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## The Phonological History of Naman, a Western Malakula Language

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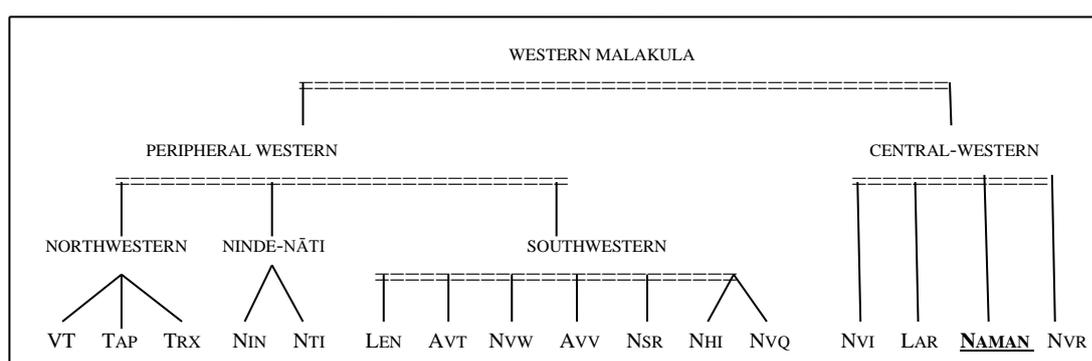
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Naman is a moribund Vanuatu language belonging to the Western Malakula linkage. This paper outlines the historical development of its phonology, paying particular attention to lenition of Proto-Oceanic (POC) \*k, loss of POC vowels in various environments, and the phonological manifestations of the POC article \*na which was accreted to many noun roots.

## 1. INTRODUCTION<sup>1</sup>

This is the first in a projected series of three papers describing the phonological history of individual languages of Malakula, each from a different major subgroup or linkage. There are three such groupings: the Northern subgroup, the Eastern linkage, and the Western linkage.<sup>2</sup> The internal structure of the Western linkage is shown in Figure 1.

FIGURE 1. THE WESTERN MALAKULA LINKAGE<sup>3</sup>



This paper describes the phonological history of Naman, a member of the Western Malakula linkage. Naman was chosen because there is a good descriptive sketch and a reasonable amount of lexical data (Crowley 2006a). The historical phonologies of two other Western languages, V'ënen Taut and Ninde, feature in Clark's (2009) coverage of North-Central Vanuatu.

Naman is a moribund language. It is currently spoken in Litzlitz village and in a couple of other villages in the area around the provincial capital, Lakatoro, on the east coast, but it was once spoken further west, in north-central Malakula. The current generation of a score or so adults, the descendants of those who moved from inland to the coast and took refuge in villages speaking other languages, are the last Naman speakers, as the language is not being passed on to the younger generation, who speak the more dominant languages of the villages in which they reside, Uripiv and Neve'ei.

<sup>1</sup> I am grateful to Catriona Malau for comments on an earlier draft of this paper.

<sup>2</sup> For the most recent discussion of Malakula subgrouping, see Lynch (2016a,b). Data from a number of Western Malakula languages are cited in this paper, and the sources are as follows: Avava (Crowley 2006b), Nahavaq (Laura Dimock, pers. comm.), Neve'ei (Musgrave 2007), Ninde and Nvwien (Charpentier 1982), Tape (Crowley 2006c), Tirax (Amanda Brotchie, pers. comm.), Unua (Pearce 2007), and V'ënen Taut (Fox n.d.).

<sup>3</sup> Language names in Figure 1 (apart from Naman) are abbreviated for reasons of space. Reading left to right, these abbreviations are: VT, V'ënen Taut; TAP, Tape; TRX, Tirax; NIN, Ninde; NTI, Nāti; LEN, Lendamboi; AVT, Aveteian; NVW, Navwien; AVV, Avava; NSR, Nasarian; NHI, Naha'ai; NVQ, Nahavaq; NVI, Neve'ei; LAR, Larëvat.

## 2. BACKGROUND

### 2.1 Synchronic phonology

This description of Naman synchronic phonology follows Crowley (2006a:24–55).

Naman is analysed as having the following consonant and vowel phonemes:

(1)	t	c	k	i	i:	u	u:
	b	d	j	g	e	ə	o
	v	s		ɣ		a	a:
	m	n		ŋ			
		l					
		r					
	w		y				

The voiceless stops /t k/ are unaspirated, while the voiced stops /b d g/ are prenasalised. Of the other consonant phonemes, the following comments need to be made:

- /c/ and /j/ are affricates: /c/ is phonetically [tʃ], in free variation with [ts] intervocalically, while /j/ is phonetically [ʃ], freely varying with [ns] non-initially;
- /v/ is labiodental, realised as [f] initially and before a voiceless consonant, [p]~[f] finally, and [v] elsewhere;
- /ɣ/ is [ɣ] intervocalically and after a voiced consonant and [x] elsewhere; and
- /r/ is a flap.

The high and low vowels show a length contrast; cf.

(2)	/nisən/	‘her breast’	vs.	/ni:sən/	‘its smoke’
	/nusulu/	‘clothes’		/nu:sən/	‘his penis’
	/vəsan/	‘s/he threw it’		/vəsa:n/	‘s/he did it how?’

Phonemically, consonant clusters are not permitted initially or finally, but two-consonant phonemic clusters may occur medially across a syllable boundary. Lexical roots rarely begin with vowels, and may end only with the [–low] short vowels /i e o u/. The phoneme /k/ is extremely rare in lexical morphemes, though common in grammatical morphemes.

Stress occurs on the penultimate mora (the final syllable if it contains two vowels or a long vowel, otherwise the penultimate syllable):

(3)	/nereun/	[ne'reun]	‘leaf’
	/delva:t/	[ <sup>n</sup> de'l'va:t]	‘at midnight’
	/noutiret/	[nou'ti'ret]	‘perspiration’
	/matərvəvrəɣ/	[matə'r'vəvrəx]	‘old men’

As far as the orthography is concerned, the system I use here mainly follows Crowley’s, with a couple of exceptions.<sup>4</sup> The phonemic symbols used in (1) are also used as orthographic symbols, with the following exceptions:

- /c/ is written as *j* and /j/ as *ns*, following Crowley;
- /ɣ/ is written as *x*; and
- long vowels are written as double vowels (thus /i:/ as *ii*, for example).

These exceptions are made partly to make it easier for the reader to refer to Crowley’s text (especially (a) and (c)), and partly to conform with other comparative work on Malakula languages (especially (b)).

### 2.2 Developments in word structure

This section very briefly outlines a few processes that affect the shape of inherited lexical items. The discussion here is merely to assist the reader in interpreting the data in the sections dealing with individual consonants and vowels; full details are given in section 5.

- POC post-consonantal final vowels are generally lost in word-final position (e.g., \*sake ‘go up’ > *sax*).

<sup>4</sup> The exceptions are: (i) I use *ŋ* and *ə* for his *ng* and *ë*; and (ii) I use *x* rather than his *kh* to represent /ɣ/.

- The second vowel in a POC word-final vowel sequence is regularly lost (e.g., \*katou ‘hermit crab’ > *no/xto*), though some final vowel sequences develop as a single vowel fusing features of both vowels (e.g., \*malau ‘megapode’ > *molo*).
- POC final consonants are usually lost, and when they were deleted the preceding vowel was also deleted (e.g., \*taŋis ‘cry’ > *i/teŋ*).
- Root-final vowels are not lost in bound roots that require a suffix (e.g., \*mata- ‘eye’ > *mete-*, typically followed by possessive suffixes).
- Medial pretonic vowels are also often lost (e.g., \*taliŋa- ‘ear’ > *delŋe-*).
- A large number of noun roots are prefaced with *n* or *nV*, deriving from POC \*na, the common article, which has become an integral part of the noun in Naman, as in other Malakula languages (e.g., \*panua ‘place, land’ > *ne/venu*).
- The citation forms of many verbs have an initial *i*, probably derived from an historical 3SG subject marker (e.g., \*mate ‘die’ > *i/mes*).

### 3. CONSONANTS

Because POC final consonants are regularly lost, the discussion in this section focuses on consonants in initial and medial positions in POC.

#### 3.1 Labials

POC contrasted bilabial (\*p, \*b, \*m) and labiovelar (p<sup>w</sup>, \*b<sup>w</sup>, \*m<sup>w</sup>) stops and nasals. Many Western Malakula, and indeed many Oceanic, languages are in the process of losing this distinction (see, e.g., Lynch 2002:317). In Naman, this process is complete: \*p<sup>w</sup>, \*b<sup>w</sup> and \*m<sup>w</sup> merge with \*p, \*b and \*m, respectively, as bilabials.

POC \*p is regularly reflected as *v* in all positions:<sup>5</sup>

(4)	*pudi ‘banana’	ne/vəns	*kapika ‘ <i>Syzygium</i> sp.’	na/avəx
	*pica ‘how many?’	vis	*kape ‘k.o. crab’	na/xav
	*paliji ‘grass’	nə/vilviləs	*(n,ñ)opuq ‘stonefish’	ni/niv
	*pulan ‘moon’	ni/vəl	*[pa]paba ‘slipper lobster’	ne/vev

There are, however, sporadic examples of oral-nasal crossover, widespread in Vanuatu, where voiceless obstruents are reflected as if they were voiced prenasalised obstruents—in this cases, where \*p is reflected as *b*. Clark (2009:14–15) notes that

PNCV consonants include several pairs that can be recognized as reflecting the POC opposition between ‘oral grade’ and ‘nasal grade’. ... As elsewhere in Oceanic, there is a certain amount of fluctuation between members of these pairs, as can be seen from variant PNCV reconstructions such as: \*bea/\*vea ‘where?’, \*taŋi-si/\*daŋi-si ‘weep’ ... In addition to this sporadic variation, there is in certain languages a regular grammatically conditioned pattern of alternation between the reflexes of oral and nasal grade in initial position in verbs. ... Even in some languages where no such synchronic alternation exists, verb-initial consonants show dual reflexes.

Naman often shows unexpected nasal grade reflexes of oral grade phonemes (\*p > *b* rather than *v*, \*t > *d* rather than *t*, etc.). Prototypically in Malakula languages, this occurs verb-initially (5a), as a relic of a productive process marking the realis-irrealis distinction (see, e.g., Crowley 1991); but it also occurs medially in Naman for reasons that are unclear (5b):

(5)	a.	<sup>E</sup> *porak-i ‘break’	bər	b.	*kaput-i ‘cover’	xabəj
		*punu(q) ‘kill’	bən		*tepe ‘cut’	təbe
					*puko ‘morning’	mete/bəx
					*lapuat ‘big, large’	tə/leb + ‘high tide’

<sup>5</sup> Reconstructions are POC unless otherwise marked. Forms that are not POC are marked by a preceding raised letter (thus <sup>E</sup>\*porak-i): these letters are E, Proto-Eastern Oceanic; N, Proto-North-Central Vanuatu; R, Proto-Remote Oceanic; and S, Proto-Southern Oceanic. Reconstructions for all these languages except Proto-Southern Oceanic may be found in Ross, Pawley and Osmond (1998, 2003, 2008, 2011, 2016), and for PNCV also in Clark (2009); specifically Proto-Southern Oceanic reconstructions are outlined in the appendix.

There are only a few reflexes of \*p<sup>w</sup> in my data, but they show the same pattern: \*p<sup>w</sup> > v (6a), occasionally > b (11b):

- |     |    |                                                       |            |    |                                      |                            |
|-----|----|-------------------------------------------------------|------------|----|--------------------------------------|----------------------------|
| (6) | a. | *p <sup>w</sup> ip <sup>w</sup> i(t) ‘squeeze, wring’ | i/vi       | b. | *p <sup>w</sup> otu ‘hill, mountain’ | botu/en                    |
|     |    | *p <sup>w</sup> a(ra)raq ‘thunder’                    | bele/ver   |    | *p <sup>w</sup> osa(k) ‘break’       | bəj(bəj) ‘break to pieces’ |
|     |    | *p <sup>(w)</sup> ilak ‘lightning’                    | ni/vəlivəl |    |                                      |                            |

POC \*b and \*b<sup>w</sup> merged in Naman, as *b*:

- |     |    |                                  |                        |                                                      |                |
|-----|----|----------------------------------|------------------------|------------------------------------------------------|----------------|
| (7) | a. | *baga ‘banyan’                   | ne/bag                 | * <sup>(q)</sup> abe ‘body’                          | n/ibə-         |
|     |    | *barapu ‘long’                   | i/ber                  | *tubu- ‘grandparent’                                 | jəbə-          |
|     |    | *bilake ‘banded rail’            | bəliex                 | *ku(i)ba ‘imperial pigeon’                           | nu/xub         |
|     |    | *boŋi ‘night’                    | buj ‘day (= 24 hrs)’   | N*makobu ‘gecko’                                     | muxub          |
|     |    | *b(o,u)kas(i) ‘pig’              | bues ‘boar’            | N*kabani ‘a sail’                                    | na/aben        |
|     |    | *buto- ‘navel’                   | bəjə-                  | *kabu ‘fire(wood)’                                   | n/ab           |
|     | b. | *b <sup>w</sup> atu(k)- ‘head’   | bata-                  | *tob <sup>w</sup> a ‘stomach, belly’                 | daba/(x)a-     |
|     |    | N*b <sup>w</sup> alika- ‘affine’ | balxə- ‘wife’s father’ | *mab <sup>w</sup> e ‘Tahitian chestnut’ <sup>6</sup> | mobu- ‘liver’  |
|     |    | N*b <sup>w</sup> ero- ‘ear’      | borə-                  | N*sob <sup>w</sup> e ‘join’                          | nsubonsubo/den |

Similarly, POC \*m and \*m<sup>w</sup> merged in Naman, as *m*:

- |     |    |                                          |                         |                              |                |
|-----|----|------------------------------------------|-------------------------|------------------------------|----------------|
| (8) | a. | *mata- ‘eye’                             | mete-                   | *tama- ‘father’              | teme-          |
|     |    | *maya-, N*mea- ‘tongue’                  | nelwe/me-               | N*meme-u ‘dew, wetness’      | i/mim ‘be wet’ |
|     |    | N*miala ‘red’                            | miel                    | *mimiq ‘urine, urinate’      | mimi (v)       |
|     |    | N*muki ‘earthquake’                      | nu/mi                   | *ñamuk ‘mosquito’            | ne/nom         |
|     | b. | *m <sup>w</sup> aqane ‘male’             | ma- ‘brother of woman’  | *Rum <sup>w</sup> aq ‘house’ | ne/im, n/emax  |
|     |    | E*m <sup>w</sup> eRa ‘young person’      | mar ‘person of a place’ | *m <sup>w</sup> ata ‘snake’  | na/mat         |
|     |    | N*tam <sup>w</sup> at(a,e) ‘peace, calm’ | damat ‘calm sea’        |                              |                |

Finally, we come to POC \*w. POC \*a sometimes coalesces with a following \*w, as *o* (9a); in other items, \*w > v (with one case of w) in a similar environment (9b):<sup>7</sup>

- |     |    |                               |                              |    |                                              |                     |
|-----|----|-------------------------------|------------------------------|----|----------------------------------------------|---------------------|
| (9) | a. | N*sukawa ‘year’               | ne/sxo                       | b. | N*sawa ‘dance’                               | (i)/sav             |
|     |    | *waroc ‘vine’                 | n/ou ‘vein +’                |    | *wa(l,R)e-wa(l,R)e ‘ <i>Flagellaria</i> sp.’ | na/val ‘vine sp.’ ? |
|     |    | *waga ‘canoe’                 | n/oag                        |    | *waiR ‘water’                                | no/we               |
|     |    | *waRisa ‘two days from today’ | n/oas ‘day before yesterday’ |    |                                              |                     |

### 3.2 Coronals

Since \*t merges with \*c and \*s, and \*d with \*j, in certain environments, I will deal with \*c, \*s and \*j first, before moving on to the coronal stops.

#### 3.2.1 \*c, \*s and \*j

POC \*s and \*c merged in Oceanic languages east of Manus, so are treated together here. The regular reflex in Naman is *s*:

- |      |                |             |                    |        |
|------|----------------|-------------|--------------------|--------|
| (10) | *sake ‘go up’  | sax ‘climb’ | *masakit ‘sick’    | məsiəx |
|      | *salan ‘path’  | ne/sel      | *pica ‘how many?’  | i/vis  |
|      | *sinaR ‘shine’ | i/sən       | *pose ‘paddle (N)’ | na/vas |

<sup>6</sup> Ross, Pawley and Osmond (2016:192–93) state that “in many Oceanic languages the term for kidney is a metaphor that makes reference to an object that is perceived as kidneyshaped ... The most frequent metaphor equates a kidney with a Tahitian chestnut ... In many languages of Vanuatu, evident reflexes of \*mab<sup>w</sup>e [‘Tahitian chestnut’] mean ‘liver’ ...”.

<sup>7</sup> The coalescence in the last three items of (9a) is with the \*a of the fused article \*na plus the following \*w.

N*soka-ri ‘reach (out)’	sesax	*b(o,u)kas(i) ‘pig’	bues ‘boar’
*susu- ‘breast’	ni/sə-	*lasoR ‘testicles’	lesə- ‘male genitals’
*sulu ‘torch(-fishing)’	i/səl ‘fish by torchlight’	*qasu ‘smoke’	ni/isə-

There is a handful of cases where \*s > j (i.e., /tʃ/) rather than s:

(11) N*sova ‘cough, breathe w. difficulty’	i/jev ‘cough’ (see also (13))
*pisiko- ‘flesh, meat, muscle’	ne/joxo-
*p <sup>w</sup> osa(k) ‘break’	bəj(bəj) ‘break to pieces’
*siko ‘kingfisher’	ne/jəx

I am unable to define any conditioning for this departure from the regular \*s > s pattern.

POC \*j (cf. PNCV \*z) has as its regular reflex *ns*:

(12) S*majonu ‘trevally’	minsin	*keja ‘green, blue’	xansxanse/n
*laje ‘branching coral’	lenslens ‘dead coral’	N*zara ‘village clearing’	tev/nsar ‘public place’
*(s)juliq ‘sucker, shoot’	nsil/ŋə- ‘seed’	N*m <sup>w</sup> azoe ‘star’	mənsə

There are also a number of etyma where oral/nasal crossover has occurred, with \*s > *ns* (the regular reflex of nasal grade \*j):

(13) N*savu ‘compressed air’	nsivu/x ‘sneeze’	N*sara ‘all, together’	tu/nsar ‘always’
N*sabo ‘ignorant, incompetent’	i/nseb(i) ‘different, other’	*saman ‘outrigger’	ne/nsem
N*sob <sup>w</sup> e ‘join’	nsubonsubode/n	*bisu ‘finger, toe’	nsəbə- (met.)
N*sova ‘cough, breathe w. difficulty’	nsuvə- ‘breath’	*sipi(r,R)i ‘coconut lory’	ni/nsəv

A number of these examples are verbs, and verb-initial position is the most common environment where this crossover occurs. Other examples in (13), however, do not fit this pattern, and seem quite random.

### 3.2.2 \*t and \*d

As is common in almost all Malakula languages (Lynch 2016a:411), \*t and \*d underwent palatalisation when before front vowels, merging with the fricatives: \*t usually became *s* in this environment (14a), and \*d became *ns* (14b)—that is, they merged with \*s and \*j, respectively, in this environment:

(14) a. *tiana ‘pregnant’	sien	*maputi(q) ‘white’	mivəs
*tina- ‘mother’	səne-	*mate ‘die, dead’	i/mes
*tinaqe- ‘intestines’	ne/sne-	*pati ‘four’	i/ves
E*tikai ‘no’	e/səx	*qata-mate ‘devil’	demes
N*tigo-ni ‘push’	suxun ‘put into’	*quti(n) ‘penis’	nu/usə-
b. *pudi ‘banana’	ne/vəns	*kadik ‘stinging black ant’	na/xans

There are, however, a number of cases where \*t palatalised as *j* (and these seem to parallel the somewhat exceptional cases of \*s > *j* discussed above and illustrated in (17)):

(15) *kaput ‘cover’	xabəj	*buto- ‘navel’	bəjə-
*taqe- ‘excrement’	ne/ji, ne/jə-	*tubu- ‘grandparent’	jəbə-
*topu ‘sugarcane’	ni/jəv		

It is possible that this may be the result of a second, later, palatalisation process. I discuss each of these in turn.

- \*kaput ‘cover’ > *xabəj*: palatalisation is explainable as due to the transitive suffix \*-i influencing the root-final \*t: i.e., \*kaput-i.
- \*taqe ‘excrement’ > *ne/ji, ne/jə-*: palatalisation of \*t would only have occurred after loss of \*q, (or possibly loss of \*aq as a single process); thus \*taqe (> \*tae?) > \*te > *je*.
- \*topu ‘sugarcane’ > *ni/jəv*: POC \*o does not normally condition palatalisation, but \*o became a front vowel in this form in most Malakula languages. Examples from the Western Malakula linkage include:

- (16) a. Neve'ei *ne/tev*, Tirax *na/tev*, Naha'ai *nuhun-tip*, Navwien *nason-tip*  
 b. V'enen Taut *ni/si*, Tape *ni/ji*

Forms in (16a) show the front vowel but no palatalisation of \*t; those in (16b) show the front vowel plus palatalisation. This suggests that it was a more recent process than the regular \*t > s / \_ \*i, \*e

- \*buto- 'navel' > *bəjə-*: a few Western Malakula languages show a front vowel in the second syllable, though there are no other examples of palatalisation of \*t: Avava *bbute-*, Neve'ei *ne/bite-*, Ninde, Naha'ai *ni/biute-*, Navwien *nə/bute-*
- \*tubu- 'grandparent' > *jəbə-*: Ninde *tibü/no-*, Nahavaq *tebu-* show a front vowel rather than \*u following initial \*t, though no palatalisation.

The default reflexes of \*t and \*d are *t* and *d*, respectively:

- |                                               |             |                                                   |          |
|-----------------------------------------------|-------------|---------------------------------------------------|----------|
| (17) a. *taŋis 'cry'                          | i/teŋ       | *mataqu, <sup>S</sup> *matuqa 'right (side/hand)' | xə/metu  |
| *taput-i 'pick fruit'                         | toŋ         | *kuRita 'octopus'                                 | ni/xət   |
| *toqa 'fowl'                                  | ne/to       | *katou 'hermit crab'                              | no/xto   |
| *tolu 'three'                                 | i/təl       | *qatop 'sago, thatch'                             | n/iet    |
| *tu(q)aRi 'ong ago'                           | toxe        | *b <sup>w</sup> atu(k)- 'head'                    | batə-    |
| *tunu 'roast'                                 | tetən 'hot' | *maturuR 'sleep'                                  | metər    |
| b. <sup>N</sup> *dali '(go) around'           | del/vəs     | *ŋado 'gums'                                      | no/ŋode- |
| <sup>E</sup> *damu (k.o.) yam'                | ne/dum      | *qudu 'palolo worm'                               | nu/ud    |
| <sup>N</sup> *daleqo- 'voice, language, word' | delə-       | <sup>N</sup> *leidumudumu 'whale'                 | lidumdum |

When a \*t-initial root was preceded by the article \*na, the expected reflex *nVt...* occasionally occurred: e.g., \*taroa 'Columba vitiensis' > *no/toro*, \*takuRu- 'back' > *ne/tre-*, and \*toqa 'fowl' > *ne/to*. More frequently, however, the \*t became *d* in this environment, assimilating to the voicing and nasalisation of the article: sometimes the article was retained (18a), with \*na-t... > *nVd...*, but more often it was lost (18b), with \*na-t... simply > *d...*. With loss of \*q, sequences of \*na-qat... behaved as if they were \*na-t...

- |                                                                |                       |
|----------------------------------------------------------------|-----------------------|
| (18) a. *tawan 'Pometia pinnata'                               | ne/dou                |
| *toŋoR 'mangrove'                                              | ne/doŋ                |
| *tulu 'earwax'                                                 | na/dəl                |
| *qatoluR 'egg'                                                 | n/adəl                |
| b. *taliŋa- 'ear'                                              | delŋe-                |
| <sup>N</sup> *tam <sup>w</sup> at(a,e) 'peace, calm'           | damat 'calm sea'      |
| <sup>N</sup> *taroa 'Columba vitiensis, white-throated pigeon' | doro                  |
| *taRutu(m,ŋ) 'porcupinefish, Diodontidae'                      | daut 'spiny puffer'   |
| *tasik 'sea'                                                   | des/we (we = 'water') |
| *tapoRa 'Terminalia catappa'                                   | dovo                  |
| *tob <sup>w</sup> a 'stomach, belly'                           | daba/(x)a-            |
| *tokalau(r) 'north wind'                                       | doxolo                |
| *qata-qutan 'bush/inland person'                               | daut                  |
| *qata-mate 'devil'                                             | demes                 |

### 3.2.3 \*l, \*r, \*dr and \*R

I will deal with \*R in this subsection, even though it is not a coronal, since it undergoes a partial merger with \*r.

POC \*l is reflected as Naman *l* in all positions:

- |                                      |                       |                                                 |                  |
|--------------------------------------|-----------------------|-------------------------------------------------|------------------|
| (19) *lasoR 'testicles'              | lesə- 'male genitals' | *salan 'path'                                   | ne/sel           |
| *leqos 'see, look at'                | lis                   | <sup>E</sup> *m <sup>w</sup> a(q)ele 'cycad'    | meil             |
| *lipon 'tooth'                       | ne/lvə-               | *taliŋa- 'ear'                                  | delŋe-           |
| <sup>N</sup> *logo 'pudding, laplap' | ne/lag                | *b <sup>w</sup> ilo 'cup, coconut shell, skull' | bəla/sən 'shell' |
| *luaq 'vomit'                        | luolu                 | *pulu- 'hair (of head)'                         | naans/vələ-      |

POC \*r is regularly reflected as *r* in all positions:

(20)	<sup>N</sup> *raka-ti ‘lift, raise, pull out’	i/rox ‘clear garden site’	*[ma]raq ‘thirsty’	ni/mir ‘hunger’
	*raqani ‘daytime, daylight’	i/ran ‘dawn (v)’	<sup>R</sup> *maraya ‘eel’	mere
	<sup>N</sup> *rara-ni ‘expose to heat’	i/rer ‘shine hotly’	*kara ‘devil nettle’	na/xaxar
	*raun ‘leaf’	ne/r, ne/reu-	*maqurip ‘alive’	mour
	*roŋoR ‘hear’	roŋ ‘hear, feel’	<sup>N</sup> *b <sup>w</sup> ero-	orə-
	*rua ‘two’	i/ru	*maturuR ‘sleep’	metər

I have only one example of POC \*dr: \*draraq ‘blood’ > *ne/de*. However, note the following examples of probable oral/nasal crossover, in which \*r > d (presumably < \*dr); this suggests that \*dr merged with \*d as d

(21)	*rarap ‘ <i>Erythrina indica</i> , coral tree’	ne/dar
	*ŋorok ‘snore’	ŋod
	<sup>N</sup> *masoru ‘hiccup’	mesed

François (2011) shows that POC \*R is lost in some items in Vanuatu languages but retained in others, with no real element of predictability. This is the case in Naman. \*R is lost in items like the following:

(22)	*Ruqa- ‘neck’	no/we-	*kuRita ‘octopus’	ni/xət
	*Rum <sup>w</sup> aq ‘house’	ne/im, n/emax	*paRu ‘ <i>Hibiscus tiliaceus</i> ’	nə/veve
	*draRaq ‘blood’	ne/de	*piRaq ‘giant taro’	ne/vi
	<sup>S</sup> *qaŋaRi ‘ <i>Canarium indicum</i> ’	n/eŋe	*suRuuq ‘fluid, juice’	ne/swe-
	*kaRat-i ‘bite’	xas	*taRutu(m,ŋ) ‘porcupinefish’	daut ‘spiny puffer’
	*kaRo ‘vine (generic), rope’	no/xo	*tu(q)aRi ‘long ago’	toxe
	*ku(r,R)iap ‘dolphin’	ni/gi	*waRisa ‘2 days from today’	n/oas ‘day before yesterday’

It is retained in others, however, and when retained it merges with \*r, as r:

(23)	*Rapi ‘evening’	revrev	*maRaqa ‘light in weight’	merere
	*Ropok ‘run, jump’	i/rəv ‘run away’	*ma-wiRi ‘left (side/hand)’	xə/mir
	<sup>N</sup> *b <sup>w</sup> aRo ‘deaf’	bore/r	<sup>S</sup> *m <sup>w</sup> aRaki ‘ground dove’	vo/mar
	*kaRaka ‘crawl’	xarax	<sup>E</sup> *m <sup>w</sup> eRa ‘young person’	mar ‘person of a place’
	*kaRi(a) ‘ <i>Cordyline</i> sp.’	na/ari ~ na/xari	*[qa]paRa- ‘shoulder’	n/əverə-
	*maRaŋo ‘(be) dry’	meraŋ (of leaves)	*takuRu ‘back’	ne/tre-

### 3.2.4 \*n, \*ñ and \*y

As in all other Malakula languages, \*n and \*ñ merge, as n:

(24)	a.	*nako- ‘face’	noxo-	*sinaR ‘shine’	i/sən
		*napo(k) ‘wave (N)’	ne/nav	*tinaqe- ‘intestines’	ne/sne-
		*niuR ‘coconut’	ne/ni	*kani ‘eat’	xan ‘burn’
		<sup>N</sup> *no(k,g)o ‘finish’	nog	*tanoq ‘earth, ground’	ne/en
		<sup>N</sup> *nuŋa ‘beg, beseech’	neŋ	*ponuq ‘full’	i/vən
	b.	*ñamuk ‘mosquito’	ne/nom	*(n,ñ)opuq ‘stonefish’	ni/niv

POC \*y occurs only in a few items. Initial \*y > y in \*yaŋo ‘yellow’ > *yaŋayan*; but it is lost in <sup>N</sup>\*yalo ‘sun’ > *n/al*. Medially, \*ay coalesces as e:

(25)	*maya- ‘tongue’	nelwe/me- <sup>8</sup>
	<sup>R</sup> *maraya ‘eel’	mere
	*kayu ‘tree, wood’	na/xe

<sup>8</sup> A number of Southern Oceanic languages show a compound form for ‘tongue’ that would suggest something like <sup>S</sup>\*lua-maya, with \*lua perhaps related to \*luaq ‘vomit’. See the appendix.

## 3.3 Dorsals

POC \*g is regularly reflected as g in all environments :

(26)	N*ganisu- ‘nose’	gunsə-	*-gu ‘1SG.POSS’	-g
	S*garai ‘flying-fox’	men-gore	N*lagu ‘outrigger pegs/struts’	bati/lug
	*ku(r,R)iap ‘dolphin’	ni/gi	N*logo ‘pudding, laplap’	ne/lag
	*baga ‘banyan’	ne/bag	N*ma(i)tagaR(a) ‘puzzle tree’	midag
	N*baig(a,e) ‘turban shell’	beig	N*magi ‘graded society, grade-taking ceremony’	megi
	N*buaga ‘swamp taro’	buag ‘taro’	*waga ‘canoe’	n/oag

The reflexes of POC \*k are complex, with lenition and loss, as well as oral/nasal crossover, all involved. First, there is a tendency for \*k to be lost noun-initially after the fused article (i.e. \*na-ka... > n(a)a...), as in (27a), but there are some cases where it is retained as x in this environment (27b):

(27)	a.	*kamaliR ‘men’s house’	na/amil	b.	*kara ‘devil nettle’	na/xaxar
		N*kabani ‘a sail’	na/aben		*kadik ‘fire ant’	na/xans
		*kabu ‘fire(wood)’	n/ab <sup>9</sup>		*katou ‘hermit crab’	no/xto
		N*katabola ‘ <i>Dracontomelon</i> ’	n/atabal		*kape ‘k.o. crab’	na/xav
		*kapika ‘ <i>Syzygium</i> sp.’	na/avəx		*kayu ‘tree’	na/xə
					*kanase ‘mullet’	ni/xan/wei ?
					*kaRo ‘vine, rope’	no/xo

It may well be that loss of \*k began to occur in the environment \*na \_ a, or perhaps \*a \_ a: one example that suggests that the change may still be in progress is \*kaRi(a) ‘*Cordyline* sp.’, where two reflexes in apparent free variation, na/ari and na/xari, are found. This is discussed further below.

POC \*k is also lost in a few other words, though I cannot determine any pattern of conditioning:

(28)	*takuRu ‘back’	ne/tre- (but cf. also a/tox ‘behind, last’ with *k > x)
	*makubu- ‘grandchild’	na/abə- (irregular loss of *m)
	*b(o,u)kas(i) ‘pig’	bues ‘boar’
	*paka- ‘multiplicative’	vaa-

Crossover to g occurs initially in three verbs (29a), and also (as is common in Vanuatu—see Clark (2009:161)) in two non-singular pronouns (29b)

(29)	a.	*kilala ‘know, see’	gəlo ‘open eyes, look’	b.	*kita ‘we INC.PL’	(i)get ~ (i)gət
		*karu ‘swim to’	garagar		*kamiu, *kamuyu ‘you PL’	(i)gem ~ (i)gəm
		N*koro ‘surround, obstruct’	gor ‘close’ (VT)			

One other non-singular pronoun shows irregular \*k > k : \*kamami ‘we EXC.PL’ > kam ~ kamem.

Otherwise, the default reflex of \*k is x. The examples in (30) exclude cases of nouns beginning with \*ka, which are illustrated in (27).

(30)	*kaput-i ‘cover’	xabəj	*manuka ‘a sore’	menox
	*kaRaka ‘crawl’	xarax	*ikan ‘fish’	n/iəx
	*kani ‘eat’	xan	*bakewa ‘shark’	baaxe
	*kaRat-i ‘bite’	xas	*sake ‘go up’	sax
	*keli ‘dig’	xəl	*masakit ‘sick’	məsəiəx
	*keja ‘green, blue’	xansxanse/n	*laki ‘marry’	ni/liəx ‘husband’
	*ko(r,R)as-i ‘scrape, grate’	xor ‘scrape (coconut)’	N*makobu ‘gecko’	muxub
	*ku(i)ba ‘imperial pigeon’	nu/xub	*siko ‘kingfisher’	ne/jəx
	*kutu ‘louse’	no/xot	*matakut ‘afraid’	mətəxtəx
	*kuRita ‘octopus’	ni/xət	N*maloku ‘kava’	meləx

<sup>9</sup> But cf. xabu ‘burnt’, with \*k retained as x.

A number of Western Malakula languages show a similar lenition process. The data in Table 1 show relevant reflexes in Neve’ei, Avava, and Ninde, as well as Naman, with lenition shaded in yellow and oral/nasal grade crossover in blue; words containing the default reflex are unshaded. Items are grouped according to the vowel on either side of \*k; \*V represents any vowel other than \*a. Note that Ninde *x* is the regular reflex of \*r, not \*k. It is clear from Table 1 that lenition in Neve’ei, Avava and Ninde is a similar process, in similar environments, but is apparently more widespread than in Naman.

TABLE 1. LENITION OF \*k IN FOUR WESTERN MALAKULA LANGUAGES

POC	NAMAN (default <i>x</i> )	NEVE’EI (default <i>x</i> )	AVAVA (default <i>k</i> )	NINDE (default <i>k</i> )
<b>*(n)a-ka...</b>				
*kamaliR ‘men’s house’	na/amil	na/?amal	amal ‘house’	n/emel
*kabu ‘fire(wood)’	n/ab	na/?am	a/abb	n/eb
<sup>N</sup> *katabola ‘dragon plum’	n/atabal	na/?atebwel	atibol	—
*kapika ‘ <i>Syzygium</i> sp.’	na/avəx	na/?avax	avik	n/evūike
*kadik ‘fire ant’	na/xans	na/?ans	liŋ/aad ?	ne/ses
*katou ‘hermit crab’	no/xto	nu/xutu	bwir/koto	n/etu
*kape ‘k.o. crab’	na/xav	ni/av ‘k.o. crab’	—	—
*kayu ‘tree’	na/xə	na/?ai	a/ga	n/ei
<b>##ka...</b>				
*kaput-i ‘cover’	xabəj	?abis	apap ‘penis wrapper’	—
*kaRaka ‘crawl’	xarax	xara?	arak	kaxakaxa
*kani ‘eat’	xan	xan	kan	—
*kaRat-i ‘bite’	—	?a?an	yanyan	a?an
	xas	xas	yat	—
<b>*...Vka...</b>				
*manuka ‘a sore’	menox	—	—	na/mūno
*ikan ‘fish’	n/iəx	n/iəx	iki, vwin/iek	—
<b>*...akV...</b>				
*bakewa ‘shark’	baaxe	no/box mavis	bbuku/mas	na/bio-mūs
*sake ‘go up’	sax	sa?	sak	ia?
*masakit ‘sick’	məsəiəx	mesa?	—	mia?
<sup>N</sup> *malakeza	—	—	melih	melkəse
*laki ‘marry’	ni/liəx ‘husband’	la?	—	la?
<sup>N</sup> *makobu ‘gecko’	muxub	nu/muxum	o/moob	nə/ma?ab
*matakut ‘afraid’	mətoxtox	meta?	matak	meta?
<b>*na-kV...</b>				
*ku(i)ba ‘imperial pigeon’	nu/xub	no/xoim	wiim	—
*kutu ‘louse’	no/xot	na/?at	a/ut	nu/gut metəne
*kuRita ‘octopus’	ni/xət	no/xoit	koit	nu/guwute
<b>Other</b>				
*keja ‘green, blue’	xansxanse/n	xansxansa/n	—	—
*keli ‘dig’	xəl	xal	il	—
*ko(rR)as-i ‘scrape, grate’	xor ‘scrape (coconut)’	?a?ar	yoryor	ka/?axa?axa?
*siko ‘kingfisher’	ne/jəx	ne/jəx	a/sik	—

There are a few cases where POC \*q appears to be retained—as *x* (merging with \*k), as in (31a), and perhaps more controversially as *i* (31b).

- (31) a. \*qapi-ŋa- ‘armpit’      no/xove-      b. \*qatop ‘*Metroxylon warburgii*’      n/iet + ‘thatch’  
       \*[qa]paRa- ‘shoulder’      no/xoverə- ‘wing’      \*qasu ‘smoke’      ni/iə-  
       \*tu(q)aRi ‘long ago’      toxə      <sup>N</sup>\*qavua ‘turtle’      n/ivu  
       \*Rum<sup>w</sup>aq ‘house’      n/emax

POC \*tuqaka- ‘older same sex sibling’ > *tuxa*- ‘sister, of woman’ may also show \*q > *x*, though \*k > *x* is more likely.

Generally, however, \*q is lost:

(32)	*qase ‘jaw’	na/ase-	*Ruqa- ‘neck’	no/we-
	*qatoluR ‘egg’	n/adəl	*raqani ‘daytime, daylight’	i/ran ‘dawn (VI)’
	*quloc ‘maggot’	no/ul	*tinaqe- ‘intestines’	ne/sne-
	*quraj ‘prawn, lobster’	no/ur	*toqa ‘fowl’	ne/to
	*qudu ‘palolo worm’	nu/ud	*leqos ‘see, look at’	lis
	*qutan ‘inland, ashore’	no/ut ‘place’	*maqurip ‘alive’	mour
	*qusan ‘rain (N)’	no/us	*qata-qutan ‘bush/inland person’	daut

POC \*ŋ is reflected as ŋ in all environments:

(33)	*ŋ(a)ican ‘when?’	na/ŋsen	*taliŋa- ‘ear’	delŋe-
	*ŋado ‘gums’	no/ŋode-	*boŋi ‘night’	buŋ ‘day (= 24 hrs)
	*ŋorok ‘snore’	ŋod	*toŋoR ‘mangrove’	ne/doŋ
	*taŋis ‘cry’	i/teŋ	*roŋoR ‘hear’	roŋ ‘hear, feel’

### 3.4 Consonants: Summary

The preceding sections are summarised in Table 2. Default reflexes are given first; a comma separates conditioned reflexes, and unconditioned reflexes are in parentheses.

TABLE 2. CONSONANT CORRESPONDENCES

POC	*p, *p <sup>w</sup>		*t		*s, *c	*k	*q
Naman	v (b)		t, s (j, d)		s (j, ns)	x (Ø, k, g)	Ø (x, i)
POC	*b, *b <sup>w</sup>		*d		*j	*g	
Naman	b		d, ns		ns	g	
POC	*m, *m <sup>w</sup>		*n		*ñ	*ŋ	
Naman	m		n		n	ŋ	
POC	*w	*l	*r	*dr	*y		*R
Naman	v, *aw > o	l	r (d)	d	y, *ay > e		Ø (r)

## 4. VOWELS

The five POC vowels have developed in Naman into a six-vowel system, with /ə/ in addition to /i e a o u/. In this section, I will first deal with two general processes that apply to more than one vowel, and then discuss the remaining reflexes of individual vowels.

### 4.1 Development of long vowels

Recall that the high and low vowels occur with a length contrast: thus /i:/ contrasts with /i/, /u:/ with /u/, and /a:/ with /a/. This contrast has developed as a result of the juxtaposition of two vowels following the loss of an intervening consonant, usually \*k or \*; and the orthographic representation as double vowels—*ii*, *uu*, and *aa*—captures this nicely

The forms in (34) show regular development of \*aka or \*aqa > aa:<sup>10</sup>

(34)	*na-qase- ‘jaw’	naase-	*paka- ‘multiplicative’	vaa-
	*na-kamaliR ‘meeting house’	naamil	*na-kapika ‘ <i>Syzygium</i> sp.’	naavəx
	<sup>N</sup> *na-kabani ‘a sail’	naaben	*malaso > PMAL *malakaso ‘cold’	melaas
	*na-kaRi(a) ‘ <i>Cordyline</i> sp.’	naari ~ naxari		

Two irregular developments are \*na-makubu- ‘grandchild’ > *naabə-*, with unexplained loss of \*m, and \*bakewa ‘shark’ > *baaxe*.

<sup>10</sup> Examples of nouns in this section are cited with the article \*na prefixed.

The two cases of *uu* in my data that have POC etymologies derive from \*na-qu..., with loss of \*q and assimilation of the \*a of the article to the following \*u: \*na-quti- ‘penis’ > *nuusə-* and \*na-qudu ‘palolo worm’ > *nuud*. However, \*na-qu... rather more frequently becomes *nou*... (35), so it is difficult to explain why the long vowel developed in these two cases.

(35)	*na-quloc ‘maggot’	noul	*na-qusan ‘rain’	nous (N)
	*na-quraj ‘prawn, lobster’	nour	*na-qutan ‘inland, ashore’	nout ‘place’

The one case of *ii* that has a POC etymology is \*na-qasu ‘smoke’ > *niisə-*, where one occurrence of *i* derives from \*q (see 3.3) and the adjacent \*a seems to have assimilated to it.

#### 4.2 Final syllable reduction

There is a very strong tendency for the high vowels to become ə in the environment C\_C#, irrespective of the nature of the vowel that followed what is now a word-final consonant: \*i > ə is shown in (36a), \*u > ə in (36b).<sup>11</sup>

(36)	a.	*siko ‘kingfisher’	ne/jəx	b.	*tuli ‘earwax’	na/dəl
		*sipi(r,R)i ‘coconut lory’	ni/nsəv		*susu ‘breast’	i/səs ‘breastfeed’
		S*b <sup>w</sup> ili ‘close eyes’	i/bəl		*pulan ‘moon’	ni/vəl
		*paliji ‘grass’	nə/vilviləs		*tapun ‘bury’	tevən
		*likot ‘hang’	ləx ‘tie up’		*natu- ‘child’	natə-
		*p <sup>w</sup> ilak ‘lightning’	ni/vəlivəl		*pusuR ‘bow’	ni/vəs
		*lima ‘five’	i/ləm		*pudi ‘banana’	ne/vəns
		*kapika ‘ <i>Syzygium</i> sp.’	na/avəx		*tubu- ‘grandparent’	jəbə-
		*sinaR ‘shine’	i/sən		*maputi(q) ‘white’	mivəs
		*sipo ‘go down’	i/jəv		*sulu ‘torch’	səl ‘burn’
		*papine- ‘man’s sister’	vəvə-		*tunu ‘roast’	te/tən ‘hot’
		*likot ‘hang up’	ləx ‘tie up’		N*ganisu ‘nose’	gunsə-
		E*tikai ‘no’	e/səx		*qasu ‘smoke’	ni/isə-
		*quti- ‘penis’	nu/usə-		*maturuR ‘sleep’	metər

Cases of \*i and \*u remaining *i* and *u* in this environment are rare, with only the following identified:

(37)	a.	*ma-wiRi ‘left (side/hand)’	xə/mir	b.	N*zumi ‘kiss’	jum
		*pica ‘how many?’	i/vis		N*leidumudumu ‘whale’	lidumdum
		N*zila ‘support’	sisil ‘lean (against)’		*tusi ‘write, paint’	tutus

There is also a tendency, though a somewhat weaker one, for \*o to become ə in the same environment as the high vowels (38a), though there are also quite a few cases of \*o > o (38b) in this environment:

(38)	a.	*p <sup>w</sup> osak-i ‘break’	bəj		*tolu ‘three’	i/təl
		*poli ‘buy’	vəl		*pilos ‘turn, change’	vələs
		*ponuq ‘full’	i/vən		*qatoluR ‘egg’	n/adəl
		N*maloku ‘kava’	meləx		*lasoR ‘testicles’	lesə-
		*Ropok ‘run, jump’	i/rəv ‘run away’		*buto- ‘navel’	bəjə-
		*topu ‘sugarcane’	ni/jəv		*lipo- ‘tooth’	ne/lvə-
	b.	*pisiko- ‘flesh, meat’	n/ejoxo- <sup>12</sup>		*toŋoR ‘mangrove’	ne/dəŋ
		*ŋorok ‘snore’	ŋod		N*koro ‘surround, obstruct’	tav kor ‘block’
		*ko(rR)as-i ‘scrape, grate’	xorxor ‘itch’		N*roroŋo ‘quiet’	roŋroŋ ‘to rest’
		*roŋoR ‘hear’	və/roŋ ‘listen’		N*no(k,g)o ‘finish’	nog

<sup>11</sup> In examples in this section, directly possessed nouns are given with a following hyphen, but this assumes a following consonantal suffix (e.g., \*tubu- ‘grandparent’ > *jəbə-* subsumes *jəbəg* ‘my grandparent’. *jəbəm* ‘your grandparent’, *jəbən* ‘his/her grandparent’, etc.

<sup>12</sup> With unexplained loss of \*p.

There are a few occurrences of \*e in the relevant environment, but \*e > ə (39a) is less common than \*e > e here (39b).<sup>13</sup>

(39)	a.	*keli ‘dig’	xəl	N*malakeza ‘green’	melexəns ‘green parrotfish’
		*(q)abe- ‘his body’	n/ibə-		
	b.	*qase- ‘jaw’	na/ase-	*maya-, N*mea- ‘tongue’	nelwe/me-
		*tinaqe- ‘intestines’	ne/sne-	N*tarere ‘to crow’	torer
		*beta ‘breadfruit’	ne/bet	N*leba ‘mud, swamp’	lebeleb

POC \*a, on the other hand, almost never becomes ə in this environment, The only good examples of \*a > ə / C\_C# that I have been able to identify are:

(40)	*saliR ‘float’	səl	*qaca(n,ŋ) ‘name’	n/aŋsə-
	*kamiu ‘you pl.’	(i)gəm	N*sova ‘cough’	nsuvə- ‘breath’
	*qapaRa- ‘shoulder’	nə/vərə-		

### 4.3 \*a

POC \*a underwent low vowel dissimilation,<sup>14</sup> with \*a > e before \*Ca. Examples of dissimilation include the following:

(41)	*tama- ‘father’	teme-	*mataq ‘new’	i/med
	*lalai ‘trochus’	ne/ləl	N*tavala- ‘side’	tevlə-
	N*marani ‘tomorrow’	meran	*masakit ‘sick’	mesix
	*saman ‘outrigger’	ne/nsem	*[pa]paba ‘slipper lobster’	ne/vev
	*patar ‘platform’	(ne)vetevet	*mamaca ‘ebb, of tide; dry’	mes
	*panako ‘steal’	venox	N*vara-si ‘step on’	veres
	*salan ‘path’	ne/səl	*barapu ‘long’	i/ber

This dissimilation, however, was blocked by a neighbouring velar, postvelar or labiovelar. That neighbouring consonant may have preceded the occurrence of \*a, or followed it. Thus dissimilation is blocked in \*m<sup>w</sup>ata ‘snake’ > na/mat (and not \*na/met) by the preceding \*m<sup>w</sup>, and also blocked in \*paŋan ‘feed’ > vaŋan (and not \*veŋan) by the following \*ŋ. Examples of blocking are:

(42)	*waga ‘canoe’	n/oag	*m <sup>w</sup> ata ‘snake’	na/mat
	Sraja- ‘branch’	ne/raja/sə-	N*vaŋa ‘alight (of fire)’	i/vaŋ
	N*lakalaka ‘Zosterops sp.’	nəvi/laxalax	*kaRat-i ‘bite’	xas
	N*tam <sup>w</sup> at(a,e) ‘peace’	damat ‘calm sea’	*ma-raqani ‘become light’	meran ‘tomorrow’
	*kaRaka ‘crawl’	xarax	N*katabola ‘dragon plum’	n/atabal
	*kamami ‘we EXC’	kamem	*paŋan ‘feed’	vaŋan
	N*b <sup>w</sup> arab <sup>w</sup> ara ‘(female) pig’	babarpar	*m <sup>w</sup> aqane ‘male’	ma- ‘brother of woman’

Note in case like N\*maraka ‘stand up’ > merax that the first \*a dissimilates before \*ra but the second \*a does not dissimilate, since it is blocked by the intervening \*k.

POC \*a is generally fronted and raised to e when followed by \*Ci:

(43)	*taliŋa- ‘ear’	delŋe-	*taŋis ‘cry’	i/teŋ
	*b(o,u)kas(i) ‘pig’	bues ‘boar’	*tasik ‘sea’	des/we
	N*dali ‘go around’	del/vəs	N*laŋi ‘wind’	ne/leŋ
	*Rapi ‘evening’	revrev	N*aliali ‘walk’	i/ləl
	N*magi ‘graded society’	megi	N*vara-si ‘step on’	veres
	N*kabani ‘a sail’	na/aben	N*lavi ‘fetch’	lev + ‘give’
	*pati ‘four’	i/ves	*kamami ‘we EXC.PL’	kamem

<sup>13</sup> However, \*a > e is also common in this environment as a result of low vowel dissimilation (see §4.3); I will ignore such cases here.

<sup>14</sup> See Lynch (2003) for discussion of low vowel dissimilation in Vanuatu languages.

There are a few cases where \*a is further raised, to *i* (or in two cases *iə*), in the same environment (44a), and, on the other hand, a few cases where no fronting or raising takes place (44b):<sup>15</sup>

(44) a.	*kamaliR ‘men’s house’	na/amil	b.	*kadik ‘fire ant’	na/xans
	*paliji ‘grass’	nəvilviləs		*kani ‘eat’	xan
	*masakit ‘sick’	məsiəx		<sup>N</sup> *b <sup>w</sup> alika- ‘affine’	balxə- ‘wife’s father’
	*laki ‘marry’	ni/liəx ‘husband’		<sup>N</sup> *marani ‘tomorrow’	meran
	<sup>N</sup> *vali ‘observe food taboo’	i/vil ‘eat from taboo fire’		*kapika ‘ <i>Syzygium</i> sp.’	na/avəx
				*kaRi(a) ‘ <i>Cordyline</i> sp.’	na/ari ~ na/xari

POC \*a also underwent similar fronting and raising when followed by \*Cu, usually to *e* (45a), but sometimes to *i* (45b):

(45) a.	<sup>S</sup> *matuqa ‘right (side)’	xə/metu	b.	*qasu ‘smoke’	ni/isə- (N)
	*maturuR ‘sleep’	metər		*manuk ‘bird’	ni/min
	*panua ‘land, territory’	ne/venu ‘place’		<sup>N</sup> *qavua ‘turtle’	n/ivu
	*patu ‘stone’	ne/vet		*maputi(q) ‘white’	mivəs
	*qasu ‘smoke’	i/es (V)			
	<sup>N</sup> *m <sup>w</sup> alu ‘come out, leave’	melu			
	*tapun ‘bury’	tevən			
	*lapuat ‘bury’	tə/leb			
	*manuka ‘a sore’	menox			

There are, however, also cases where \*a undergoes *backing* and raising in the same environment, to *o* (46a) or, less often, to *u* (46b):

(46) a.	<sup>N</sup> *vasusu ‘(animal) give birth’	vos	b.	<sup>N</sup> *lagu ‘outrigger pegs/struts’	bati/lug
	*matakut ‘afraid’	mətəxtəx		<sup>E</sup> *damu ‘ <i>Dioscorea</i> sp.’	ne/dum
	*takuRu- ‘back’	a/tox ‘be last’			
	*ñamuk ‘mosquito’	ne/nom			
	*taput ‘pick fruit’	tov			
	*m <sup>w</sup> aruqe ‘ <i>Dioscorea</i> sp.’	more ‘vine sp.’			

I cannot establish any conditioning for these variant reflexes, nor for cases like those in (47) where \*a remains *a* in this same environment:

(47)	*b <sup>w</sup> atu(k)- ‘head’	batə-	*qapu ‘ashes’	misn/av
	*natu- ‘child’	natə-	*karu ‘swim to’	garagar

There are occasional unexplained cases of all vowels as occasional reflexes, but the default reflex is *a*; see (42), (44b), (47), and also:

(48)	*qatoluR ‘egg’	n/adəl	*napo(k) ‘a wave’	ne/nav
	*bakewa ‘shark’	baaxe	<sup>N</sup> *b <sup>w</sup> alo ‘fight’	balabal
	*kape ‘reef/rock crab’	na/xav ‘rock-crab’	*yaŋo(-yaŋo) ‘yellow’	yaŋayaŋ
	*wa(l,R)e-wa(l,R)e	na/val ‘vine sp.’ ?	*m <sup>w</sup> aloq ‘coral head’	batn/mal ‘ocean side of reef’
	‘ <i>Flagellaria</i> sp.’			

#### 4.4 The mid vowels

POC \*e is backed and rounded when preceded by \*b<sup>w</sup>, either as *o* (<sup>N</sup>\*sob<sup>w</sup>e ‘join’ > *nsubonsubo/den*, <sup>N</sup>\*b<sup>w</sup>ero- ‘ear’ > *borə-*) or *u* (\*mab<sup>w</sup>e ‘Tahitian chestnut’ > *mobu-* ‘liver’). And, as discussed in §4.2, \*e sometimes becomes ə in the environment C\_C#—see (39a). Otherwise, the default reflex is *e*: see (39b) and also:

<sup>15</sup> Most of the cases where \*a remains *a* before \*Ci have \*k preceding the \*a. I am not sure whether this is significant, as other cases of \*a in this environment undergo fronting..

- |      |                                          |       |                                     |        |
|------|------------------------------------------|-------|-------------------------------------|--------|
| (49) | *bakewa ‘shark’                          | baaxe | *pea (> <sup>N</sup> *bea) ‘where?’ | (e)abe |
|      | <sup>N</sup> *vareqa ‘outside, outdoors’ | vere  | <sup>E</sup> *boRe ‘dream’          | bore   |

POC \*o is often reflected as ə in the environment C\_C# (see §4.2). It is regularly raised to u when adjacent to \*b or \*b<sup>w</sup>:

- |      |                     |                      |                                                  |                             |
|------|---------------------|----------------------|--------------------------------------------------|-----------------------------|
| (50) | *bo- ‘smell, stink’ | i/bu                 | <sup>N</sup> *makobu ‘gecko’                     | muxub                       |
|      | *b(o,u)kas(i) ‘pig’ | bues ‘boar’          | *b <sup>w</sup> o-b <sup>w</sup> oe ‘pufferfish’ | bubu-dis ‘spineless puffer’ |
|      | *boŋi ‘night’       | buŋ ‘day (24 hours)’ | <sup>N</sup> *sob <sup>w</sup> e ‘join’          | nsubonsuboden               |

There are occasional examples of \*o being reflected as a, e or i, but the default reflex is o:

- |      |                                                  |               |                                         |                 |
|------|--------------------------------------------------|---------------|-----------------------------------------|-----------------|
| (51) | *nako- ‘face’                                    | noxo-         | *roŋoR ‘hear’                           | roŋ             |
|      | <sup>S</sup> *b <sup>w</sup> aŋo- ‘mouth’        | boŋo-         | *toŋoR ‘mangrove’                       | ne/doŋ          |
|      | *ŋorok ‘snore’                                   | ŋod           | *tapoRa ‘ <i>Terminalia catappa</i> ’   | dovo            |
|      | *ko(r,R)as-i ‘scrape, grate’                     | xorxor ‘itch’ | *p <sup>w</sup> otu ‘hill, mountain’    | botu/en         |
|      | *toqa ‘fowl’                                     | ne/to         | *tokalau(r) ‘north wind’                | doxolo          |
|      | <sup>N</sup> *taroa ‘ <i>Columba vitiensis</i> ’ | doro          | <sup>N</sup> *koro ‘surround, obstruct’ | tav kor ‘block’ |
|      | *katou ‘hermit crab’                             | no/xto        | <sup>N</sup> *no(k,g)o ‘finish’         | nog             |

#### 4.5 The high vowels

In §4.2, I showed that the high vowels regularly became ə in the environment C\_C#. POc \*i also often became ə before \*Ca (52a) and \*Co (52b):

- |      |    |                       |                        |    |                           |                  |
|------|----|-----------------------|------------------------|----|---------------------------|------------------|
| (52) | a. | *kilala ‘know, see’   | gəlo ‘open eyes, look’ | b. | *pilos ‘turn, change’     | vələs            |
|      |    | *tina- ‘mother’       | səne-                  |    | *b <sup>w</sup> ilo ‘cup, | bəla/sən ‘shell’ |
|      |    | *bilake ‘banded rail’ | bəliex                 |    | coconut shell,skull’      |                  |
|      |    | *kita ‘we INC.PL’     | (i)gət                 |    |                           |                  |

though there are counterexamples:

- |      |                                        |                                     |                              |                        |
|------|----------------------------------------|-------------------------------------|------------------------------|------------------------|
| (53) | <sup>N</sup> *baig(a,e) ‘turban shell’ | beig                                | *pica ‘how many?’            | i/vis                  |
|      | *qipaR ‘spouse’s sibling’              | nivənlel ‘in-law’<br>(lel = ‘tabu’) | <sup>N</sup> *zila ‘support’ | sisil ‘lean (against)’ |
|      |                                        |                                     | *k(ira) ‘they’               | a/ir                   |

The default reflex is i:

- |      |                                                       |          |                                              |                  |
|------|-------------------------------------------------------|----------|----------------------------------------------|------------------|
| (54) | *mimiŋ ‘urine, urinate’                               | mimi (v) | *piRaŋ ‘giant taro’                          | ne/vi            |
|      | *tiana ‘pregnant’                                     | sien     | *kaRi(a) ‘giant taro’                        | na/ari ~ na/xari |
|      | <sup>N</sup> *magi ‘graded society’                   | megi     | <sup>S</sup> *niu-niu ‘ <i>Veitchia</i> sp.’ | ne/nini          |
|      | *p <sup>w</sup> iŋ <sup>w</sup> i(t) ‘squeeze, wring’ | i/vi     | <sup>N</sup> *liua ‘arrow’                   | ni/liu           |
|      | *niuR ‘coconut’                                       | ne/ni    | <sup>N</sup> *miala ‘red’                    | miel             |

Like \*i, \*u is generally reflected as ə in the environment C\_C#, as shown in §4.2 and illustrated in (36b). There are a couple of other weak tendencies: \*uCu or \*uCo > əC (55a), and \*u > e before a possessive suffix in words where the pretonic vowel has been deleted (55b):

- |      |    |                         |             |    |                       |         |
|------|----|-------------------------|-------------|----|-----------------------|---------|
| (55) | a. | *pulu- ‘hair (of head)’ | naans/vələ- | b. | *punut ‘skin, bark’   | ne/vne- |
|      |    | *buto- ‘navel’          | bəjə-       |    | *takuRu ‘back’        | ne/tre- |
|      |    | *tubu- ‘grandparent’    | jəbə-       |    | *suRuŋ ‘fluid, juice’ | ne/swe- |

The default reflex is u:

- |      |                 |         |                         |               |
|------|-----------------|---------|-------------------------|---------------|
| (56) | *quti- ‘penis’  | nu/usə- | *quraŋ ‘prawn, lobster’ | no/ur         |
|      | *luaŋ ‘vomit’   | luolu   | *qudu ‘palolo worm’     | nu/ud         |
|      | *quloc ‘maggot’ | no/ul   | *qutan ‘inland, ashore’ | no/ut ‘place’ |

*taRutu(m,ŋ) ‘porcupinefish’	daut ‘spiny puffer’	*kabu ‘fire(wood)’	xabu ‘burnt’
N*leidumudumu ‘whale’	lidumdum	N*bue ‘bamboo’	ni/bu
N*qavua ‘turtle’	ni/vu	N*buaga ‘swamp taro’	buag ‘taro’
*tuqaka- ‘older same sex sibling’	tuxa- ‘sister, of woman’	*panua ‘land, territory’	ne/venu ‘place’

## 5. WORD STRUCTURE

I very briefly sketched developments in word structure in §2.2, mainly to facilitate the reader’s understanding of the examples cited in §3 and §4 which show reflexes of POC consonants and vowels. In this section, I provide fuller details of those developments.

### 5.1 Loss of word-final consonants

Western Malakula languages vary widely as to the fate of POC word-final consonants (see Lynch 2005): V’ënen Taut and Tape, for example, retain about half of all instances, whereas Nāti and Nahavaq lose just about every instance. Naman belongs with this latter group: the only possible examples of retention are the following:

(57)	*guba(rR) ‘cloud’	no/bobor
	*tuqur ‘stand’	i/tər
	*Rum <sup>w</sup> aq ‘house’	n/emax

Of these, the first is not a secure reflex, since it is missing the initial syllable.

The examples in (58) illustrate loss of various consonants word-finally (usually along with the preceding vowel—see the next section):

(58)	*maquirip	‘alive’	mour	*rarap	‘ <i>Erythrina</i> ’	ne/dar
	*matakut	‘fear’	mətoxtox	*masakit	‘sick’	məsiəx
	*manuk	‘bird’	ni/min	*kadik	‘fire ant’	na/xans
	*piRaq	‘ <i>Alocasia</i> ’ n	a/vi	*draRaq	‘blood’	ne/de
	*taŋis	‘cry’	i/teŋ	*quloc	‘maggot’	no/ul
	*m <sup>w</sup> inum	‘drink’	mən	*kokom	‘hold tight’	go, to/go
	*saman	‘outrigger’	ne/nsem	*salan	‘path’	ne/sel
	*quraŋ	‘prawn’	no/ur	*qaca(n,ŋ)	‘name’	naŋsə-
	*laur	‘seawards’	a/lo ‘by the sea’	*patar	‘platform’	(ne)vetevet
	*pusuR	‘bow’	ni/vəs	*toŋoR	‘mangrove’	ne/doŋ

There are a few cases of apparent retention of word-final consonants, like \*kaput ‘cover’ > *xabəj*, or \*paŋan ‘feed’ > *vaŋan*. However, it is likely that the consonant in these examples, though *root*-final, was not *word*-final: the verb root was probably followed by the transitive suffix \*-i (which also explains the palatalisation of the \*t of \*kaput).

### 5.2 Loss of word-final vowels

In speaking of final vowels, we need to recognise that in forms ending in \*VqV or \*VRV, where the intervening consonant has been regularly lost, a final vowel sequence results. Final \*ai and \*au sequences tend to be reflected as *e* and *o*, respectively:

(59)	*talai ‘clam; axe/adze’	(bat)ne/tele ‘axe’	*sauq ‘far’	tuo/so
	*[ka]ŋaRi, <sup>S</sup> *qaŋaRi ‘ <i>Canarium</i> sp.’	n/eŋe	*tokalau(r) ‘north wind’	doxolo
	*waiR ‘water’	no/we	*m <sup>w</sup> alau ‘megapode’	molo
	<sup>S</sup> *garai ‘flying-fox’	men-gore (men = ‘bird’)	<sup>N</sup> *matailau ‘sister’s child’	metelo
	N*vai ‘copula; do, make, cause’	ve	(male speaker)	
	*tu(q)aRi ‘be long ago’	toxe		

Otherwise, the second vowel of a final vowel sequence is regularly lost:

(60)	*katou ‘hermit crab’	no/xto	*taroa ‘ <i>Columba vitiensis</i> ’	no/toro
	*maya-, <sup>S</sup> *mea- ‘tongue’	nelwe/me-	*tapoRa ‘ <i>Terminalia catappa</i> ’	dovo
	*mataqu, <sup>S</sup> *matuqa ‘right (side)’	xə/metu	*piRaQ ‘giant taro’	ne/vi
	*luaq ‘vomit’	luolu	<sup>N</sup> *bue ‘bamboo’	ni/bu
	*toqa ‘fowl’	ne/to	*panua ‘land, territory’	ne/venu ‘place’

Single post-consonantal word-final vowels were regularly lost:

(61)	*liŋi ‘put, pour’	ləŋ	*pati ‘four’	i/ves
	*sake ‘go up’	sax	*mate ‘die’	i/mes
	*lima ‘five’	i/ləm	*kita ‘we INC.PL’	(i)gət
	*sipo ‘go down’	i/jəv	*maRaŋo ‘dry’	meraŋ
	*topu ‘sugarcane’	ni/jəv	*ma-tolu ‘thick’	mi-təl

As the examples in (58) show, when a final consonant was lost, the vowel preceding it was also lost.

However, note that a root-final vowel that was usually followed by a suffix was not lost (since it was not in fact *word-final*):

(62)	*quti- ‘penis’	nu/usə-
	*tinaqe- ‘intestines’	ne/sne-
	*qapaRa- ‘shoulder’	nə/vərə- ‘arm, hand’
	*lipo- ‘tooth’	ne/lvə-
	*tubu- ‘grandparent’	jəbə-

### 5.3 Loss of pretonic medial vowels

A medial vowel was often lost if it occurred in the syllable before the primary-stressed vowel, but not in the first syllable of the word. In the examples below, primary stress is marked by an acute accent, and directly possessed nouns are suffixed with the 3SG form *\*-na*:

(63)	*na-takuRú-na ‘back’		netre-n
	*na-taliŋá-na ‘ear’	> *daliŋá-na	deŋe-n
	*na-puŋá-na ‘flower’		nevŋa-n
	*na-sukáwa ‘year’		nesxo
	<sup>N</sup> *b <sup>w</sup> alíká-na ‘affine’		balxe- ‘wife’s father’
	*na-tinaqé-na ‘intestines’	> *na-tiné-na	nesne-n
	*na-tavalá-na ‘side’		tevla-n
	*na-punút-na ‘skin’		nevne-n
	*na-lipó-na ‘tooth’		nelvə-n
	*na-ŋ(a)icán ‘when?’	> *na-ŋicán	naŋsen

### 5.4 Accretion of the article *\*na*

The POC common article is attached to many nouns in all Malakula languages. That article had two forms, *\*na* and *\*a*. Most Malakula languages show accretion of *\*na* only, though a few show *\*a* instead of, or along with, *\*na*.<sup>16</sup>

In a number of Malakula languages, especially but not solely those of the Eastern linkage, when a noun root consists of a single syllable,<sup>17</sup> the accreted article is retained (64a); but where a noun root consists of two or more syllables, the article does not appear (64b). This development was first noted for Unua by Pearce (2007).

<sup>16</sup> See Lynch (200) for a general discussing of this phenomenon in Vanuatu and Lynch (2017) for specifics on *\*na* and *\*a* in Malakula. In some languages, the article is separable from the noun root in a number of grammatical contexts, while in others it is more tightly bound to the root and can never or only rarely be separated from it. Naman allows separation only in what Crowley (2006a:65–66) calls “tight compounds”, as in *netite* ‘child’ + *numin* ‘man’ > *netite-mən* ‘boy’.

<sup>17</sup> Whether the original root was multisyllabic or not is not relevant: vowel loss rules have reduced, for example, the two syllables of the root of *\*na kutu* ‘louse’ to one in Unua *naxut*.

(64)	a. POC	UNUA	b. POC	UNUA
	*kutu ‘louse’	na/xut	*mata-na ‘his/her eye’	mete-n
	*ñamuk ‘mosquito’	ne/nom	*qata-mate ‘devil’	demej
	*manuk ‘bird’	ne/men	*b <sup>w</sup> atu(k)-na ‘head’	bati-n
	*m <sup>w</sup> ata ‘snake’	na/mat	N*buaga ‘swamp taro’	bbuax
	*toŋoR ‘mangrove’	na/rroŋ	E*bakuRa ‘ <i>Calophyllum</i> sp.’	bakur

However, the length of Naman roots bears no relation to the presence or absence of the article, with multisyllabic roots like the following taking \*na-:

(65)	N*katabola ‘dragon plum’	na/tabal	*qapaRa- ‘shoulder’	no/xoverə- ‘wing’
	*kara ‘devil nettle’	na/xaxar	S*va-(laka)lakav ‘ <i>Zosterops</i> sp.’	nə/vilaxalax
	*quti- ‘penis’	nu/usə-	*paliji ‘grass’	nə/vilviləs
	*ŋado- ‘gums’	no/ŋode-	*takere ‘fantail’	nuvi/toxotox ‘bird sp. w. yellow tongue’

In Malakula languages, nouns with human reference, and sometimes nouns referring to higher animates, do not take the article. Thus in Naman nouns like the following show no bound \*na- for semantic reasons:

(66)	baaxe ‘shark’	lidumdum ‘whale’	teme- ‘father’
	babar ‘pig’	metelo ‘sister’s son’	səne- ‘mother’
	lektər ‘old woman’	moxi ‘sorcerer’	tuxa- ‘sister, of woman’
	libax ‘dog’	moxot ‘person’	xabət ‘white-skinned spirit’

It appears that at least some Naman nouns referring to body parts and products also do not take the article (but contrast the forms in (67) with words like \*qapaRa- ‘shoulder’ > no/xoverə- ‘wing’, \*quti- ‘penis’ > nu/usə-, or \*ŋado- ‘gums’ > no/ŋode- in (65)):

(67)	batə- ‘head’	gawe- ‘spur on leg of rooster’	mete- ‘eye’
	bəjə- ‘navel’	lesə- ‘male genitals’	miə- ‘urine’
	galə- ‘side, rib’	malgava- ‘finger/toenail’	mobu- ‘liver’

However, there are other nouns which do not take the article, but for which no clear phonological or semantic explanation can be given. These include nouns like the following:

(68)	belever ‘thunder’	loxor ‘circumcision ceremony’	sele ‘anchorage, harbour’
	bour ‘banana variety’	metab ‘open space’	tevtəvbəŋ ‘fog, mist’
	buag ‘taro’	mənse ‘star’	xəjxəj ‘pounded breadfruit’

Now to the shape of the article. The original form, as I have mentioned, was \*na-, but we find all six vowels, plus no vowel, following initial *n*, and we also find cases of \*na-t... > d... Each of these variants is illustrated in (69):

(69)	*laki ‘marry’	ni/liəx ‘husband’	*ku(i)ba ‘imperial pigeon’	nu/xub
	*panua ‘place, land’	ne/venu	*katou ‘hermit crab’	no/xto
	*paliji ‘grass’	nə/vilviləs	*ikan ‘fish’	n/iəx
	*kape ‘k.o. crab’	na/xav	*tasik ‘sea’	des/we (we ‘water’)

But what conditions the shape of the fused article?

Let me start with \*ta-initial nouns. Generally, \*na-ta became *dV*:

(70)	*taliŋa- ‘ear’	delŋe-	N*tarōa ‘ <i>Columba vitiensis</i> ’	doro
	N*tam <sup>w</sup> at(a,e) ‘peace, calm’	damat ‘calm sea’	*taRutu(m,ŋ) ‘porcupinefish’	daut ‘spiny puffer’
	*tapōRa ‘ <i>Terminalia catappa</i> ’	dovo	*tasik ‘sea’	des/we

Two cases of \*na-qata-initial compounds are also treated, after loss of \*q, as if they were \*na-ta-initial: \*qata-mate ‘devil’ > *demes* and \*qata-qutan ‘bush/inland person’ > *daut*. There are a couple of kinds of exceptions:

cases of \*to-initial nouns behaving the same way (71a), and cases of \*ta-initial nouns *not* behaving the same way but taking the “full” article instead (71b):

- |         |                                       |           |    |                        |                    |
|---------|---------------------------------------|-----------|----|------------------------|--------------------|
| (71) a. | *tob <sup>wa</sup> - ‘stomach, belly’ | daba(x)a- | b. | *takuRu- ‘back’        | ne/tre-            |
|         | *tokalau(r) ‘north wind’              | doxolo    |    | *talai ‘clam’          | (bat)ne/tele ‘axe’ |
|         |                                       |           |    | *tanoq ‘earth, ground’ | ne/ten             |
|         |                                       |           |    | *taqe- ‘excrement’     | ne/ji, ne/jə-      |

Next let me deal with cases where only *n* is prefixed to the root. The commonest of these are cases of \*na-CV where \*C was lost, and thus \*na-CV became \*nV:

- |      |                                      |          |                                     |                        |
|------|--------------------------------------|----------|-------------------------------------|------------------------|
| (72) | *[qa]paRa- ‘shoulder’                | n/əvəɾə- | N*katabola ‘ <i>Dracontomelon</i> ’ | n/atabal               |
|      | *qaca(n,ŋ) ‘name’                    | n/aŋsə-  | N*yalo ‘sun’                        | n/al                   |
|      | *qatoluR ‘egg’                       | n/adəl   | *Rum <sup>wa</sup> q ‘house’        | n/emax                 |
|      | S*qajaRi ‘ <i>Canarium indicum</i> ’ | n/eŋe    | *pisiko- ‘flesh, meat’              | n/ejoxo- <sup>18</sup> |
|      | *kabu ‘fire(wood)’                   | n/ab     |                                     |                        |

There are, however, other cases of \*qa- and \*ka-initial nouns where the consonant was lost but the article remained *nV-*, and I cannot explain why these forms differ from those in (72):

- |      |                       |                   |                                  |                    |
|------|-----------------------|-------------------|----------------------------------|--------------------|
| (73) | *qasu ‘smoke’         | ni/isə-           | *kapika ‘ <i>Syzygium</i> sp.’   | na/avəx            |
|      | *qapi-ŋa- ‘armpit’    | no/xove           | N*kabani ‘a sail’                | na/aben            |
|      | *[qa]paRa- ‘shoulder’ | no/xovəɾə- ‘wing’ | *kaRi(a) ‘ <i>Cordyline</i> sp.’ | na/ari (~ na/xari) |
|      | *qase ‘jaw’           | na/ase-           | *kamaliR ‘men’s house’           | na/amil            |

Other apparent instances of prefixation of *n* only are cases of \*na-qa > *ni* (74a), \*na-wa > *noa* (74b), and two cases of (what developed as) an \*i-initial root (74c):

- |         |                           |                                |    |                             |                              |
|---------|---------------------------|--------------------------------|----|-----------------------------|------------------------------|
| (74) a. | *(q)abe ‘body’            | n/ibə-                         | b. | *waroc ‘vine’               | n/ou ‘vein +’                |
|         | *qatop ‘sago, thatch’     | n/iet                          |    | *waga ‘canoe’               | n/oag                        |
|         | N*qavua ‘turtle’          | n/ivu                          |    | *waRisa ‘2 days from today’ | n/oas ‘day before yesterday’ |
| c.      | *ikan ‘fish’              | n/iəx                          |    |                             |                              |
|         | *qipar ‘spouse’s sibling’ | nivənləl ‘in-law’ (ləl ‘tabu’) |    |                             |                              |

Now we come to those cases—by far the majority—where the prefix surfaces as *nV-*, and try to account for the nature of *V* in as many cases as possible. Some of the occurrences of reflexes of the article can be explained by the rules that apply to \*a which were discussed in §4.3; thus:

- The vowel of the article underwent low vowel dissimilation and took the form *ne-* when the POC root which followed began with \*Ca, where \*C is not one of the “blocking consonants” discussed in §4.3—i.e., a labiovelar, a velar, or a postvelar:

- |      |                                |                         |                          |                 |
|------|--------------------------------|-------------------------|--------------------------|-----------------|
| (75) | *baga ‘banyan’                 | ne/bag                  | *napo(k) ‘a wave’        | ne/nav          |
|      | E*damu ‘(k.o.) yam’            | ne/dum                  | *panua ‘land, territory’ | ne/venu ‘place’ |
|      | *draRaq ‘blood’                | ne/de                   | *raun ‘leaf’             | ne/reu-         |
|      | *lalai ‘trochus’               | ne/ləl                  | *salan ‘path’            | ne/sel          |
|      | *(m,k)arawa ‘green parrotfish’ | ne/mer ‘red parrotfish’ | *tanoq ‘earth, ground’   | ne/ten          |

- Where one of these blocking consonants occurred root-initially, however, dissimilation did not take place (whether or not that consonant was subsequently lost) and the vowel remained *a*:

- |      |                           |          |                             |         |
|------|---------------------------|----------|-----------------------------|---------|
| (76) | *kadik ‘black biting ant’ | na/xans  | *kayu ‘tree, wood’          | na/xə   |
|      | *kamaliR ‘meeting house’  | na/amil  | *m <sup>w</sup> ata ‘snake’ | na/mat  |
|      | *kara ‘devil nettle’      | na/xaxar | *qase- ‘jaw’                | na/ase- |

<sup>18</sup> With unexpected loss of \*p.

- POC \*a in the article \*na was often raised to *e* (77a), and sometimes to *i* (77b), before \*Ci:

(77) a.	*lipon ‘tooth’	ne/lvə-	b.	<sup>N</sup> *liua ‘arrow’	ni/liu
	*niuR ‘coconut’	ne/ni		*p <sup>(w)</sup> ilak ‘lightning’	ni/vəlivəl
	*piRaq ‘giant taro’	ne/vi		*pinu(q)an ‘ <i>Macaranga</i> sp.’	ni/vnu
	*siba ‘cut’	ne/səb ‘knife’		*sipi(r,R)i ‘coconut lory’	ni/nsəv
	*siko ‘kingfisher’	ne/jəx			
	*tinaqe- ‘intestines’	ne/sne-			

- Similarly, POC \*a in the article \*na was often raised to *o* (78a), and sometimes to *u* (78b), before \*Cu, and in a couple of cases before \*u or \*w:

(78) a.	<sup>N</sup> *kumaqu ‘ <i>Intsia bijuga</i> ’	no/xmo	b.	*ku(i)ba ‘ <i>Ducula pacifica</i> ’	nu/xub
	*kutu ‘louse’	no/xot		<sup>N</sup> *muki ‘earthquake’	nu/mi
	*quloc ‘maggot’	no/ul		*qudu ‘palolo worm’	nu/ud
	*quraŋ ‘prawn, lobster’	no/ur		*quti- ‘penis’	nu/usə-
	*Ruqa- ‘neck’	no/we-			
	<sup>N</sup> *ure ‘island’	no/urour			
	*waiR ‘water’	no/we			
	*waroc ‘vine’	no/u ‘vein +’			

There are two other apparent sub-regularities not related to the development of \*a discussed in §4.3.

- There are a number of cases of \*na > *ni* before \*Cu:

(79)	<sup>N</sup> *bue ‘bamboo’	ni/bu		*pulan ‘moon, month’	ni/vəl
	*bulut ‘sticky’	ni/bəl ‘ <i>Cordia dichotoma</i> , glue tree’		*pusuR ‘bow and arrow’	ni/vəs ‘bow’
	*kuRita ‘octopus’	ni/xət		*susu- ‘breast’	ni/sə-

- The other sub-regularity is probably a more recent development: there is a tendency for the article \*na to become *no* when the vowel of the first syllable of the root had become *o* (whatever its source was). This would explain these reflexes:

(80)	*kaRo ‘vine (generic), rope’	no/xo		*qapaRa- ‘shoulder’	no/xoverə- ‘wing’
	*katou ‘hermit crab’	no/xto		*qapi-ŋa- ‘armpit’	no/xove-
	*ŋado- ‘gums’	no/ŋode-			

as well as possibly cases like the following from (78a): <sup>N</sup>\*kumaqu ‘*Intsia bijuga*’ > *no/xmo* and \*kutu ‘louse’ > *no/xot*.

## 6. CONCLUDING REMARKS

This discussion of the historical phonology of Naman is intended to help illustrate how the phonologies of Western Malakula linkage languages developed.

## APPENDIX. PROTO-SOUTHERN OCEANIC RECONSTRUCTIONS CITED IN THE TEXT

Data supporting reconstructions to Proto-Oceanic, Proto-Eastern Oceanic and Proto-Remote Oceanic can be found in Ross, Pawley and Osmond (1998, 2003, 2008, 2011, 2016), and to PNCV in Clark (2009). Below, I cite data supporting reconstructions to Proto-Southern Oceanic cited in this paper, from North-Central Vanuatu (NCV), Southern Vanuatu (SV) and New Caledonian (NC). Where the NCV data had led Clark to make a PNCV reconstruction in his 2009 work, I cite only that reconstruction; otherwise, I cite data from individual NCV languages.

<sup>S</sup>\*b<sup>w</sup>aŋo- ‘mouth’  
PNCV \*b<sup>w</sup>aŋo ‘mouth, front of house’

SV: N Tanna *nə/p<sup>w</sup>ajə-* ‘hole’; Whitesands *nə/p<sup>w</sup>oŋə-* ‘hole’; Lenakel *nə/p<sup>w</sup>aj*, *nə/p<sup>w</sup>ajə-* ‘hole’; SW Tanna *nə/p<sup>w</sup>ajə-* ‘hole’; Kwamera *nə/pəŋ*, *nə/pəŋi-* ‘hole’  
The SV forms followed by hyphens are used as the first element of compounds in words for interior of ear, nose, mouth, etc. It is difficult to decide what the primary sense of this word was.

<sup>S\*</sup>b<sup>w</sup>ili ‘close the eyes’

PNCV \*b<sup>w</sup>ili ‘close the eyes’

SV: Lenakel *a/pul* ‘close eyes, sleep’, *a/puliapul* ‘blink’, *a/pul/etin* ‘wink’; Kwamera *a/pri* ‘sleep, close eyes, wink, blink’

NC: Nemi, Jawe *bwi* ‘blind’; Nêlêmwa *bwi* ‘blind person’

<sup>S\*</sup>garai ‘flying-fox’

PNCV \*garai

SV: Sye *na/ŋkrai*; Ura *navso/kikrai* ‘bat’; N Tanna *kəi*; Whitesands *kei*; Lenakel *kəl*; SW Tanna *kil/avən*; Kwamera *kiri* ‘*Pteropus tonganus*’; Anejoñ *ne/kra*

<sup>S\*</sup>lua-mea ‘tongue’

NCV: Neve’ei *ne/leme-*: Avava *leme*

SV: Sye *ne/lwame-* ‘+ flame’, Ura *na/lwame-*, Southwest Tanna *ne/lamə-* and Kwamera *na/ramə-* ‘+ flame’

<sup>S\*</sup>majonu ‘k.o. fish, probably *Caranx* sp., trevally

NCV: Araki *m’atsonu* ‘*C. melampygus*’, Uripiv *mejun*, Neve’ei *ne/mansin* ‘very long trevally’, Nese *ne/nijun*, Namakir *mahon*

SV: Sye *mehen* ‘kingfish (family Carangidae), Lenakel *mihin* ‘rabbitfish’

NC: Jawe *majen bac*

<sup>S\*</sup>matuqa ‘right (side/hand)’

PNCV \*matuqa ‘right hand, right side’:

SV: N Tanna *m<sup>w</sup>adəp*; Whitesands *maru*; Lenakel *m<sup>w</sup>atu*; SW Tanna *matuk<sup>w</sup>*; Kwamera *m<sup>w</sup>atuk*; Anejoñ *n/mata-*

NC: Pije, Fwâi *du/hi*, *du/hi-n*; Nemi *due-hi-n*, *du/hi*, *du/hi-n*; Jawe *jue-hi-n*; Nêlêmwa *m<sup>w</sup>aaguk*; Nyelâyu *m<sup>w</sup>aayu* (?); Iaa *metə*; Nengone *nata*

This is a metathesised form of POC \*matuqa-

<sup>S\*</sup>m<sup>w</sup>aRaki ‘ground dove’

PNCV \*m<sup>w</sup>araki ‘ground dove’

SV: Lenakel *m<sup>w</sup>ak*; Kwamera *mak*

<sup>S\*</sup>niu-niu ‘*Veitchia* sp.’

NCV: Araki *vi-nini*; Raga *niuniu*; Naman *ne/nini*; Neve’ei *na/nini*; Avava, Uripiv *nini*; Larevat *nin*; Nese *na/ni*, *neve/nini*

The Raga form suggests that this form may be a reduplication of \*niu ‘coconut’ and thus attributable to a higher level protolanguage than PNCV.

<sup>S\*</sup>qaŋaRi ‘*Canarium indicum*’

PNCV \*qaŋaRi ‘almond, *Canarium*’

SV: Sye, Ura, Anejoñ *n/aŋai*; Lenakel, SW Tanna, Kwamera *n/aŋe*

Irregular development of POC \*[ka]ŋaRi.

<sup>S\*</sup>va-(laka)lakav ‘*Zosterops* sp.’

PNCV \*lakalaka ‘whiteeye, *Zosterops*’

SV: Sye *ulyap*, *welyap*, *n/elyap*; Ura *ulyap*; Anejoñ *n/huley*

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