker \*ma- for drinkable possessions. I do not know what the “inalienable possession” form *ma-* (?) is meant to refer to in Tomoip, unless Johnston had perhaps interpreted *lalma* ‘hand, arm’ as containing a morpheme *ma-* (cf. Reesink 2005: 183, who also considers this possibility, §2.5.5). Likewise, I am uncertain what a “kin” possession form *al-* (?) is meant to refer to. As noted in §2.1, however, the terms *alpun* ‘child’ and *alum* ‘child’ are both suspected to be bimorphemic, suggesting the existence (perhaps only fossilized) of a morpheme *al*, although its function is far from clear. The parenthetical form “(aŋ)”, glossed as “edible”, is similarly opaque to me.

#### 2.5.4 Inalienable possession: kinship terms

Unlike alienable possession constructions, inalienable possession constructions do not employ possessive classifiers. Inalienable kinship relationships exhibit direct possession marking, such that a possessive suffix is directly affixed to the possessed kinship relation. The possessive suffixes are given in Table 4.

**Table 4. Possessive suffixes**

	<b>Singular</b>	<b>Dual</b>	<b>Plural</b>
<b>1st (EXCL)</b>	-ŋ ~ -jo	-ka	-kem
<b>1st (INCL)</b>		-ta	-sier
<b>2nd</b>	-m ~ -ke	-kuma	-kom
<b>3rd</b>	-n ~ -k	-doro	-di

The 1SG.POSS endings *-ŋ* and *-jo* appear to be freely interchangeable, as do the 2SG.POSS endings *-m* and *-ke*. The 3SG.POSS suffix *-k* is only attested with one kinship term, namely *die* ‘brother’. Otherwise the ending for this person/number is consistently *-n* ‘3SG.POSS’. Examples of kinship terms illustrating direct possession are given in (36).<sup>10</sup> As the noun *sae* ‘name’ in this set of examples illustrates, such direct possession constructions occur with more than strictly kinship terms.

<sup>10</sup> Johnston (1983: 33, fn.3), apparently referring to Tomoip’s inalienable possessive suffixes, writes: “TOM has *-goŋ* 1S, *-ho* 2S, and *-hari* 3S with *-i* in non-singular forms.” However, it is difficult to square these forms with my own data, and I suspect that there has been some mixing in his data with edible possessive forms.



## (36) Directly possessed kinship terms

<i>deβi-jo</i>	‘my sister’ <sup>11</sup>	<i>deβi-n</i>	‘his/her sister’
<i>deβi-m</i>	‘your [SG] sister’	<i>deβi-ke</i>	‘your [SG] sister’
<i>die-jo</i>	‘my brother’	<i>die-ke</i>	‘your [SG] brother’
<i>die-k</i>	‘his/her brother’	<i>mibu-n</i>	‘his/her grandfather’
<i>tena-n</i>	‘his/her mother’	<i>mimma-sier</i>	‘our [PL.INCL] father’
<i>talpu-jo</i>	‘my sibling-in-law’	<i>sae-jo</i>	‘my name’

For a non-pronominal possessor, the possessor simply follows the unsuffixed kinship term, as in (37) and (38). If the possessor is a proper noun, then the personal marker optionally precedes it; this optionality is illustrated by the presence of *a* ‘PERS’ in (39) and its absence in (40).

(37)	<i>sae kotik</i> name child ‘child’s name’	(38)	<i>deβi tena-n</i> sister mother-3SG ‘his/her mother’s sister’
(39)	<i>die a Beti</i> brother PERS [name] ‘Betty’s brother’	(40)	<i>mimma Mapa</i> father [name] ‘Mapa’s father’

When a kinship term is modified—for example, with an adjective like *pur* ‘big’ or *kakae* ‘small’—to specify the relative age of the relation, the modifier follows the kinship term, which receives its usual possessive marking, as illustrated by examples (41) through (44).

(41)	<i>die-jo pur</i> brother-1SG big ‘my older brother’	(42)	<i>die-jo me-pur</i> brother-1SG ADJ-big ‘my older brother’
(43)	<i>deβi-n kakae</i> sister-3SG small ‘his/her younger sister’	(44)	<i>deβi-n me-kakae</i> sister-3SG ADJ-small ‘his/her younger sister’

At least two kinship terms exhibit a stem alternation when marked for 2SG possessors such that the final /a/ of the stem becomes [i] (sometimes pronounced as [e]). This occurs before the suffix *-m* ‘2SG.POSS’, but does not occur before the alternative form *-ke* ‘2SG.POSS’. The two kinship terms in question are *tena* ‘mother’ and *mimma* ‘father’ (45).

(45) Stem alternations in *tena* ‘mother’ and *mimma* ‘father’ with 2SG possessors

<i>tena-jo</i>	‘my mother’	<i>mimma-jo</i>	‘my father’
<i>tena-n</i>	‘his/her mother’	<i>mimma-n</i>	‘his/her father’
<i>tena-ke</i>	‘your [SG] mother’	<i>mimma-ke</i>	‘your [SG] father’
<i>teni-m</i>	‘your [SG] mother’	<i>mimmi-m</i>	‘your [SG] father’ (or [mimmem])

<sup>11</sup> Grace (1955a: 85) records the form <deviŋ> ‘(my) sister’, illustrating the alternative 1SG.POSS suffix *-ŋ*.

In expressions for spouses, which are compounds containing either *pulo* ‘older woman’ or *lami* ‘older man’ along with the word *hoa* (which means ‘rope’ but is also a term used to refer to some affines), a final /oa/ is replaced with [i] in the 2SG.POSS form, as in *pulo him* ‘your [SG] wife’, which can be compared with *pulo hoa-n* ‘his wife’.

A similar change in /a/-final stems can also be seen with body-part terms that receive direct-possession suffixes (§2.5.5): thus *lalma-n* ‘his/her hand’ contrasts with *lalmi-m* ‘your [SG] hand’ (also pronounced [lalmem]). The form *deli-m* ‘your [SG] face’ may also represent such an alternation, although this lexeme is difficult to analyze.

### 2.5.5 Inalienable possession: body-part terms

For inalienable possession involving a number of body-part terms a possessive preposition is employed. There are several such possessive prepositions, each apparently lexically selected. Notably, the choice of preposition is determined by the possessum rather than the possessor. They include *lo* ~ *lol*, *ta* ~ *to*, *ŋa*, and *e*, potentially among others. The possessive preposition follows the possessum and precedes the possessor, as illustrated by examples (46) through (49).

- |      |   |      |  |
|------|---|------|--|
| (46) | <i>buhe lo Mapa</i><br>belly POSS [name]<br>‘Mapa’s belly’    | (47) | <i>tom lo ne=pap</i><br>tongue POSS SG=dog<br>‘the dog’s tongue’ |
| (48) | <i>e=ju lo Lapal</i><br>PL=hair POSS [name]<br>‘Lapal’s hair’ | (49) | <i>pel to Lapal</i><br>skin POSS [name]<br>‘Lapal’s skin’        |

When there is a pronominal possessor, the possessive suffix attaches directly to the preposition, as illustrated by the examples in (50).

- (50) Possessive prepositions with possessive suffixes
- |                  |                 |                  |                  |
|------------------|-----------------|------------------|------------------|
| <i>buhe lo-n</i> | ‘his/her belly’ | <i>tom lo-jo</i> | ‘my tongue’      |
| <i>e=ju lo-n</i> | ‘his/her hair’  | <i>pel to-ke</i> | ‘your [SG] skin’ |

Concerning the possessive prepositions, Reesink (2005: 182–183) notes: “The most productive adposition is *lol*, which loses the final *-l* before 3SG *-n*, but retains it in the other person categories”. My data reflect a slightly different situation, however, in which there is some variability. I have observed both *lo-n* and *lol-Ø* for ‘3SG.POSS’, as well as both *lo-jo* and *lol-jo* for ‘1SG.POSS’ and both *lo-m* and *lol-ke* for ‘2SG.POSS’. I note, however, that there does appear to be a phenomenon similar to what Reesink (2005: 182–183) describes for Tomoip in the nearby language Lote (cf. Pearson & van den Berg 2008: 16–18): in Lote inalienable possession constructions with nouns ending in a liquid /l, r/, this liquid is fully assimilated to the [n] of the 3SG suffix *-na*. It is thus possible that an areal feature has influenced at least some varieties of Tomoip. I provisionally treat *lo* and *lol* as different possessive preposition allomorphs, which may not be (entirely) phonologically conditioned.<sup>12</sup>

<sup>12</sup> Cf. Ross (1988: 286–287, 292) for discussion of a locative (and temporal) preposition *lo* in Tomoip and some languages of New Ireland.

In addition to *lo ~ lol*, there are other possessive prepositions that are used with body-part terms. However, most of these do not seem to be productive. If they are not totally spurious, they are likely to be fossilized forms.

There is also a possessive preposition *ta*, which has been observed with the noun *lem* ‘forehead, face’. It seems to have the allomorph *to*, which is used with the nouns *pel* ‘skin’ and *ηom* ‘eye’. Indeed, this latter noun, *ηom* ‘eye’, exhibits the form *to* with 2SG possessors, but it exhibits the form *ta* with other possessors (cf. *ηom to-m* ‘your [SG] eye’ vs. *ηom ta-n* ‘his/her eye’). This lexeme is particularly idiosyncratic, however, as the form [ηom] appears to be an abbreviated version of *ηoma* ‘eye’, which is the form used with direct possession (see below). The possessive preposition *ta-* may reflect POC \**ta-*, a semantically empty noun to which possessive suffixes attach, the resulting form serving as a preposition (Ross 2004: 185–189; 2007: 232–234).

The possessive marker *ηa* is mainly observed with semantically complex body-part terms, such as *paliē del ηa-jo* ‘my earlobe’ (literally ‘ear mouth POSS-1SG’?). It appears to function as a ligature in the form *kinto ηa kap lo-n* ‘his/her spine’ (literally ‘bone of back POSS-3SG’). Reesink (2005: 183) reports the form <nga-> being used with the noun <pēlēl> ‘ear’. It is not clear whether the form *ηa* in expressions such as these is of the same functional kind as the possessive prepositions *lo ~ lol* or *ta ~ to*. Tomoip has a demonstrative form *ηa*, which is possibly related to this putative possessive form, whether synchronically or diachronically (cf. §2.6).

As Reesink (2005: 183) notes, it is not clear whether some body-part terms employ a possessive preposition or instead directly receive a possessive suffix as do kinship terms. Indeed, the preposition *e* is difficult to analyze as being either a stem-final vowel of various body-part terms or a separate possessive marker. I analyze it here as a distinct preposition and not part of the stem, since it is capable of bearing stress, as would be expected of a separate word (but not of a stem-final vowel, at least not in multisyllabic words). Reesink (2005: 183) gives as an example the contrasting analyses of *psie* ‘penis’ versus *psi-e* ‘penis-POSS’. I analyze the root as *psi* ‘penis’, with *e* serving as a possessive preposition, as in *psi e-n* ‘his penis’. Other terms that seem to take this preposition include *deli* ‘mouth, lower face’, *ka* ‘heel (of the hand or foot)’, *kebi* ‘intestines, guts’, *nobi* ‘buttocks’, *pini* ‘lips’, and *pla* ‘skin’. However, stress assignment does not always serve as a consistent guide for analyzing these forms, and I suspect that there has been some amount of diachronic reanalysis leading to [e] moving one way or the other with respect to which morpheme it belongs to.

An even more unusual putative preposition is *o*, which possibly occurs in the form *kao-n* ‘his/her chin, cheek’ (cf. Reesink 2005: 183). If there is such a preposition here, then the root of the noun would be rather *ka*, which would make it homophonous with *ka* ‘heel’. Although possibly etymologically related to *ka* ‘heel’, this putative form seems not to be polysemous, since it selects a different preposition (*o*, in this analysis, as opposed to *e*). Rather, it seems better to me to analyze this form as *kao* ‘chin, cheek’, although more evidence is needed to make any confident assertions.<sup>13</sup>

Reesink (2005: 183) also considers the possibility that *a* may be a possessive preposition, as in the form *kia-n* ‘his/her leg/foot’ (alternative analysis: *kia a-n*). Historically this may well be the case, but synchronically this, too, seems to be an instance of direct possession, insofar as stress assignment can inform an analysis.<sup>14</sup> The form *ηoma* ‘eye’ (mentioned above) may also reflect reanalysis of stem-final vowels. The alternative stem *ηom* ‘eye’ perhaps derives from a reanalysis

<sup>13</sup> Reesink (2005: 164) also records a preposition *o* in an example sentence, although it does not have a clear possessive meaning in this sentence: <Ti ta nging o yo> ‘They laughed because of me’.

<sup>14</sup> I note here that Ross (1988: 281) presents the Tomoip form as <ki(a)> ‘leg’.

of final /a/ as constituting a separate possessive marker (that is, assuming that *ɲoma* and not *ɲom* is the older form, an assumption that would be supported by an etymology of \**ɲo-ma[ta]*; cf. §2.3).

Likewise, Reesink (2005: 183) considers a possible *ma* morpheme in the form *lalma* ‘arm, hand’ (cf. §2.5.3). On diachronic grounds at least, assuming a derivation from \**la-lima*, the [ma] would belong to the root and would not be a possessive marker. Of course, as already mentioned, morphology can be reanalyzed, and it is possible that this has happened (or is in the process of happening) with this single lexical item.

Finally, Reesink (2005: 183) also reports a preposition <yel-> used with <dël> ‘mouth’. However, based on my data, it seems that the form of this noun is *deli* ‘mouth, face’ and that it is accompanied by the possessive preposition *e*. However, this word, like *ɲom* ~ *ɲoma* ‘eye’, seems to exhibit stem alternations, namely *deli* ~ *dela* ‘mouth, face’ (as well as perhaps *del* ‘mouth, face’ in certain compounds). It remains difficult to explain.

It seems inescapable that some body-part terms must be analyzed as taking direct possession marking (as do kinship terms) as opposed to taking possessive prepositions (as the majority of body-part terms do). Examples of directly possessed body-part terms include *delkua* ‘neck’, *kame* ‘knuckle’, *lakilia* ‘knee’, *blodu* ‘nose’, *lalma* ‘hand, arm’, *kia* ‘leg, foot’, and *ɲoma* ‘eye’ (which has the alternative indirectly possessed form *ɲom*). Examples of body-part terms taking direct possession marking are given in (51). Notably, all these forms end in vowels.

(51) Some body-part terms that take direct possession marking

<i>delkua-jo</i>	‘my neck’	<i>delkua-n</i>	‘his/her neck’
<i>kame-n</i>	‘his/her knuckle’	<i>lakilia-n</i>	‘his/her knee’
<i>blodu-jo</i>	‘my nose’	<i>blodu-m</i>	‘your [SG] nose’
<i>lalma-jo</i>	‘my hand’	<i>e=lalma-ta</i>	‘our [DU.INCL] hands [PL]’
<i>lalma-ke</i>	‘your [SG] hand’	<i>lalmi-m</i>	‘your [SG] hand’ (or [lalmem])
<i>kia-n</i>	‘his/her leg’	<i>ɲoma-jo</i>	‘my eye’

When such body-part terms that take direct possession suffixes have non-pronominal possessors, the possessor can simply follow the body-part term, without any possessive marking being required, as illustrated by examples (52) through (55).

(52) *blodu Lapal*  
nose [name]  
‘Lapal’s nose’

(53) *blodu ne=pap*  
nose SG=dog  
‘the dog’s nose’

(54) *kia Lapal*  
leg [name]  
‘Lapal’s leg’

(55) *lalma nolo*  
hand woman  
‘the woman’s hand’

It seems possible for at least some body-part terms to exhibit more typical alienable possession constructions—that is, with the general possessive classifier *ano* (or its allomorphs; cf. 2.5.1) (56).

(56) Body-part terms with the general possessive classifier (?)

<i>kinto no-n</i>	‘his/her bone’	<i>βoloha no-jo</i>	‘my shoulder’
<i>nio an-ke</i>	‘your [SG] tooth’	<i>punon ano Lapal</i>	‘Lapal’s fat’

Either this general possessive classifier can be extended rather broadly in its usage, or the body-part terms I have recorded with *no* are meant to be interpreted as alienable possessions (such as parts of animals' bodies).<sup>15</sup> Indeed, whereas I recorded *nio* 'tooth' with the general possessive classifier *no*, Reesink (2005:183) reports that it occurs with *lo ~ lol*. Similarly, although I recorded the general possessive classifier *no* in the phrase *burho no Lapal* 'Lapal's flesh', I recorded the possessive preposition *lo* in *burho lo m=buo* 'the meat of the pig', suggesting to me that the 'flesh' in the first example is not meant to be understood as belonging to Lapal's body but rather refers to an external possession of his (i.e., belonging to an animal, living or dead).

Thus, while some body-part terms seem to behave more like prototypical inalienably possessed relations in that they take direct-possession suffixes, others seem rather more like alienably possessed terms that cooccur with possessive classifiers. However, it does not seem best to analyze the forms *lo ~ lol*, *ta ~ to*, *ŋa*, and *e* as possessive classifiers, because they do not seem to convey any semantic information about the possessed item. They are, rather, lexically determined ligatures used only with things that are inalienably possessed. This makes them appear to be functionally different from the set of three possessive classifiers *ano ~ no* 'POSS.GEN', *ahe* 'POSS.ED', and *alma* 'POSS.DRINK'.

Indeed, the fact that there are attested alternations between these possessive ligatures and the general possessive classifier *ano ~ no* 'POSS.GEN' that are seemingly conditioned by semantic distinctions between inalienable and alienable relations suggests that these forms are distinct from the possessive classifiers. This arrangement in Tomoip somewhat resembles that of the western New Britain language Bariai, which, in addition to possessive suffixes and possessive classifiers, also employs a possessive preposition *to* (Gallagher & Baehr 2005: 76–77, 87–89).

Regarding a more general phenomenon of individual languages employing multiple possession-marking strategies for body-part terms, Chowning (1976: 379) notes:

A feature that is odd enough possibly to be significant is the fact that some languages in different south New Britain families – Arawe, Whiteman, Mengen, Tumuip [i.e., Tomoip], and perhaps Lamogai – use two different sets of possessive pronouns for different parts of the body, one suffixed and one not.

Reesink (2005: 183) notes the similarity between Tomoip's possessive constructions and those found in the neighboring non-Austronesian language Kol, where the gender (or noun class) of a possessed noun determines the form of the possessive marker that follows it and precedes the possessor (cf. Stebbins, Evans & Terrill 2018: 795–796).

## 2.6 Demonstratives

The last piece of noun phrase morphology to be discussed are demonstratives, about which I unfortunately have rather limited data. There seems to be (at least) a three-way contrast among proximal, medial, and distal deictic forms. Adnominal demonstratives immediately follow the noun. They may occur as monosyllabic enclitics or as disyllabic free forms beginning with /a/. Ross (n.d.: 1) suggests that this allomorphy is conditioned by the final segment of the preceding noun, with vowel-final nouns exhibiting the shorter clitic and consonant-final nouns exhibiting the longer free form. At the very least, based on my data, this seems to hold as a general tendency. In

<sup>15</sup> Malcolm Ross (p.c.) offers another explanation, namely that the inalienable/alienable distinction may be breaking down in the language, something that can happen when languages face obsolescence.

the deictic forms that contain an alveolar nasal /n/, this nasal can be alternatively pronounced as a geminate [nn]. Pronominal demonstratives seem to derive from the nominalizing marker *ne*= ‘SG’ plus the shorter adnominal demonstrative form. The demonstratives are given in Table 5. There do not seem to be any distinctions made in number among the demonstrative forms.

**Table 5. Demonstratives**

	<b>Adnominal (clitic)</b>	<b>Adnominal (free)</b>	<b>Pronominal</b>
<b>Proximal</b>	=ni ~ =nni	ani ~ anni	neni
<b>Medial (?)</b>	=na ~ =nna	ana ~ anni	neni
<b>Distal (?)</b>	=ŋa ~ =ŋam	aŋa	neŋa ~ neŋam

Although the proximal forms are clearly used to refer to referents that are close to the speakers, the forms presented here as “medial” and “distal” are less well understood by me, and my interpretation could be inaccurate. Ross (n.d.: 1) treats the forms that are based on [na] as distal (‘that’) and the forms that are based on [ŋa] as neutral. Ross (p.c.) also suggests the possibility that the demonstratives have quasi-personal reference, such that “proximal” is rather “near speaker”, “medial” is rather “near listener”, and “distal” is rather “near neither speaker nor listener”. The form [aŋa] is also used as a complementizer or relativizer. Ross (n.d.: 1) additionally gives the longer forms <neniko> ‘this’ and <nenako> ‘that’. Examples of demonstratives are given in (57) through (64).

- (57) *kotik=ni*  
child=PROX  
‘this child’
- (58) *bale=na*  
house=MED  
‘that house’
- (59) *holo=ŋam*  
woman.PL=DIST  
‘those women (yonder)’
- (60) *ne=pap*     *anni*     *me=pur*  
SG=dog     PROX     ADJ=big  
‘This dog is big.’
- (61) *nobuŋ* *anna* *mimma*     *Kanuŋ*  
man     MED     father     [name]  
‘That man is Kanung’s father.’ (adapted from Ross n.d.: 11)
- (62) *nolo*     *na*     *a*     *Mukuo*     *tena-n*  
woman     MED     PERS     [name]     mother-3SG  
‘That woman is Mukuo’s mother.’ (adapted from Ross n.d.: 11)
- (63) *e=bale=na*     *(me-)koloŋa*     *an-kem*  
PL=house=PROX     (ADJ-)new     POSS.GEN-1PL.EXCL  
‘these new houses of ours [PL.EXCL]’ (adapted from Ross n.d.: 10)
- (64) *ne=pap*     *aŋa*     *me-pur*  
SG=dog     DIST?     ADJ-big  
‘big dog’ (adapted from Ross n.d.: 10)

The proximal form may also follow pronouns, as in *jo=ni* ‘I myself’, thus apparently serving an emphatic function. I do not know whether the medial or distal forms may be used in this same way with pronouns (perhaps being used with different person categories).

There is certainly much more to say about demonstratives and deixis in Tomoip than my data allow. Table 6 is adapted from a table in Ross’s (n.d.: 2a) outline of the language.

**Table 6. Locative proforms and verbs (adapted from Ross n.d.: 2a)**

	Locative pronoun ‘(be) at’	Locative verb ‘come/go to’	Locative verb ‘come/go from’
‘where’	temlanmua	tanua	toa
‘here’	neniko neni aun	tanun	tou
‘there’	nenako nena auna	tanna	toniako
Neutral	neŋa auŋa	taŋa	tuŋa
‘down there’	soden	tannaden tansoden	toniadenko
‘up there’	neiali iali	taniali taniali	toniali
‘there out of sight’	nesi		

Some of the forms written in Table 6 with <i> may alternatively be analyzed as containing the palatal consonant /j/ (e.g., /tanjali/ ‘upwards’). Ross describes the forms beginning with [ne-] as copulas that join subjects with locative expression and the forms beginning with [au-] as serial forms that follow verbs of posture. Ross also refers to three forms that are not themselves locative verbs but occur between verbs and prepositional phrases: *ta* ‘(come/go) to’, *to* ‘(come/go) from’, and *mo* ‘(come/go) up’.

### 3. Verbal morphology

In the following subsections I describe several morphemes that occur in verb phrases. Verbs may be preceded by various proclitics that index (in a rather limited way) the person and number of the subject argument (§3.1), while also indicating mood, as well as perhaps other grammatical categories, such as aspect (§3.2). Verbal affixation includes a causative prefix (§3.4) and several transitive suffixes (§3.5). When the object of a transitive verb is overtly expressed, it follows the verb. In this section I also discuss the morphological process of reduplication, which may not be limited to verbs (§3.5), and I assess the status of Tomoip’s verbal morphology as seemingly “non-Austronesian” (§3.6).

### 3.1 Subject markers

The first element of a verb phrase is often a subject marker, which indicates the mood of the clause (either realis or irrealis). These portmanteau morphemes encode information about the person/number of the subject argument (both for the subjects of intransitive clauses and for the subjects of transitive clauses). They make only minimal differentiations among the eleven person/number categories that exist in the language. They can cooccur with overt subject arguments (including pronominal subjects), although it is also possible for them to occur without any overt subject (i.e., “pro-drop”). Subject markers do not seem to be obligatory, although they are apparently rather common. When present, they cliticize to the beginning of the verb phrase. The forms presented in (65) are slightly different from those given in Reesink (2005: 169).

(65) Subject markers

DU/PL/1SG.REAL	<i>ta=</i>
2SG/3SG.REAL	<i>ti= ~ t=</i>
DU/PL/1SG.IRR	<i>sa=</i>
2SG.IRR	<i>se=</i>
3SG.IRR	<i>so=</i>

The marker *ta=* ‘DU/PL/1SG.REAL’ is used in realis-mood clauses with all except 2SG and 3SG subjects. Before vowel-initial verbs, the 2SG/3SG.REAL marker *ti=* has the allomorph *t=*. I have also recorded a form [te], which—based on its form—seems like it could be a designated 2SG realis marker, but my data here are unclear. The realis subject markers are illustrated in sentences (66) through (73).

- |      |                        |                |              |             |                              |              |              |
|------|------------------------|----------------|--------------|-------------|------------------------------|--------------|--------------|
| (66) | <i>jo</i>              | <i>ta=so</i>   | <i>m=men</i> | (67)        | <i>i</i>                     | <i>ti=so</i> | <i>m=buo</i> |
|      | 1SG                    | REAL=see       | SG=bird      |             | 3SG                          | 3SG.REAL=see | SG=pig       |
|      | ‘I see a bird.’        |                |              |             | ‘He sees a pig.’             |              |              |
| (68) | <i>jo</i>              | <i>ta=in</i>   | <i>e=mao</i> | (69)        | <i>ike</i>                   | <i>t=in</i>  | <i>boka</i>  |
|      | 1sg                    | REAL=eat       | PL=banana    |             | 2SG                          | 2SG.REAL=eat | what         |
|      | ‘I am eating bananas.’ |                |              |             | ‘What do you eat?’           |              |              |
| (70) | <i>amma</i>            | <i>t=unun</i>  | (71)         | <i>amma</i> | <i>ti=ler</i>                |              |              |
|      | father                 | 3SG.REAL=drink |              | father      | 3SG.REAL=sleep               |              |              |
|      | ‘Father is drinking.’  |                |              |             | ‘Father is sleeping.’        |              |              |
| (72) | <i>ti</i>              | <i>ta=rβio</i> | (73)         | <i>ikem</i> | <i>ta=so</i>                 | <i>kom</i>   |              |
|      | 3PL                    | REAL=fight     |              | 1PL.EXCL    | REAL=see                     | 2PL          |              |
|      | ‘They are fighting.’   |                |              |             | ‘We [PL.EXCL] see you [PL].’ |              |              |

Ross (1988: 292) suggests that the initial [t] that occurs in such realis subject markers, which he notes are used in “non-future, non-habitual verb phrases”, might reflect a Proto-New Ireland punctiliar-aspect morpheme \*ta (Ross 1982). Such a morpheme, however, may not be limited to



the New Ireland languages: it seems to be reflected, for example, in the Bali-Vitu languages (see below).

The marker *sa=* ‘DU/PL/1SG.IRR’, like its realis counterpart *ta=* ‘DU/PL/1SG.REAL’, is the irrealis marker used with the greatest number of subjects. Indeed, it seems that *sa=* can function as a general irrealis marker, unspecified for person or number. Thus, although there are the designated portmanteau forms *se=* ‘2SG.IRR’ and *so=* ‘3SG.IRR’, there are examples of *sa=* being used with 3SG subjects (instead of the expected *so=*). The irrealis subject markers are illustrated in sentences (74) through (79).

- |      |                           |                                     |                       |      |                       |   |                            |
|------|---------------------------|-------------------------------------|-----------------------|------|-----------------------|---|----------------------------|
| (74) | <i>ike</i><br>2SG         | <i>se=lko</i><br>2SG.IRR=fall       |                       | (75) | <i>mlanua</i><br>when | <i>ike</i><br>2SG                           | <i>se=pu</i><br>2SG.IRR=go |
|      |                           | ‘You [SG] will fall.’               |                       |      |                       |   | ‘When will you [SG] go?’   |
| (76) | <i>kusier</i><br>1PL.INCL | <i>sa=so</i><br>IRR=see             | <i>amma</i><br>father | (77) | <i>jo</i><br>1SG      | <i>sa=na=lap-rie</i><br>IRR=1SG.FUT?=hit-TR |                            |
|      |                           | ‘We [PL.INCL] will see father.’     |                       |      |                       | ‘I will hit him.’                           |                            |
| (78) | <i>amma</i><br>father     | <i>so=n=to</i><br>3SG.IRR=FUT?=make | <i>bale</i><br>house  | (79) | <i>i</i><br>3SG       | <i>sa=ni=rbe</i><br>IRR=FUT?=fly            |                            |
|      |                           | ‘Father wants to build a house.’    |                       |      |                       | ‘It will fly.’                              |                            |

Example (79) illustrates the use of the irrealis marker *sa=* ‘DU/PL/1SG.IRR’ with a 3SG referent. This example, along with examples (77) and (78), further illustrates another feature of verbal morphology: the irrealis subject markers are commonly immediately followed by one of three markers: *na=* (77), *n=* (78), or *ni=* (79). While these forms are likely reflexes of a POC or Proto-Western Oceanic irrealis marker \**na* (cf. Ross 1988: 360–375; 1996: 267), their synchronic function in Tomoip, if any, as distinct from *sa=* ‘IRR’ is unclear. I tentatively suggest that *na=* ~ *ni=* ~ *n=* is (or was) a marker of future tense.

The form *na=* has only been observed with 1SG subjects (80), whereas the forms *n=* (81) and *ni=* (82) have been observed with other subjects.

- |      |                          |   |                         |
|------|--------------------------|---|-------------------------|
| (80) | <i>jo</i><br>1SG         | <i>sa=na=goa</i><br>IRR=1SG.FUT?=stay           |                         |
|      |                          | ‘I will stay.’                                  |                         |
| (81) | <i>a</i><br>PERS         | <i>Lapal so=n=so</i><br>[name] 3SG.IRR=FUT?=see | <i>a</i><br>PERS        |
|      |                          | ‘Lapal will see Tonggo.’                        | <i>Tonggo</i><br>[name] |
| (82) | <i>herek</i><br>child.PL | <i>sa=ni=n-tanun</i><br>IRR=FUT?=go-hither      |                         |
|      |                          | ‘The children will come.’                       |                         |

The form *na=* occurs in every instance that *sa=* refers to a 1SG subject. The 1SG.IRR subject marker may indeed be *sana=*, as analyzed by Reesink (2005: 169). The form *ni=*, on the hand, has been attested with 3SG, 3DU, 3PL, and 1DU.EXCL subjects; in each of these instances, the marker

*ni=* combines with *sa=*, ultimately producing the form *sani=*. There are also examples, however, of *sa=* (or *so=*) occurring with these subjects without the use of *ni=*. The form *sani=* is perhaps especially common with 3PL subjects. The distinction in meaning or use between *ni=* and *n=*, if any, is unknown.

The marker *n=* may at times be difficult to differentiate from what seems to be a verbal form *n-* ‘to go’, with which it may be etymologically related. Example (82) illustrates this verbal form immediately following the form *ni=* ‘FUT?’, here producing the verb *n-tanun* ‘to come’ (literally ‘to go hither’). Similar combinations of *n-* ‘to go’ with directional words include *n-taŋa* ‘go-thither’ and *n-toŋa* ‘go-thence’.

The marker *n=* ‘FUT?’ has a bilabial allomorph [m] when immediately preceding a bilabial consonant, as seen in (83) and (84). This *n : m* alternation is reminiscent of irrealis markers found elsewhere in the Oceanic family, and may have its origins in POC itself (cf. Lynch 1975).

(83) *ner so=m=bu*  
rain 3SG.IRR=FUT?=fall  
‘It will rain.’

(84) *amma so=m=pu morik*  
father 3SG.IRR=FUT?=go tomorrow  
‘Father will go tomorrow.’

Preverbal portmanteau morphemes that indicate realis/irrealis modality as well as index the person/number of the subject occur elsewhere in the languages of New Britain. The Bali-Vitu languages, for example, exhibit preverbal morphemes such as *ta* ‘1SG/2NSG/3NSG.REAL’, *tu* ‘2SG.REAL’, *e ~ Ø* ‘3SG.REAL’, *na* ‘1SG/2NSG/3NSG.IRR’, *nu* ‘2SG.IRR’, and *ni* ‘3SG.IRR’ in Vitu (i.e., Muduapa) (van den Berg & Bachet 2006: 98); and *ta=* ‘1.REAL’, *to=* ‘2.REAL’, *te=* ‘3.REAL’, *ma=* ‘N3.IRR’, and *mi=* ‘3.IRR’ in Bali (i.e., Uneapa) (Ross 2002a: 374). Reesink (2005: 168–169) notes that such preverbal portmanteau morphemes may be an areal feature, providing paradigms for similar systems in the nearby Austronesian language Mengen as well as in the nearby non-Austronesian language Sulka. Indeed, preverbal subject markers seem to constitute a rather widespread areal feature, stretching from Halmahera in the west to the Solomon Islands in the east (Ross 2017: 789–791).

There may be other TAM markers that can occur in the slot otherwise occupied by the realis or irrealis subject markers, although I have only limited information here. For example, there appears to be a habitual marker *me=* ‘HAB’ (85).

(85) *amma me=to bale*  
father HAB?=make house  
‘Father builds houses.’

I cannot say, though, whether this marker exhibits different forms when used with different subjects, nor am I sure that it is a proclitic as opposed to a free particle. Ross’s (1980) elicited sentences include numerous instances of this putative habitual marker, some of which are presented in (86) through (89).

(86) *i me=in ha-n*  
3SG HAB?=eat POSS.ED-3SG  
‘He eats.’ (adapted from Ross 1980: A5)

- (87) *i me=ler*  
 3SG HAB?=sleep  
 ‘He sleeps.’ (adapted from Ross 1980: A6)
- (88) *i me=rpek*  
 3SG HAB?=cry  
 ‘He cries.’ (adapted from Ross 1980: A6)
- (89) *i me=robel e=per*  
 3SG HAB?=throw PL=stone  
 ‘He throws stones.’ (adapted from Ross 1980: B4)

The marker *me=* ‘HAB’ is homophonous with the marker *me-* ‘ADJ’, which frequently occurs with adjectives (§4). The two forms likely share a common origin and may even be best analyzed synchronically as a single marker. Indeed, Ross (n.d.: 17a) regards <me-> as a “habitual / stative” marker, occurring both with verbs and with adjectives.

### 3.2 Imperative markers

Commands are indicated by proclitic imperative markers: *i=* ‘IMP.SG’ for singular subjects (90) and *a=* ‘IMP.NSG’ for non-singular subjects (91). Information on imperatives with dual subjects is lacking, and thus it is possible that a different marker is used in such instances; this would mean that the marker *a=* is actually a plural imperative marker (as opposed to a non-singular imperative marker). The second person pronoun is optionally included in commands (e.g., in 91).

- (90) *i=dun*  
 IMP.SG=sit  
 ‘Sit!’ (ordered to one person)
- (91) *ikom a=in he-kom*  
 2PL IMP.NSG=eat POSS.ED-2PL  
 ‘Eat!’ (ordered to multiple people)

Ross (n.d.) analyzes the forms [i] and [a] more generally as subject markers (occurring, for example, in forms such as *t-i=* ‘3SG.REAL’, *t-a=* ‘DU/PL/1SG.REAL’, and *s-a=* ‘DU/PL/1SG.IRR’). Although the form [a] occurs consistently throughout the non-singular forms (including imperatives) and may thus be considered a (non-singular) subject formative, it is more challenging to treat the form [i] as a singular subject formative: while [i] occurs in the 3SG.REAL marker and in the singular imperative, it does not occur in the other singular forms (although *ti=* ‘2SG/3SG.REAL’ and *se=* ‘2SG.IRR’ may derive from \**ta-i=* and \**sa-i=*, respectively, it would be more challenging to argue for the presence of \*i in the forms *ta=* ‘1SG.REAL’, *sa=* ‘1SG.IRR’, and *so=* ‘3SG.IRR’).

Another reason for possibly treating the imperative marker *i=* ‘IMP.SG’ as formally distinct from the [i] found in the subject marker *ti=* ‘3SG.REAL’ is the fact that, whereas the [i] of the latter form elides when followed by the vowel /u/ (92), the [i] of the former form does not (93).

- (92) *amma t=unun*  
 father 3SG=drink  
 ‘Father drinks.’ ([t=] from underlying /ti=/)
- (93) *i=unun*  
 IMP.SG=drink  
 ‘Drink!’

When followed by the vowel /i/, on the other hand, the imperative marker also elides (94).

- (94) *(ke) in he-ke*  
 (2SG) eat POSS.ED-2SG  
 ‘Eat!’ (ordered to one person) (underlying /i=in/)

### 3.3 Transitive suffixes

There is no special verbal marking for the objects of verbs (i.e., for the more patient-like arguments of transitive clauses). Non-pronominal objects follow their verb without any dedicated morphology indexing them, as illustrated in (95) and (96). As mentioned in §3.1, subject arguments are optionally indexed on the verb with portmanteau modal proclitics.

- (95) *anno ti=soŋ ka-piŋhe*  
 mother 3SG.REAL=sew CLASS-cloth  
 ‘Mother sews cloth.’
- (96) *a Lapal lap a Palua*  
 PERS [name] hit PERS [name]  
 ‘Lapal hit Palua.’

Pronominal objects also follow the verb, as in (97) and (98). Although the 1SG, 3DU, and 3PL object pronouns are of the same form as the corresponding subject pronouns, most of the other object pronouns are shorter versions of the corresponding subject pronouns (see §7).

- (97) *amma so ti*  
 father see 3PL  
 ‘Father sees them.’
- (98) *ikom sa=so kem*  
 2PL IRR=see 1PL.EXCL  
 ‘You [PL] will see us [PL.EXCL].’

The 3SG pronoun, which, as a subject has the form *i* ‘3SG’, does not occur as a verbal object. Instead, when a transitive verb has a 3SG pronominal referent as its object, one of several “transitive markers” immediately follows the verb, as in (99) through (102).

- (99) *tem lanua ike t=in-ie*  
 time when 2SG 2SG.REAL=eat-TR  
 ‘When did you [SG] eat (it)?’ (*tem* is borrowed from Tok Pisin *taim* ‘time’)

- (100) *i ti=lap-rie*  
 3SG 3SG.REAL=hit-TR  
 ‘He/She hit him/her/it.’
- (101) *ne=pap ha-sie*  
 SG=dog bite-TR  
 ‘The dog bit (him/her/it).’
- (102) *i so=n=so-ni*  
 3SG 3SG.IRR=FUT?=see-TR  
 ‘He/She will see him/her/it.’

Thus, transitive verbs may be marked by one of several suffixes (or enclitics). These transitive markers are the following: *-ie*, *-rie*, *-sie*, *-ni*, and *-n*. The first three forms (*-ie*, *-rie*, and *-sie*) are almost certainly lexically conditioned allomorphs of the same morpheme. It is less clear, however, (i) whether *-ni* and *-n* are also allomorphs of this same morpheme *-(C)ie*, (ii) whether *-ni* and *-n* are both allomorphs of a different morpheme, (iii) whether *-ni* is an allomorph of *-(C)ie* but *-n* is a different morpheme, or (iv) whether both *-ni* and *-n* are separate morphemes. There is, unfortunately, too little information to decide among these possibilities. Although the synchronic state of affairs is unclear, it seems plausible that, at least historically, *-ie*, *-rie*, and *-sie* all derive from the POC local transitive suffix *\*i*, whereas *-ni* derives from the POC remote transitive suffix *\*akini* (or *\*ni*); *-n* may also derive from the POC remote transitive suffix or else have a separate history (cf. Pawley 1973). Finally, in addition to these forms, there is possibly one more transitive suffix, *-bi*, which is only attested with the verb *him* ‘to kill’. The transitive-marked form of this verb is *hibi* ‘kill him/her/it’, the final [m] of the stem apparently deleting. The contrast between [him] and [hibi] is illustrated by examples (103) and (104).<sup>16</sup>

- (103) *amma him ne=pap*  
 father kill SG=dog  
 ‘Father killed a dog.’
- (104) *amma hi-bi*  
 father kill-TR?  
 ‘Father killed him/her/it.’

Although ostensibly a “transitive” morpheme, the marker *-(C)ie* actually generally only occurs when the verb has no overtly stated object. It is not known to cooccur with a pronominal object, and it generally seems to be absent when the verb has a non-pronominal object (although there are examples of it preceding such objects). In fact, were it not for its attested cooccurrence with full noun phrases serving as objects, it might be best to analyze it synchronically as the object form of the 3SG pronoun. At the same time, *-(C)ie* appears to be obligatory for any verb whose meaning entails a patient argument when no such argument is otherwise overtly stated. Thus, for example, sentences like (105) are unattested (and are potentially ungrammatical).

- (105) *†i t=in*  
 3SG 3SG.REAL=eat  
 †‘He eats.’

<sup>16</sup> Malcolm Ross (p.c.) suggests an alternative analysis, namely that the stem was formerly /hi<sup>m</sup>b/ (with prenasalised /b/) and the stop was lost word-finally.

Instead, when elicited, sentences like (106) are provided.

- (106) *i t=in ha-n*  
 3SG 3SG.REAL=eat POSS.ED-3SG  
 ‘He eats his (edible possession).’

In this case, the edible possession classifier *ha-* with 3SG.POSS marking *-n* is the grammatical object of the verb *in* ‘to eat’. Alternatively, the verb *in* ‘to eat’ may be followed by the transitive marker *-ie*, as in *tem lanua ike t=in-ie* ‘when did you [SG] eat?’. This same question could be rephrased with a 2SG-marked edible possession classifier, as in (107).

- (107) *ke t=in he-ke tem lanua*  
 2SG 2SG.REAL=eat POSS.ED-2SG time when  
 ‘When did you [SG] eat?’

It could be the case that word order plays a role in the presence of the transitive marker. There seems to be a strong aversion to a semantically transitive verb occurring at the end of a sentence without any transitive marking, whereas in non-final position there may be more freedom to leave the verb unmarked (even without an overtly expressed object). For example, when the question phrase *au ua* ‘where?’ occurs clause-finally, the verb *in* ‘to eat’ may be followed by an edible possession classifier as its direct object (108), but this does not seem to be mandatory (109).

- (108) *ke t=in he-ke au ua*  
 2SG 2SG.REAL=eat POSS.ED-2SG at where  
 ‘Where did you [SG] eat?’

- (109) *ke t=in au ua*  
 2SG 2SG.REAL=eat at where  
 ‘Where did you [SG] eat?’

Similarly, the verb *muŋ* ‘to turn’ seems inclined to exhibit transitive marking, even when the patient of the turning is also the agent (i.e., a reflexive or middle sense of the word). Both *i ti=muŋ* and *i ti=muŋ-sie* are attested for the meaning ‘he turns’.

The transitive suffix in Tomoip is reminiscent of a suffix found in the western New Britain language Kaulong, about which Ross (2002b: 399) writes:

The transitive suffix *-(C)i* has a narrower distribution than its cognates in other Oceanic languages, as it occurs only when there is no object noun phrase, whether lexical or pronominal, in the same clause (and only when the object is a lower animate or an inanimate, as higher animates are expressed as independent pronouns).

As far as I can tell, however, animacy does not play a role in the use of the transitive suffix in Tomoip; it generally occurs whenever no overt object is stated, regardless of the animacy of the object. As mentioned, there are a variety of transitive suffixes, the most common of which are

probably *-ie*, *-rie*, and *-sie*. Examples of verbs taking these suffixes are given in (110), (111), and (112). A number of these examples are taken from Grace (1955a) and from Ross (1980).

(110) Verbs that take the transitive suffix *-ie*

<i>inie</i>	‘to eat’	(also <i>in</i> ‘to eat’)
<i>rarie</i>	‘to tie’	(Ross 1980: D5: <rarie> ‘(he) ties (a knot)’)
<i>tulie</i>	‘to hit’	(Grace 1955a: 85: <tulie> ‘hit’)
<i>roie</i>	‘to carry’	(Ross 1980: D3: <roie> ‘(he) carries (a coconut)’)
<i>βulβulie</i>	‘to boil’	(Grace 1955a: 89: <bulβulie> ~ <vulvulie> ‘to boil’)
<i>βadelie</i>	‘to swallow’	(Ross 1980: D3: <vadelie> ‘(he) swallows (food)’)

Ross’s (1980: D3) form <vadelie> ‘(he) swallows (food)’ may be compared with Grace’s (1955a: 88) form <vadel> ‘swallow’.

(111) Verbs that take the transitive suffix *-rie*

<i>loɽrie</i>	‘to hear, to ask’	(cf. <i>loɽ</i> ‘question’)
<i>βarie</i>	‘to plant, to bury’	(Ross 1980: C7: <ti warie> ‘(he) buries (dead man)’)
<i>siɽrie</i>	‘to tear, to cut’	(Ross 1980: D6: <siɽri> ‘(he) tears (paper)’)
<i>soɽrie</i>	‘to sew, to weave’	(Ross 1980: C8: <tisoɽrie> ‘(she) weaves (a mat)’)
<i>laprie</i>	‘to hit’	(also <i>lap</i> ‘to hit’)

That form *laprie* ‘to hit him/her/it’ undergoes a sound change in its root. It is pronounced [laβrie]. The verb *pisarie* ‘to finish’ seems to contain this suffix as well, although the connection to the form *pisa* ‘some, multiple’ is not clear.

(112) Verbs that take the transitive suffix *-sie*

<i>hasie</i>	‘to bite’	(also <i>ha</i> ‘to bit’)
<i>muɽsie</i>	‘to turn’	(also <i>muɽ</i> ‘to turn’)
<i>raɽsie</i>	‘to squeeze’	(also <i>raɽ</i> ‘to squeeze’)
<i>timsie</i>	‘to finish’	(also <i>tim</i> ‘to finish’)
<i>ɽaɽsie</i>	‘to chew’	(Ross 1980: D3: <ɽaɽsie> ‘(he) chews (betelnut)’)

Ross (1980: D7) records <kasie> ‘(he) scrapes (a coconut)’, but it is not clear whether there is a verb form /ka/. Also, it is not clear whether there is a connection between the property-denoting word *mamsie* ‘heavy’ and the verb *mam* ‘to chew (betel nut)’.

One reason for suspecting that *-ni* is not an allomorph of *-ie* ~ *-rie* ~ *-sie* is that it may be possible that the two morphemes can cooccur with the same verb, although this is not entirely clear. For example, Grace (1955a: 89) records <rərɔsieni> ‘drag’, which is possibly analyzable as ‘RED~carry-TR-TR’—that is, with both the suffix *-sie* and the suffix *-ni*. Ross (1980: C8) records the form <ti vatotorini> ‘(he) shakes (a coconut)’, which is possibly analyzable as ‘3SG.REAL=CAUS-beat-TR-TR’—that is, with both the suffix *-rie* and the suffix *-ni*, although this assumes slightly different vowel qualities from what has been transcribed.

Second, the form *-ni* is different from the forms *-ie* ~ *-rie* ~ *-sie* simply in that it does not share the diphthong [ie] that is found in the three allomorphs of *-(C)ie*. However, the irregular

ending *-bi* of the transitive form of *him* ‘to kill’ also lacks this diphthong, thereby rather resembling the form *-ni*.

Finally, there may be semantic differences in terms of which verbs take the suffix *-ni*, although this is not clear. It may be the case that verbs that employ *-ni* have objects that are less directly affected by the action of the verb. Examples of verbs attested with the transitive suffix *-ni* are given in (113). Forms that are based on those found in Grace (1955a) are indicated in parentheses.

(113) Verbs that take the transitive suffix *-ni*

<i>soni</i>	‘to see’	(also <i>so</i> ‘to see’)
<i>βatitini</i>	‘to breastfeed’	(cf. <i>βatiti</i> ‘to breastfeed’)
<i>nani</i>	‘to give’	(Grace 1955a: 85: <nani?> ‘give, push’)
<i>toni</i>	‘to do’	(Grace 1955a: 85: <toni> ‘do’)
<i>jumani</i>	‘to throw’	(Grace 1955a: 85: <jumani> ‘throw’)
<i>laβsini</i>	‘to pull’	(Grace 1955a: 85: <lavsini> ‘pull’)
<i>nasini</i>	‘to show’	(Grace 1955a: 89: <nasini> ‘show’)

The nature of the verbal suffix *-n* is the most challenging to explain. As opposed to the other “transitive makers”, *-n* appears to occur more frequently with overtly stated objects (as well as apparently serving as a dummy 3SG marker). It is not clear whether it is an abbreviated form of the marker *-ni* or it has a different history. As with *-ni*, there may be slight indications that it is possible for *-n* to cooccur with *-(C)ie*, but the evidence is scant. For example, Ross (1980: D4) records <kadeliēn> ‘(he) sharpens (a stick to a point)’, which perhaps contains both *-ie* and *-n*. Grace (1955a: 89) records <laosin> ‘to break (rope)’, which perhaps contains both *-sie* and *-n* (allowing for a slight difference in vowel transcription); the forms *laβsini* ‘to pull’ and *nasini* ‘to show’ (mentioned above), may also exhibit this cooccurrence. As stated, however, this evidence is thin. Examples of verbs attested with the transitive suffix *-n* are given in (114).

(114) Verbs attested with the suffix *-n*

<i>tutoro</i> ~ <i>tutoron</i>	‘to beat, to pound, to mash’
<i>kombua</i> ~ <i>kombuan</i>	‘to cut’
<i>nebua</i> ~ <i>nebuan</i>	‘to break (a stick)’
<i>kolo</i> ~ <i>kolon</i>	‘to find; to look for, to seek; to hunt’
<i>pindian</i> (?)	‘to find’ (from Grace 1955a: 89: <pindjan> ‘find’)

Given the semantics of these verbs, it is tempting to postulate that the ending *-n* has something to do with punctual, telic events.

### 3.4 Causative prefix

Thus the transitive markers do not seem generally to increase valency, but rather function more like 3SG object pronouns (or dummy pronouns) of verbs whose argument structure requires an object argument. However, the causative prefix *βa-* ‘CAUS’ does indeed increase the valency of a verb, namely by making an intransitive verb transitive. The causative prefix is illustrated in



examples (115) through (117). A list of some verbs attested as cooccurring with the causative prefix is given in (118).

- (115) (a) *kotik ti=ɲiŋ*  
child 3SG.REAL=laugh  
'The child laughs.'
- (b) *ti ta=βa-ɲiŋ*  
3PL REAL=CAUS-laugh  
'They play.'<sup>17</sup>
- (116) (a) *kotik ti=ti~ti*  
child 3SG.REAL=RED~breast  
'The baby suckles.'
- (b) *tena-n ti=βa-ti~ti kotik*  
mother-3SG 3SG.REAL=CAUS-RED~breast child  
'Its mother nurses the baby.'
- (117) (a) *i ti=βiri*  
3SG 3SG.REAL=bathe  
'He/She bathes.'
- (b) *i ti=βa-uri kotik*  
3SG 3SG.REAL=CAUS-bathe child  
'He/She bathes the child.'

(118) Verbs attested as taking the causative prefix *βa-* 'CAUS'

<i>βa-mil</i> 'to prohibit, to prevent'	(from <i>mil</i> 'to return', i.e., 'to make return')
<i>βa-ɲiŋ</i> 'to play, to make laugh'	(from <i>ɲiŋ</i> 'to laugh')
<i>βa-titi</i> 'to breastfeed, to nurse'	(from <i>titi</i> 'to suckle', i.e., 'to make suckle')
<i>βa-ileŋ</i> 'to be strong'	(from <i>ileŋ</i> 'muscle, strength', i.e., 'to make muscle')
<i>βa-uri</i> 'to wash, to clean, to bathe'	(from <i>βiri</i> 'to bathe' [< *uri]; i.e., 'to make bathe')
<i>βa-loŋ</i> 'to listen'	(from <i>loŋ</i> 'to hear', i.e., 'to make [oneself] hear')

One possible example, based on other sources, is the form *βadel* 'to swallow', which is possibly derived from *del(i/a)* 'mouth'—in other words, literally meaning 'to make mouth' (cf. Grace 1955a: 88: <vadel> 'swallow'; Ross 1980: D3: <vadelie> '(he) swallows (food)'). Another possible example is recorded by Ross (1980: C7): <tivakodeltu> '(he) erects (a post)'. As this contains *deltu* 'to stand', it seems to mean 'to make (something) stand'; however, the element <ko> between the causative prefix <va-> (i.e., *βa-*) and the stem <deltu> 'to stand' is unexplained.

Another example comes from Ross (n.d.: 7): *βa-tio* 'to drown (transitive)' derives from *tio* 'to drown (intransitive)' (orthography mine).

Some other verbs begin with [βa], but it is not clear whether or not this is encoding causative meaning, whether synchronically or diachronically. Examples include *βaho* 'to count',

<sup>17</sup> Cf. Reesink (2005: 164): <Ti wa-nging kem> 'They made us laugh'.

*βaneban* ‘to live, to be alive’, *βanon* ‘to think’, *βanori* ‘to stink’, and *βasuku* ‘to push’. Grace (1955a: 89) records the form <vavtal> ‘to open’. Ross (1980: C8) records the form <ti vatotorini> ‘(he) shakes (a coconut)’, which is possibly related to the verb *tutoro* ‘to beat, to pound, to mash’.

### 3.5 Reduplication

Verb stems may be reduplicated to indicate iterative or continuous aspect. Based on limited data, it seems that monosyllabic verb stems generally undergo full reduplication (119), whereas longer verb stems undergo partial reduplication, whereby only the first CV(C) is reduplicated and prefixed to the full multisyllabic form (120).

#### (119) Full reduplication in verbs

<i>haha</i>	‘to swim’	(connection, if any, to <i>ha</i> ‘to bite’ is unclear)
<i>konkon</i>	‘to stab repeatedly’	(cf. <i>kon</i> ‘to shoot, to stab’)
<i>marmar</i>	‘to grow’	(also <i>mar</i> ‘to grow’)
<i>milmil</i>	‘to return’	(also <i>mil</i> ‘to return’) <sup>18</sup>
<i>sijsij</i>	‘to slice up’	(cf. <i>sij</i> ‘to cut, to split, to slice’)
<i>titi</i>	‘to suckle’	(cf. <i>ti</i> ‘breast’)
<i>unun</i>	‘to drink’	(reduplication of *un?; or fossilized suffix -n?)

#### (120) Partial reduplication in verbs

<i>hahabur</i>	‘to crush, to grind’	(cf. <i>habur</i> ‘to break’)
<i>manmana</i>	‘to float’	(connection, if any, to <i>mana</i> ‘knowledge’ is unclear)
<i>leler</i>	‘to lie down’	(cf. <i>ler</i> ‘to sleep’)

Reduplication is illustrated in sentences (121) through (124).

(121) (a) *amma ti=kon*                      *m=buo*  
 father 3SG.REAL=shoot      SG=pig  
 ‘Father shot a pig.’

(b) *i ti=kon~kon*                      *ndan*  
 3SG 3SG.REAL=RED~shoot earth  
 ‘He stabbed at the ground.’

(122) (a) *i ti=sij*                      *uβe*  
 3SG 3SG.REAL=cut tree  
 ‘He split wood.’

(b) *i ti=sij~sij*                      *rakabuk*  
 3SG 3SG.REAL=RED~cut meat  
 ‘He sliced the meat.’

<sup>18</sup> Data from Ross (1980: C8): <timilmil> ‘(he) comes back’ and from Grace (1955a: 89): <mil> ‘return’.

- (123) (a) *amma habur ndan*  
father break earth  
'Father digs.' (literally 'breaks ground'; cf. Tok Pisin *brukim graun*)
- (b) *ha~habur-ie la-kula*  
RED~break-TR CLASS-shell  
'(He) crushes shells.'
- (124) (a) *amma ti=ler*  
father 3SG.REAL=sleep  
'Father is sleeping.'
- (b) *amma le~ler*  
father RED~sleep  
'Father is lying down.'

In the case of *le~ler* 'to lie down', which appears to employ partial reduplication despite deriving from a monosyllabic stem (*ler* 'to sleep'), the semantic effect of reduplication may be attenuating the meaning rather marking continuous aspect. Similarly, Grace (1955a: 89) records <takolkolon> 'want', which I hypothesize to be analyzable as /ta=kol~kolo-n/ 'REAL=RED~find-TR'.

Some nouns seem to exhibit reduplication, whether full (125) or partial (126), although there is no evidence of any productive process of nominal reduplication in the language.

(125) Nouns with apparent full reduplication

<i>pelpel</i>	'fishtail'	(related to <i>pel</i> 'skin, body'?)
<i>βulβul</i>	'elbow'	(loan from Sulka?) <sup>19</sup>
<i>kaka</i>	'maternal uncle' <sup>20</sup>	
<i>kenken</i>	'insect sp. (black ant)'	
<i>korkor</i>	'bird sp. (crow)'	(loan from Tok Pisin <i>kotkot</i> ?)
<i>liuliu</i>	'insect sp. (bedbug)'	(also <i>liliiu</i> 'bedbug')
<i>bobo</i>	'taro sp.'	
<i>kunkun</i>	'sugarcane'	
<i>kelkel</i>	'whirlpool'	(cf. Grace 1955a: 86: <kelkel> 'float')
<i>βusβus</i>	'seafoam'	
<i>kinkin</i>	'pain; to ache'	
<i>minmin</i>	'string'	
<i>tultul</i>	'torch'	(cf. <i>tul</i> 'to hit (with a stick); to burn')
<i>βoŋβoŋ</i>	'tattoo'	

(126) Nouns with apparent partial reduplication

<i>peperen</i>	'fish sp. (red)'	
<i>mulmulieŋ</i>	'dream'	(cf. <i>jamleŋ</i> 'to dream')

<sup>19</sup> Cf. Grace (1955b: 125): <vulvul> 'elbow, ankle'; Lindrud (1980: 178): <kaŋkaŋ ka βulβul> '(his) elbow'.

<sup>20</sup> Grace (1955a: 92) gives a different reduplicative form for this word: <jaŋja> 'MoBr' [i.e., 'mother's brother'], suggesting the phonemic form /jaŋja/.

Indeed, the reduplication in some of these words seems to point to iterative action (for example, *kelkel* ‘whirlpool’ or *βusβus* ‘seafoam’). Others, however, might not have any such semantic connections, as in some of the flora and fauna terms. Tomoip does not make strong word class distinctions; for example, the singular marker *ne=* ‘SG’ is capable of preceding words with prototypically verbal meanings as well as more prototypical nouns (although this may be viewed as a form of deverbalization). In light of this, I suggest that some of these nouns that seem to be derived by reduplication are better conceived of as nominal uses of verbs that have been thus derived.

Similarly, adjectives or other potential modifiers do not necessarily represent a distinct morphosyntactic word class (cf. §4). Instances of apparent reduplication found in such words is presented in (127) and (128).

(127) Modifiers with apparent partial reduplication

<i>kokobe</i>	‘curved’
<i>kokolik</i>	‘crooked’
<i>mulmultin</i>	‘wet’
<i>totoŋ</i>	‘black; dirty’

(128) Modifiers with apparent full reduplication

<i>golgol</i>	‘hard (not soft)’	
<i>keke</i>	‘mature, dry’	(cf. <i>kie</i> ‘dry’)
<i>komkom</i>	‘short’	
<i>marmar</i>	‘tasty’	
<i>perper</i>	‘hard, mature’	(cf. <i>per</i> ‘stone’)
<i>rara</i>	‘thin’	(cf. <i>ra-</i> , class term prefix for leaves)
<i>tenten</i>	‘hot’	
<i>βeβe</i>	‘mute’	
<i>birbir</i>	‘all’	(cf. <i>bir</i> ‘white’)
<i>mermer</i>	‘slightly’	(related to <i>mer</i> ‘to die’?)
<i>nomnom</i>	‘very’	
<i>depuk depuk</i>	‘each, one-by-one’	(cf. <i>puk</i> ‘piece’)

### 3.6 Tomoip verbal morphology as “non-Austronesian”?

One final note on Tomoip verbal morphology is in order. In a brief discussion of the language, Capell (1971: 267) writes:

Tomoip forms (kindly supplied to the writer by Prof. G.W. Grace) do not seem to be structurally AN [i.e., Austronesian], apart from the lexical content, which has a degree of AN. The verbal forms, however, are doubtful ... These seem to be constructed on principles quite NAN [i.e., non-Austronesian] ...

This sentiment is echoed by Wurm (1971: 645):

Several Papuan languages are located on New Britain, most of them concentrated at the northern end of the island. The remaining quite numerous languages are Austronesian, though quite a few of them have been more or less heavily influenced in their vocabulary, and some of them – e.g. the Mengen and Tumuip [i.e., Tomoip] languages in the southwest [sic] of the island – also in their structure, by Papuan languages.

Likewise, Chowning (1976: 373) writes:

I wholly agree with Capell about the NAN appearance of Tumuip [i.e., Tomoip] grammar, though the possible sources of influence are still to be identified. Of the languages I have classed as AN, this is the only one that offers strong grounds for being considered mixed, though I have virtually no information on the grammar of Lamogai, and little on Arawe.

However, it seems to me that this “non-Austronesian” character of Tomoip has been overstated. Although phonologically Tomoip seems in some ways more like the non-Austronesian languages of New Britain in that it has numerous monosyllabic forms and consonant clusters (cf. Chowning (1976: 378; Barlow & Killian 2023b: 83–86), the verbal morphology does not appear to me to be especially non-Austronesian. The examples that Capell (1971: 267) gives of Tomoip verbs are rather misleading (129).

(129) Capell’s (1971: 267) presentation of Tomoip verbal paradigms

<tarɔŋomtɔŋ> ‘I know’	<nāmaleŋ>	‘I think’	<tīni>	‘eat!’
<kerɔŋomtɔŋ> ‘you know’	<mānalɔŋ>	‘you think’	<tīni>	‘I eat’
<ɔŋomake> ‘he knows’	<māna>	‘he thinks’	<īni>	‘he eats’

The original forms given by Grace (1955a: 84) are actually as presented in (130).

(130) Excerpts from Grace’s (1955a: 84) Tomoip wordlist

<tarɔŋomtɔ> ~ <tarɔŋomtɔŋ>	‘I know’
<kerɔŋomtɔ> ~ <kerɔŋomtɔm>	‘you know’
<ɔŋomake>	‘he knows’
<ma·naleŋ>	‘I think’
<ma·nalan>	‘you think’
<ma·na> ~ <mana>	‘he thinks’
<ti·ni> ~ <tini>	‘I eat’
<i·ni>	‘he eats’

The concepts of ‘knowing’ and ‘thinking’ are perhaps suboptimal examples for showing the verbal system of a language. Indeed, in the case of Tomoip, I suspect that ‘knowing’ is expressed with a phrase containing the noun *ŋom* ‘eye’. Thus, a form like <tarɔŋomtɔŋ> ‘I know’ can perhaps be analyzed as in (131).

- (131) *ta=ro=ηom to-η*  
 REAL=DU=eye POSS-1SG  
 ‘I know’ (literally ‘my two eyes’?)

Similarly, what Grace (1955a: 84) records as verbs of ‘thinking’ look like noun phrases with possessive marking. I recorded the nominal form *mana* ‘knowledge, wisdom; custom, tradition’, whereas I recorded the verbal form *βanon* ‘to think’, as in (132).

- (132) *jo ta=βanon aηa i so=m=pu*  
 1SG REAL=think that 3SG 3SG.IRR=FUT?=go  
 ‘I think that he/she will go.’

Ross (1980: A3) also reports a nominal usage of the word *mana*, with a slightly different, perhaps metaphorical meaning: <*mana lon*> ‘his heart’.<sup>21</sup>

Finally, the forms for ‘to eat’ given by Grace (1955a: 84) are not terribly unusual for an Austronesian language, only that here—as elsewhere—there seems to have been some confusion in the person/number referent being elicited.

#### 4. Adjectives

As mentioned in §3.5, it is not clear to what extent adjectives comprise a distinct lexical class in Tomoip. That said, property-denoting words always follow head nouns when they occur within noun phrases. One morphological feature of these property-denoting words is that they are capable of taking the prefixes *me-* or *te-*. No semantic or syntactic differences have been observed regarding the presence versus absence of these prefixes. For example, there is no clear difference between attributive or predicative uses of adjectives—in either case it seems possible either to include or to exclude the prefix. It is also not known what, if any, differences there are between the two prefixes; it can only be said that *me-* seems more common than *te-*. There are, however, some forms attested as occurring with either of the two prefixes. Although their current functions are unclear, the prefixes *me-* and *te-* probably derive from the POC verbal prefixes \**ma-* and \**ta-*, often considered to be stative prefixes (cf. Evans 2003). Examples of adjectives known to occur with the prefix *me-* are given in (133).

In some cases it is possible that *me-* is serving an adjectivizing (or deverbalizing or denominalizing) function, but this is not clear. The forms without *me-* generally also represent property-denoting words. However, the form *meper* ‘empty’ perhaps requires the initial *me-*. Otherwise, *per* only means ‘stone’ as far as I know. The semantic connection here, if any exists,

<sup>21</sup> It is tempting to connect the Tomoip word *mana* ‘knowledge, wisdom; custom, tradition; heart (metaphorical) (?)’ with a possible POC form \**mana* ‘power in natural phenomena’ (cf. Blust, Trussel & Smith 2023), whose reflexes in the eastern Oceanic languages are well known, but whose etymology has been difficult to discern (cf. Codrington 1891: 118–120; Capell 1938–1939; Blust 2007b; Blevins 2008; Osmond 2023). If in fact the Tomoip word is related to the forms found among eastern Oceanic languages, then it may prove the best example of a western Oceanic language to reflect a meaning similar to ‘power’. I also note here that the neighboring non-Austronesian language Kol has the word [ma:na] ‘good; life, life force; heart (metaphorical)’ (author’s fieldnotes). Perhaps Kol has borrowed this word from Tomoip. Or perhaps Tomoip—or even Proto-Oceanic—has borrowed this word from Kol or some other non-Austronesian language of New Britain.

is not clear (*meperper* ‘hard’, on the other hand, likely does derive from *per* ‘stone’). Likewise, *memar* ‘raw, uncooked’ perhaps requires the initial *me-* (otherwise, the form *mar* means ‘to grow’).

(133) Adjectives occurring with the prefix *me-*

<i>mebek</i>	‘bitter, salty’	<i>memia</i>	‘red’
<i>mebir</i>	‘white’	<i>memian</i>	‘ripe’
<i>mebirbir</i>	‘all’	<i>memio</i>	‘weak, sad’
<i>meblik</i>	‘bad’	<i>memke</i>	‘sweet’
<i>medidirap</i>	‘rough (not smooth)’	<i>memuriu</i>	‘soft, rotten’
<i>megeŋ</i>	‘long, far’	<i>meperper</i>	‘hard, mature’
<i>megolgol</i>	‘hard (not soft)’	<i>mepka</i>	‘good’
<i>mein</i>	‘sharp’	<i>mepur</i>	‘big’
<i>meindum</i>	‘dull, blunt (not sharp)’	<i>mekakae</i>	‘small’
<i>merarek</i>	‘light (not heavy)’	<i>meriŋ</i>	‘sour’
<i>mekeke</i>	‘mature, dry’	<i>merle</i>	‘smooth’
<i>mekomkom</i>	‘short’	<i>mesir</i>	‘straight’
<i>memamsie</i>	‘heavy’	<i>metum</i>	‘thick’
<i>memarmar</i>	‘tasty’	<i>meu</i>	‘smelly, stinky’

The list of adjectives attested with the prefix *te-* is much shorter (134). All of these words (aside from *tekie* ‘dry’ and *teledel* ‘wild’) are alternatively attested as occurring with the prefix *me-*.

(134) Adjectives occurring with the prefix *te-*

<i>tebirbir</i>	‘all’
<i>tekie</i>	‘dry’
<i>teledel</i>	‘wild’
<i>temian</i>	‘ripe’
<i>tenim</i>	‘round’
<i>tepka</i>	‘good’
<i>terle</i>	‘smooth’

The possible adjectivizing function of *te-* seems the clearest with the form *teledel* ‘wild’, which is clearly derived from the noun *ledel* ‘forest, woods, jungle’.

In an example sentence, Ross (1988: 292) provides the form <me-kakae> ‘small’, glossing the prefix *me-* as “L” (i.e., “ligature”), presumably since the morpheme has almost no semantic content. The prefixes *me-* and *te-* seem, simply, to be optional markers of adjectives.

Ross (n.d.: 10) notes that adnominal demonstratives appear to be mandatory when adjectives occur in noun phrases (order: N–DEM–ADJ), although the demonstratives do not always occur in citation forms.

## 5. Numerals

As mentioned in §2.3, Tomoip does not employ numeral classifiers, at least not in a prototypical way. Although the class term prefixes found in some nouns are reminiscent of classifiers, they serve no clear function in designating quantities. That said, the numeral ‘one’ seems to serve a sort

of classifying function in that it takes different forms depending on the referent that is being enumerated (135).

(135) The numeral ‘one’

<i>denan</i>	‘one’ (for counting in general)
<i>demuor</i>	‘one’ (for counting people)
<i>debuŋ</i>	‘one’ (for counting fruits or other small, round things)
<i>depuk</i>	‘one’ (only attested in the distributive expression <i>depuk depuk</i> )
<i>detu</i>	‘one’ (as found in <i>horomdetu</i> ‘three’)

The general word for ‘one’ is *denan*, which can be used to count anything (or anyone). The ending [nan] likely derives from a demonstrative (cf. the medial demonstrative forms *na* ‘MED’ and *nenā* ‘MED’, §2.6). However, a more specific word for ‘one’ may be used when counting people, namely *demuor* ‘one’. Thus both *nolo denan* ‘one woman’ and *nolo demuor* ‘one woman’ are acceptable phrases. The form [muor] is otherwise unattested in the language; it may derive, however, from the POC classifier \*m<sup>w</sup>ane ‘animate being’ (cf. Lynch, Ross & Crowley 2002: 74), itself derived from POC \*m<sup>w</sup>aqane ‘man, male’ (Ross & Osmond 2016: 51).<sup>22</sup> Similarly, when counting fruit (or other small, round objects), the numeral *debuŋ* ‘one’ can be used, as in *bulme debuŋ* ‘one coconut’. In addition to being used adnominally, these numerals can also occur pronominally, as in (136).

(136) *i=kae*                      *de-buŋ*  
 IMP.SG=choose              one-CLASS  
 ‘Choose one (e.g., fruit)!’

In addition to the forms *denan*, *demuor*, and *debuŋ*, there is also the form *depuk* (derived from *puk* ‘piece’), which is only attested in the distributive expression *depuk depuk* ‘one-by-one, one each’ (cf. Tok Pisin *wanwan*). Finally, the form *detu* ‘another’, as found in the complex numeral *horomdetu* (< *horo* ‘two’ + *mo* ‘and’ + *detu* ‘another’), also contains this initial element [de].

The behavior of the numeral ‘one’ thus resembles numeral classification. However, no other numeral in the language seems to exhibit any classifying morphology. That said, the numeral *horo* ‘two’ may contain a fossilized numeral classifier *ho-*, perhaps derived from POC \*pua ‘default inanimate; round object’ (Ross 2023: 483–485), as suggested in §2.1.

Tomoip does not even reflect a POC decimal (or even quinary) counting system (cf. Barlow 2023: 296). The numerals ‘one’ through ‘five’, as I recorded them, are presented in Table 7.

**Table 7. Tomoip numerals**

Gloss	Numeral	Comment
1 ‘one’	<i>denan</i> ~ <i>debuŋ</i> ~ <i>demuor</i> ~ <i>depuk</i> ~ <i>detu</i>	< <i>de-</i> ‘one’?
2 ‘two’	<i>horo</i>	cf. <i>ho-</i> ‘PL’ (?); <i>ro</i> = ‘DU’
3 ‘three’	<i>horomdetu</i>	‘two and another’
4 ‘four’	<i>horo mo horo</i>	‘two and two’
5 ‘five’	<i>liem</i>	loanword?

<sup>22</sup> Another trace of this etymon in Tomoip might be found in the question word *amo* ~ *amor* ‘who?’, which possibly also contains the pronominal personal marker *a*.



As is clear from Table 7, the numerals ‘three’ and ‘four’ are constructed additively based on *horo* ‘two’. These “binary”-like formulations are common among Papuan (i.e., non-Austronesian) languages (Barlow 2023). In the nearby non-Austronesian language Sulka, the numerals ‘three’ and ‘four’ seem to be derived from ‘2+1’ and ‘2+2’, respectively (Schneider 1962: 163–165; Reesink 2005: 184). Similarly, in nearby Kol, <tetepe kusua> ‘three’ appears to derive from <tetepe> ‘two’ plus <pusua> ‘one’, although <keəsoε> ‘four’ is seemingly unrelated (cf. Grace 1955b: 119). The Tomoip forms are thus suggestive of a loss of conventionalized counting methods, likely due to cultural influence from neighboring non-Austronesian groups.

Indeed, there does not appear to be any conventionalized means of counting beyond the numeral ‘four’ in Tomoip. Even the form for ‘five’ occurs variously in different wordlists and may not be standardized. It seems that the form *liem*, given in Table 7 as ‘five’ may alternatively be used to mean ‘ten’.<sup>23</sup> My consultant reported that people do not commonly count beyond ‘four’, and his own ad hoc translations for ‘six’ were rather varied: *horo mo denan* ‘six’ (literally ‘two and one [doubled]?’), *denan βa denan* ‘six’ (literally ‘one [five] with one?’), and *liem denan* ‘six’ (literally ‘five [plus] one’). For higher numerals, he produced the following: *liem horo* ‘seven’ (literally ‘five [plus] two’), *liem horomdetu* ‘eight’ (literally ‘five [plus] three’), and *liem horo mo horo* ‘nine’ (literally ‘five [plus] four’). For ‘ten’, he produced the following: *liem denan* ‘ten’ (literally ‘ten [times] one?’), *roliem* ‘ten’ (literally ‘DU=five’), and *roliem horo* ‘ten’ (literally ‘DU=five [times] two’). For ‘twenty’, he produced *roliem horo mo horo* ‘twenty’ (literally ‘DU=five [times] four’) and *eliem horo mo horo* ‘twenty’ (literally ‘PL=five [times] four’). It bears emphasizing that these alternative formulations were all produced by the same speakers (on different occasions).

A comparison of other attempts to document Tomoip numerals seems to confirm this lack of conventionalization, as the reports vary considerably (Table 8).

**Table 8. Tomoip numerals according to other sources**

	Parkinson (1907: 780)	Grace (1955a: 89)	Milligan & Milligan (1995)
1	dēnan	denan	dēnan
2	ro huru	hōru	horo
3	horum detu	hōrumdetu	horomdetu
4	horumo horum	hōrumohōru	horo mō horo
5	ko liem	koliem	liem
6	—	denanke·n	liem denana mō denana
7	—	hōrukēn	liem denana mō horo
8	—	hōrumdetukēn	liem denana mō horomdetu
9	—	hōruhōrukē·n	liem denana mō horo mō horo
10	liem	timdel	roliem kēre
11	—	timdel denan	—
20	tamdil	r·omr·o tamdel	tamdil

Curiously, Parkinson (1907: 780) records <ko liem> ‘fünf’ [‘five’] and <liem> ‘zehn’ [‘ten’], suggesting that the word for ‘five’ is derived from the word for ‘ten’. However, I suspect that the first part of the compound used in ‘five’ may be *ko* ‘fist’ (i.e., referring to the five fingers of a fist).

<sup>23</sup> I suspect that *liem* ‘five’ may have been borrowed from another Austronesian language rather than being a retention of POC \*lima ‘five’. Müller (1907: 88), for example, gives the form <tane līm> ‘5’ for the nearby language Mengen.

The recurrence of <liem> in the form Parkinson recorded for ‘ten’ might just represent a general imprecision for quantities greater than four or five (Parkinson’s wordlist is left blank for the numerals ‘six’ through ‘nine’ in Tomoip, whereas he includes forms for these concepts in his parallel Sulka and Mengen lists). Grace (1955a: 87) similarly records <ko liem> ‘5’, but has <timdel> ‘10’, this latter form rather resembling Parkinson’s (1907: 780) <tamdil> ‘zwanzig’ [‘twenty’]. These two similar forms for ‘ten’/‘twenty’ perhaps derive from an expression meaning ‘finished one’ (cf. /tim/ ‘to finish’; also, /del/ ‘part’ and the [de] element in the different forms for ‘one’); this expression perhaps suggests a digit-based vigesimal tally used by Parkinson’s consultant, which was later reanalyzed for decimal counting used by Grace’s consultant.<sup>24</sup>

Grace’s (1955a: 89) attempts at recording higher numerals seem to have resulted in even more confusion: <r·omr·om detu> ‘30’ (i.e., ‘DU=and=DU=and another?’), <r·omr·o r·omr·o> ‘40’ (i.e., ‘DU=and=DU DU=and=DU?’), <liem> ‘50’ (i.e., ‘five?’), <liem asi> ‘60’ (i.e., ‘five some?’), <r·oliem kere> ‘70’ (i.e., ‘DU=five all?’), <r·oliem kere moden·an> ‘80’ (i.e., ‘DU=five all and-one?’), <r·oliem kere məhoro> ‘90’ (i.e., ‘DU=five all and-two’), and <r·omr·o tamdel> ‘100’ (i.e., ‘DU=and=DU 10’ ~ ‘DU=and=DU 20’?; the same form was recorded as ‘20’).

Lindrud (1980: 178) gives the forms <de'muř> ‘one’ and <řomřo> ‘two’, the former probably referring to the numeral used for counting people and the latter an apparent reduplication of the dual marker *ro=* (perhaps also containing the coordinator *mo* ‘and’). Reesink (2005: 162) gives <horo mo dinan> ‘three’, which suggests more analyzability than *horomdetu* ‘three’ (the latter form’s reduction of *mo* ‘and’ to [m] suggests greater lexicalization). Finally, Ross (1980: B5) gives <liem denan mo denan> ‘six’ (i.e., ‘five [times] one and one’), <liem denan mo horo mo horo> ‘nine’ (i.e., ‘five [times] one and four’), and <roliem kere> ‘ten’ (i.e., ‘DU=five all’).

Indeed, Tomoip seems to lack a conventionalized numeral system. At different points in their history, Tomoip speakers may have used various digit-based tallying methods, perhaps incorporating quinary, decimal, and/or vigesimal elements.

Noun phrases that include numerals may also include number-marking proclitics (i.e., *ne=* ‘SG’ with *denan* ‘one’, *ro=* ‘du’ with *horo* ‘two’, or *e=* ‘PL’ with *horomdetu* ‘three’ or higher), as illustrated by (137) through (140).

(137) *ne=pap*            *denan*  
 SG=dog            one  
 ‘one dog’

(138) *nolo*            *demuor*            *me-pka*  
 woman            one            ADJ-good  
 ‘one good woman’

(139) *ro=pap*            *horo*    *me-pur*  
 DU=dog            two    ADJ-big  
 ‘two big dogs’

(140) *e=pap*            *horomdetu*  
 PL=dog            ‘three’  
 ‘three dogs’

<sup>24</sup> Milligan & Milligan (1995) explain <roliem kere> ‘10’ as “(lit: ‘two hands’)” and <tamdil> ‘20’ as “(lit: ‘person’)”; however, as far as I can tell, these expressions do not have these literal meanings.

When used adnominally, numerals generally follow the noun they modify, although it seems that ‘three’ and ‘four’, which are rather “heavy” formulations, may alternatively precede the noun. This variability in ordering is illustrated by (141) and (142).

(141) *jo ta=in e=mao horo mo horo*  
 1SG REAL=eat PL=banana two and two  
 ‘I ate four bananas.’

(142) *jo βa horomdetu e=bu-lme*  
 1SG with three PL=CLASS-coconut  
 ‘I have three coconuts.’

## 6. Quantifiers

The universal quantifier *birbir* ‘all’ seems to derive from reduplication of the color term *bir* ‘white’. Grace (1955a: 87), on the other hand, gives the form <kere> ‘all’, which he also records as meaning ‘black’ (Grace 1955a: 86). The sense of ‘all’ is probably also present in the form Ross (1980: B5) reports for ‘six’, <roliem kere> ‘DU=five all’, likely referring to ‘all’ the fingers used in a digit-based tallying system (§5). I suspect that the word *kere* ‘black; all’ is a loan from Kol (cf. Lindrud 1980: 180: <kɛ:rɛ> ‘black’). I have not recorded this word in Tomoip, rather only *toy* ‘black’ and *totoŋ* ‘black; dirty’ (cf. Grace 1955a: 84: <totoŋ> ‘dirty’).

Like numerals, the quantifier *birbir* ‘all’ generally follows the noun. However, it may, alternatively, precede it. Examples of *birbir* ‘all’ are given in (143) through (146).

(143) *e=holo birbir*  
 PL=woman.PL all  
 ‘all the women’

(144) *e=bale birbir me-pur*  
 PL=house all ADJ-big  
 ‘all big houses’

(145) *jo ta=in e=mao birbir*  
 1SG REAL=eat PL=banana all  
 ‘I ate all the bananas.’ (adapted from Ross n.d.: 9)

(146) *jo ta=in birbir e=mao*  
 1SG REAL=eat all PL=banana  
 ‘I ate all the bananas.’

The existential quantifier *hasi ~ asi ~ si* ‘some’ can follow either singular nouns (147) or non-singular nouns (148).

(147) *nolo si*  
 woman some  
 ‘a/some woman’

(148) *holo si*  
 woman.PL some  
 ‘some women’ (adapted from Ross n.d.: 10a)

The monosyllabic form *si* appears to follow words that end in vowels (149), whereas the disyllabic form *asi* (or *hasi*) appears to follow words that end in consonants, as in (150) and (151) (cf. demonstratives, §2.6).

(149) *jo ta=in e=mao si*  
 1SG REAL=eat PL=banana some  
 ‘I ate some bananas.’

(150) *ta=so e=pap asi*  
 REAL=see PL=dog some  
 ‘(I) see some dogs.’ (also attested with *hasi*)

(151) *jo ka ta=in hasi*  
 1SG NEG REAL=eat some  
 ‘I did not eat anything.’

The word *meutu* ‘many’, which seems—at least historically—to contain the prefix *me-* ‘ADJ’, is perhaps structurally no different from (other) adjectives (§4).

## 7. Pronouns

Most Tomoip pronominal forms exhibit longer and shorter versions, the longer forms generally used as subjects and the shorter forms generally used for other grammatical relations. As mentioned in §3.3, the subject and non-subject forms are colexified for 1SG, 3DU, and 3PL. Although the longer “subject” forms have not been observed in non-subject roles, it seems permissible for the shorter forms to function as subjects: the forms *ke* ‘2SG’, *ka* ‘1DU.EXCL’, and *ta* ‘1DU.INCL’ have all been observed in subject position as alternatives to their longer counterparts. It is not known what if any semantic effect this has or whether the other “non-subject” forms may be used similarly in subject position. There is no free 3SG object pronoun; rather, one of several transitive markers is used (see §3.3). Table 9 presents the Tomoip pronominal forms.

**Table 9. Tomoip pronouns**

	Subject	Non-subject	Possessive suffixes
<b>1SG</b>	<i>jo</i>	<i>jo</i>	-jo, -ŋ
<b>2SG</b>	<i>ike</i>	<i>ke</i>	-ke, -m
<b>3SG</b>	<i>i</i>	[transitive suffix]*	-n, -k
<b>1DU.EXCL</b>	<i>ika</i>	<i>ka</i>	-ka
<b>1DU.INCL</b>	<i>kuta</i>	<i>ta</i>	-ta
<b>2DU</b>	<i>ikuma</i>	<i>kuma</i>	-kuma
<b>3DU</b>	<i>toro</i>	<i>toro</i>	-doro
<b>1PL.EXCL</b>	<i>ikem</i>	<i>kem</i>	-kem
<b>1PL.INCL</b>	<i>kusier</i>	<i>sier</i>	-sier
<b>2PL</b>	<i>ikom</i>	<i>kom</i>	-kom
<b>3PL</b>	<i>ti</i>	<i>ti</i>	-di

\* *-ie, -rie, -sie, -ni, -bi* (?), *-n* (?) (see §3.3)

Reesink (2005: 169) gives the free 3SG form as <ti>, making it homophonous with the 3PL form. I suspect, however, that what he records as the 3SG subject pronoun is actually the 3SG.REAL subject-marker proclitic. Parkinson (1907: 779) records the form <bita> ‘er, sie, es’ [‘he, she, it’], and Grace (1955a: 87; 1955c: 79) records the forms <br·ani> ‘he’ and <mbita> ‘he’. I wonder whether the form <bita> can be analyzed as /bi-ta/ ‘friend-1DU.INCL.POSS’—that is, a reference to a third party made by two interlocutors; if this is so, then the form <mbita> could be analyzed as /m=bi-ta/ ‘SG=friend-1DU.INCL.POSS’—that is, the form /bi-ta/ with a singular-marking proclitic. I suspect that <br·ani> refers to the same form that I recorded as /bara=ni/ ‘other/person=PROX’. Based on these wordlists, as well as my own elicitation sessions, it seems that *i* ‘3SG’, although commonly used as a subject pronoun, does not occur as a disjunctive pronoun.

## 8. Function words and particles

Finally, in this section I discuss a number of functional morphemes, some of which remain opaque to me. They all appear to be phonologically free morphemes. Since I have only very limited data concerning these “particles”, the descriptions in this section should be considered tentative.

### 8.1 Negation

Negative polarity in realis-mood declarative sentences is indicated by the particle *ka* ‘NEG’, which occurs after the subject and before the verb, as in (152) and (153).

(152) *ne=pap ka t=in buŋ-mao*  
 SG=dog NEG 3SG.REAL=eat CLASS-banana  
 ‘The dog did not eat a banana.’

(153) *amma ka pu*  
 father NEG go  
 ‘Father did not go.’

Based on data from Ross (n.d.: 18), it seems that *ka* ‘NEG’ is also used for non-verbal predication, as illustrated by (154).

(154) *ne=pap ka nenako*  
 SG=dog NEG that  
 ‘That is not a dog.’ (adapted from Ross n.d.: 18)

Ross (n.d.: 3, 17) also reports that a different negation marker is used for irrealis-mood constructions, such as future-tense declarative sentences and imperatives (i.e., prohibitions); it takes the form *soma* ‘NEG.IRR’, possibly derived from the irrealis marker *sa=* ‘IRR’ and some otherwise unknown negative element [*V*]*ma*. This form occurs in sentences (155) and (156).

(155) *jo soma na=βuri mo lo nuaŋ ani-ŋ morik*  
 1SG NEG.IRR 1SG.FUT?=board and PREP canoe POSS.GEN-1SG tomorrow  
 ‘I will not board my canoe tomorrow.’ (adapted from Ross n.d.: 17)

- (156) *soma*            *i=βuri*            *mo*    *lo*    *nuay*    *an-ke*  
 NEG.IRR            IMP.SG=board and    PREP    canoe    POSS.GEN-2SG  
 ‘Don’t board your canoe!’ (adapted from Ross n.d.: 17a)<sup>25</sup>

## 8.2 Repeated action

Continuous or iterative action can be signaled by verbal reduplication (§3.5). To signal a single repetition of an action, the form *mi* ‘again’ can be used. I suspect that this word derives from the verb <mil> ‘return’ (Grace 1955a: 89). It seems capable of hosting subject-marker proclitics (157).

- (157) *morik*            *herek*            *ti*    *sa=mi*            *in*    *e=mao*  
 tomorrow    child.PL            3PL    IRR=again    eat    PL=banana  
 ‘Tomorrow the children will eat bananas again.’

An example from Ross (n.d.: 4) suggests that variable word order is possible (158).

- (158) *holo*            *mi*    *ta=kuam*            *min*  
 woman.PL    again    IRR=fear            too?  
 ‘The women are frightened again.’ (adapted from Ross n.d.: 4)

Example (158) also contains the element *min*, which Ross (n.d.: 1) translates as ‘too (= again)’. I suspect it is related to *mi* ‘again’. I only have one example in my data (159).

- (159) *ke*    *so-ni*    *min*  
 2SG    see-TR    too?  
 ‘Do you see him?’

Perhaps clause-final *min* ‘too’ (?) has the force of a confirmatory particle, as in some uses of Tok Pisin *tu* ‘too’.

## 8.3 Completed action

There seems to be a postverbal marker *ma* ‘PFV’, which I am treating as a perfective marker. It may be seen in sentences (160) and (161).

- (160) *amma* *pu*    *ma*  
 father    go    PFV  
 ‘Father already went.’
- (161) (*jo*)    *ta=lap-rie*    *ma*  
 (1SG)    real=hit-TR    PFV  
 ‘I have hit him.’

<sup>25</sup> Ross (n.d.: 17a) transcribes the possessive form as <a-ŋ-ke>, indicating nasal assimilation, a phenomenon that generally does not occur in my data but could exist in some dialects or could be a sporadic phonological change.

Ross (n.d.: 3) identifies *ma* as a completive aspect marker, as in examples (162) and (163).

(162) *a Kanuŋ mukone ike ti=n-tanun ma*  
 PERS [name] say 2SG 2SG.REAL=go-hither PFV  
 ‘Kanung said that you had come.’ (adapted from Ross n.d.: 17b)

(163) *a Maikel ti=rie ma*  
 PERS [name] 3SG.REAL-dance PFV  
 ‘Michael has already danced.’ (adapted from Ross n.d.: 17b)

#### 8.4 Reflexive and reciprocal action

Reflexive (164) or reciprocal (165) actions are indicated by the marker *buop* ‘REFL’ (Ross n.d.: 4), which follows the pronoun to which it refers.

(164) *jo ta=nebua jo buop*  
 1SG REAL=cut 1SG REFL  
 ‘I cut myself.’ (adapted from Ross n.d.: 4)

(165) *robuj anna ka lap toro buop*  
 man.DU MED NEG hit 3DU REFL  
 ‘The two men did not hit each other.’ (adapted from Ross n.d.: 17b)

Reesink (2005: 166–167) also notes that Tomoip uses the same form *buop* ‘REFL’ for both reflexive and reciprocal meanings; in his examples—(166) and (167)—this form follows the subject pronoun rather than the object pronoun.

(166) *jo buop ta=nebua jo*  
 1SG REFL REAL=cut 1SG  
 ‘I cut myself.’ (adapted from Reesink 2005: 166)

(167) *ti buop ta=kon ti*  
 3PL REFL REAL=stab 3PL  
 ‘They stab one another.’ (adapted from Reesink 2005: 167)

The same marker *buop* can also be used for emphasis, as in *anini buop* ‘now’ (literally ‘today itself’), which is comparable to the Tok Pisin use of the reflexive/reciprocal marker *yet* (as in *nau yet* ‘now’, referring to this very moment).

#### 8.5 Coordination

Coordination of both phrases and clauses is accomplished with the word *mo* ‘and’ (cf. Ross n.d.: 3; Reesink 2005: 162). Examples of coordination are given in (168) through (171).

- (168) *Lapal*        *so*        *m=buo*        *mo*        *ne=pap*  
 [name]        see        SG=pig        and        SG=dog  
 ‘Lapal sees a pig and a dog.’
- (169) *nolo*        *si*        *pu*        *mo*        *nasi*        *goa*  
 woman        some        go        and        another        stay  
 ‘One woman went and another stayed.’
- (170) *a*        *Kanuŋ*        *dun*        *mo*        *t=in*        *e=mao*  
 PERS [name]        sit        and        3SG.REAL=eat PL=banana  
 ‘Kanung sat and ate bananas.’ (adapted from Ross n.d.: 20)
- (171) *a*        *Kanuŋ*        *ti-n*        *muop* *mo*        *jo*        *ta=in*        *buŋ-hian*  
 PERS [name]        3SG.REAL=eat taro        and        1SG        REAL=eat        CLASS-yam  
 ‘Kanung ate taro and I ate yam.’ (adapted from Ross n.d.: 20)

Reesink (2005: 162, fn.11) writes that, based on limited data, *mo* ‘and’ can be used for clausal coordination with the sense ‘and (then)’. Specifically for sequential coordination, Ross (n.d.: 3, 20) notes the form *per* ‘and then’, as in (172) and (173).

- (172) *a*        *Kanuŋ*        *t=in*        *buŋ-mao*        *namunia*        *per*        *ti=pu*  
 PERS [name]        3SG.REAL=eat CLASS-banana afterwards        then        3SG.REAL=go  
*ta*        *lo*        *bale*        *no-n*  
 to        PREP        house        POSS.GEN-3SG  
 ‘Kanung ate a banana and then went to his house.’ (adapted from Ross n.d.: 20)
- (173) *a*        *Kanuŋ*        *t=in*        *buŋ-mao*        *per*        *ike*        *βar-ie*  
 pers [name]        3SG.REAL=eat CLASS-banana then        2SG        call-TR  
 ‘Kanung ate a banana and then you called him.’ (adapted from Ross n.d.: 20)

## 8.6 Purpose constructions

It seems that the same form *mo* is used to indicate purpose—that is, it has the meaning ‘for (the purpose of)’ or ‘(in order) to’, as in (174) and (175).

- (174) *buŋ-home*        *ago-ŋ*        *mo*        *in-ie*  
 CLASS-sweet.potato        POSS.ED-1SG        and        eat-TR  
 ‘my sweet potato to eat’
- (175) *e=he*        *mo*        *mom*  
 PL=stick        and        burn  
 ‘firewood’ (literally ‘sticks to burn’)

Ross (n.d.: 3) records a purposive preposition *mone*. I suspect, however, that this is the form *mo* followed by the nominalizing singular marker *ne=* (§2.1), which, in this analysis, would then belong to the following verb (176).



- (176) *nuje mo ne=unun*  
 water and SG=drink  
 ‘water for drinking’ (adapted from Ross n.d.: 16a)

### 8.7 The modal particle *ga* (?)

Finally, there is a form *ga*, which can intervene between subjects and verbs. It does not seem to cooccur with the realis or irrealis subject markers and may thus occupy the same morphological slot as these; at the same time, however, it does not appear on phonetic grounds to be a proclitic but rather a free morpheme. It may be pronounced with an initial fricative [ɣa] or even approximant [ɥa] (cf. Barlow & Killian 2023b: 65, fn.7). This form, glossed vaguely as ‘MOD’ (for “modal”), can be seen in sentences (177) and (178).

- (177) *e=bu-lme ga tur*  
 PL=CLASS-coconut MOD? fall  
 ‘Some coconuts fell.’

- (178) *Lapal ga kombua rakabuk*  
 [name] MOD? cut meat  
 ‘Lapal cut/cuts meat.’

There are scant clues of what this form *ga* might mean. In some languages of western New Britain there is a marker *ga*, variously described as (i) a modal marker with several meanings (as in Bola; cf. van den Berg & Wiebe 2019: 133–138), (ii) an imminent irrealis marker (as in Nakanai; cf. Johnston 1980: 63–65), or (iii) a future marker (as in Bariai; cf. Gallagher & Baehr 2005: 110–111). I cannot say whether the presence of a possible modal marker *ga* in Tomoip indicates shared inheritance, borrowing, or chance resemblance.

## 9. Conclusion

I have presented a basic overview of the morphology of Tomoip, building on earlier work by Ross (n.d.; 1988) and Reesink (2005) and complementing the phonological description provided in Barlow & Killian (2023b). Although a number of questions concerning Tomoip morphology still remain, I hope that this brief introduction will provide a basis from which further research may proceed.

## Abbreviations and symbols

1	1 <sup>st</sup> person	HAB	habitual	POC	Proto-Oceanic
2	2 <sup>nd</sup> person	IMP	imperative	POSS	possessive
3	3 <sup>rd</sup> person	INCL	inclusive	PREP	preposition
ADJ	adjective	IRR	irrealis	REAL	realis
AN	Austronesian	MOD	modal particle	RED	reduplication
C	consonant	N	nasal	REFL	reflexive
CAUS	causative	N3	non-3 <sup>rd</sup> person	S	subject
CLASS	class term	NAN	non-Austronesian	SG	singular
DEM	demonstrative	NEG	negative	sp.	species
DRINK	drinkable classifier	NSG	non-singular	TR	transitive
DU	dual	O	object	V	verb
ED	edible classifier	PAN	Proto-Austronesian	V	vowel
EXCL	exclusive	PERS	personal marker	*	reconstructed
FUT	future	PFV	perfective	†	unattested
GEN	general classifier	PL	plural		

## References

- Barlow, Russell. 2023. Papuan-Austronesian contact and the spread of numeral systems in Melanesia. *Diachronica* 40(3). 287–340. <https://doi.org/10.1075/dia.22005.bar>.
- Barlow, Russell & Killian, Don. 2023a. Tomoip wordlist: Based on elicitation sessions with Simon Mangil from Milim village, recorded in Kokopo, East New Britain, October to November 2022. v1.0.2. <https://doi.org/10.5281/zenodo.8437515>.
- Barlow, Russell & Killian, Don. 2023b. Tomoip phonetics and phonology. *Te Reo* 66(1). 60–96. <https://hdl.handle.net/21.11116/0000-000D-F9B0-3>.
- Blevins, Juliette. 2008. Some comparative notes on Proto-Oceanic \*mana: Inside and outside the Austronesian family. *Oceanic Linguistics* 47(2). 253–274. <https://doi.org/10.1353/ol.0.0022>.
- Blust, Robert. 2007a. Disyllabic attractors and anti-antigemination in Austronesian sound change. *Phonology* 24(1). 1–36. <https://doi.org/10.1017/s0952675707001108>.
- Blust, Robert. 2007b. Proto-Oceanic \*mana revisited. *Oceanic Linguistics* 46(2). 404–423. <https://doi.org/10.1353/ol.2008.0005>.
- Blust, Robert & Trussel, Stephen & Smith, Alexander D. 2023. CLDF dataset derived from Blust's *Austronesian comparative dictionary* (v1.2). <https://acd.clld.org>. <https://doi.org/10.5281/zenodo.7741197>.
- Capell, Arthur. 1938–1939. The word ‘mana’: A linguistic study. *Oceania* 9(1). 89–96. <https://doi.org/10.1002/j.1834-4461.1938.tb00218.x>.
- Capell, Arthur. 1971. The Austronesian languages of Australian New Guinea. In Thomas A. Sebeok (ed.), *Current trends in linguistics, volume 8: Linguistics in Oceania, part one: Indigenous languages*, 240–340. The Hague: Mouton. <https://doi.org/10.1515/9783111418827-010>.

- Chan, Eugene & Bibiko, Hans-Jörg & Rzymiski, Christoph & Greenhill, Simon J. & Forkel, Robert. 2019. *channumerals* (v1.0). <https://doi.org/10.5281/zenodo.3475912>. Derived from Eugene Chan's "Numeral systems of the world's languages" (accessed 30 September 2019). Currently available as: <https://lingweb.eva.mpg.de/channumerals>.
- Chowning, Ann. 1976. Austronesian languages: New Britain. In Stephen A. Wurm (ed.), *New Guinea area languages and language study, volume 2: Austronesian languages* (Pacific Linguistics: Series C-39), 365-386. Canberra: Research School of Pacific Studies, the Australian National University. <http://hdl.handle.net/1885/145151>.
- Codrington, Robert H. 1891, *The Melanesians: Studies in their anthropology and folk-lore*. Oxford: Clarendon Press.
- Crowley, Terry. 1985. Common noun phrase marking in Proto-Oceanic. *Oceanic Linguistics* 24(1/2). 135-193. <https://doi.org/10.2307/3623065>.
- Evans, Bethwyn. 2003. *A study of valency-changing devices in Proto Oceanic* (Pacific Linguistics 539). Canberra: Research School of Pacific and Asian Studies, the Australian National University. <http://hdl.handle.net/1885/72242>.
- Evans, Bethwyn. 2008. Parts of plants. In Malcolm Ross, Andrew Pawley & Meredith Osmond (eds.), *The lexicon of Proto Oceanic: The culture and environment of ancestral Oceanic society, volume 3: Plants* (Pacific Linguistics 599), 85-127. Canberra Research School of Pacific Studies, the Australian National University. <http://hdl.handle.net/1885/106908>.
- Gallagher, Steve & Baehr, Peirce. 2005. *Bariai grammar sketch* (Data Papers on Papua New Guinea Languages 49). Ukarumpa: Summer Institute of Linguistics. <https://www.sil.org/resources/archives/23630>.
- Grace, George W. 1955a. The George Grace linguistic research and slides of Melanesia collection, 1955-1956: Online documents: 34. Columbia University Notebook, pt. 3. Unpublished manuscript. <https://digital.library.manoa.hawaii.edu/grace/docs>.
- Grace, George W. 1955b. The George Grace linguistic research and slides of Melanesia collection, 1955-1956: Online documents: 37. Swains Exercise Book, number 1, pt. 3. Unpublished manuscript. <https://digital.library.manoa.hawaii.edu/grace/docs>.
- Grace, George W. 1955c. The George Grace linguistic research and slides of Melanesia collection, 1955-1956: Online documents: 41. Yellow 5 inch x 8 inch spiral notebook. Unpublished manuscript. <https://digital.library.manoa.hawaii.edu/grace/docs>.
- Grinevald, Colette. 2000. A morphosyntactic typology of classifiers. In Gunter Senft (ed.), *Systems of nominal classification* (Language, Culture and Cognition 4), 50-92. Cambridge: Cambridge University Press.
- Johnston, Raymond Leslie. 1980. *Nakanai of New Britain: The grammar of an Oceanic language* (Pacific Linguistics: Series B-70). Canberra: Research School of Pacific Studies, the Australian National University. <http://hdl.handle.net/1885/148444>.
- Johnston, Raymond Leslie. 1983. The continuing quest for Proto-Southwest New Britain. Paper presented to the 15<sup>th</sup> Pacific Science Congress.
- Lindrud, Stellan. 1980. The languages and communities of the Open Bay, Wide Bay and Southern Gazelle Peninsula region. In Raymond L. Johnston (ed.), *Language, communication and development in New Britain*, 159-183. Ukarumpa: Summer Institute of Linguistics.
- Lynch, John. 1975. Oral/nasal alternation and the realis/irrealis distinction in Oceanic languages. *Oceanic Linguistics* 14(2). 87-99. <https://www.jstor.org/stable/20172299>.

- Lynch, John & Ross, Malcolm & Crowley, Terry. 2002. *The Oceanic languages*. Richmond: Curzon Press.
- Meyer, Otto. 1961. *Wörterbuch der Tuna-Sprache* (Micro-Bibliotheca Anthropos 34). Posieux: Anthropos-Institut. <https://dx.doi.org/10.4225/72/56FD43D737050>.
- Milligan, Llyod & Milligan, Ruth. 1995. Tomoip, Papua New Guinea. Contribution to Chan et al. (2019). <https://lingweb.eva.mpg.de/channumerals/Tomoip.htm>.
- Müller, Hermann. 1907. Grammatik der Mengen-Sprache. *Anthropos* 2(1). 80–99. <https://www.jstor.org/stable/40389626>.
- Næss, Åshild. 2006. Bound nominal elements in Äiwoo (Reefs): A reappraisal of the “multiple noun class systems”. *Oceanic Linguistics* 45(2). 269–296. <https://www.doi.org/10.1353/ol.2007.0006>.
- Osmond, Meredith. 2023. Mana. In Malcolm Ross, Andrew Pawley & Meredith Osmond (eds.), *The lexicon of Proto Oceanic: The culture and environment of ancestral Oceanic society, volume 6: People: Society*, 269–281. Canberra: College of Asia and the Pacific, the Australian National University. <http://hdl.handle.net/1885/106908>.
- Osmond, Meredith & Ross, Malcolm. 1998. Household artefacts. In Malcolm Ross, Andrew Pawley & Meredith Osmond (eds.), *The lexicon of Proto Oceanic: The culture and environment of ancestral Oceanic society, volume 1: Material culture* (Pacific Linguistics: Series C–152), 67–114. Canberra: Research School of Pacific and Asian Studies, the Australian National University. <http://hdl.handle.net/1885/106908>.
- Osmond, Meredith & Ross, Malcolm. 2016. The human body. In Malcolm Ross, Andrew Pawley & Meredith Osmond (eds.), *The lexicon of Proto Oceanic: The culture and environment of ancestral Oceanic society, volume 5: People: Body and mind* (Asia-Pacific Linguistics 28), 75–207. Canberra: College of Asia and the Pacific, the Australian National University. <http://hdl.handle.net/1885/106908>.
- Parkinson, Richard. 1907. *Dreißig Jahre in der Südsee: Land und Leute, Sitten und Gebräuche im Bismarckarchipel und auf den deutschen Salomoinseeln*. Stuttgart: Strecker & Schröder.
- Pawley, Andrew. 1973. Some problems in Proto-Oceanic grammar. *Oceanic Linguistics* 12(1/2). 103–188. <https://doi.org/10.2307/3622854>.
- Pearson, Greg & van den Berg, René. 2008. *Lote grammar sketch* (Data Papers on Papua New Guinea Languages 54). Ukarumpa: SIL-PNG Academic Publications. <https://www.sil.org/resources/archives/23806>.
- Rath, Daniel. 1980. The languages and communities of the Mengen region. In Raymond L. Johnston (ed.), *Language, communication and development in New Britain*, 197–223. Ukarumpa: Summer Institute of Linguistics.
- Reesink, Ger. 2005. Sulka of East New Britain: A mixture of Oceanic and Papuan traits. *Oceanic Linguistics* 44(1). 145–193. <https://doi.org/10.1353/ol.2005.0026>.
- Ross, Malcolm. n.d. Tomoip grammar outline: Based on data from Raphael Liavan, Kaukum village (Palmal HS), augmented by wordlist from Martin Marlow, Kaukum village. Unpublished manuscript.
- Ross, Malcolm. 1980. *Konomala Mamusi Uvol Tomoip*. X-WAV/MPEG/PDF/TIFF/JPEG. MR1-012 at [catalog.paradisec.org.au](http://catalog.paradisec.org.au). <https://dx.doi.org/10.4225/72/56FFE00776765>. [The Tomoip recording begins around 07:13 in the file *MR1-012-B.wav*; the Tomoip wordlist is transcribed in the righthand column of the file *MR1-012-A2\_Mamusi.pdf*.]

- Ross, Malcolm. 1982. Aspect-marking in New Ireland: Towards a historical reconstruction. In Rainer Carle, Martina Heinschke, Peter W. Pink, Christel Rost & Karen Standtlander (eds.), *Gava': Studies in Austronesian languages and cultures dedicated to Hans Kähler* (Veröffentlichungen des Seminars für Indonesische und Südseesprachen der Universität Hamburg 17), 173–196. Berlin: Dietrich Reimer.
- Ross, Malcolm. 1988. *Proto-Oceanic and the Austronesian languages of western Melanesia* (Pacific Linguistics: Series C–98). Canberra: Research School of Pacific Studies, the Australian National University. <http://hdl.handle.net/1885/145428>.
- Ross, Malcolm. 1996. On the genetic affiliations of the Oceanic languages of Irian Jaya. *Oceanic Linguistics* 35(2). 258–271. <https://doi.org/10.2307/3623174>.
- Ross, Malcolm. 2002a. Bali-Vitu. In John Lynch, Malcolm Ross & Terry Crowley (eds.), *The Oceanic languages*, 362–386. Richmond: Curzon Press.
- Ross, Malcolm. 2002b. Kaulong. In John Lynch, Malcolm Ross & Terry Crowley (eds.), *The Oceanic languages*, 387–409. Richmond: Curzon Press.
- Ross, Malcolm. 2004. Demonstratives, local nouns and directionals in Oceanic languages: A diachronic perspective. In Gunter Senft (ed.), *Deixis and demonstratives in Oceanic languages* (Pacific Linguistics 562). 175–204. Canberra: Research School of Pacific and Asian Studies, the Australian National University. <http://hdl.handle.net/1885/146182>.
- Ross, Malcolm. 2007. Talking about space: Terms of location and direction. In Malcolm Ross, Andrew Pawley & Meredith Osmond (eds.), *The lexicon of Proto Oceanic: The culture and environment of ancestral Oceanic society, volume 2: The physical environment* (Pacific Linguistics 545) (2nd ed.), 229–294. Canberra: ANU E Press. <http://hdl.handle.net/1885/106908>.
- Ross, Malcolm. 2008. Introducing Proto Oceanic plant names. In Malcolm Ross, Andrew Pawley & Meredith Osmond (eds.), *The lexicon of Proto Oceanic: The culture and environment of ancestral Oceanic society, volume 3: Plants* (Pacific Linguistics 599), 25–51. Canberra Research School of Pacific Studies, the Australian National University. <http://hdl.handle.net/1885/106908>.
- Ross, Malcolm. 2017. Languages of the New Guinea Region. In Raymond Hickey (ed.), *The Cambridge handbook of areal linguistics* (Cambridge Handbooks in Language and Linguistics), 758–820. Cambridge: Cambridge University Press. <https://doi.org/10.1017/9781107279872.029>.
- Ross, Malcolm. 2023. Counting: Numerals and numeral classifiers. In Malcolm Ross, Andrew Pawley & Meredith Osmond (eds.), *The lexicon of Proto Oceanic: The culture and environment of ancestral Oceanic society, volume 6: People: Society*, 427–513. Canberra: College of Asia and the Pacific, the Australian National University. <http://hdl.handle.net/1885/106908>.
- Ross, Malcolm & Osmond, Meredith. 2016. People: Gender, age cohorts and marital status. In Malcolm Ross, Andrew Pawley & Meredith Osmond (eds.), *The lexicon of Proto Oceanic: The culture and environment of ancestral Oceanic society, volume 5: People: Body and mind* (Asia-Pacific Linguistics 28), 37–73. Canberra: College of Asia and the Pacific, the Australian National University. <http://hdl.handle.net/1885/106908>.
- Schneider, Joseph. 1962. *Grammatik der Sulka-Sprache (Neubritannien)* (Micro-Biblioteca Anthropos 36). Posieux: Anthropos Institut.

- Stebbins, Tonya & Evans, Bethwyn & Terrill, Angela. 2018. The Papuan languages of Island Melanesia. In Bill Palmer (ed.), *The languages and linguistics of the New Guinea Area: A comprehensive guide* (The World of Linguistics 4), 775–894. Berlin: De Gruyter Mouton. <https://doi.org/10.1515/9783110295252-007>.
- van den Berg, René & Bachet, Peter. 2006. *Vitu grammar sketch* (Data Papers on Papua New Guinea Languages 51). Ukarumpa: Summer Institute of Linguistics. <https://www.sil.org/resources/archives/23711>.
- van den Berg, René & Wiebe, Brent. 2019. *Bola grammar sketch* (Data Papers on Papua New Guinea Languages 63). Ukarumpa: SIL-PNG Academic Publications. <https://www.sil.org/resources/archives/80489>.
- Wurm, Stephen A. 1971. The Papuan linguistic situation. In Thomas A. Sebeok (ed.), *Current trends in linguistics, volume 8: Linguistics in Oceania, part one: Indigenous languages*, 541–657. The Hague: Mouton. <https://doi.org/10.1515/9783111418827-017>.