An Oceanic Origin for Äiwoo, the Language of the Reef Islands?

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Whether the languages of the Reefs–Santa Cruz (RSC) group have a Papuan or an Austronesian origin has long been in dispute. Various background issues are treated in the introductory section. In section 2 we examine the lexicon of the RSC and Utupua-Vanikoro languages and show that there are regular sound correspondences among these languages, and that RSC languages display regular reflexes of Proto-Oceanic etyma and are therefore Austronesian. We also show that together the RSC and Utupua-Vanikoro languages form an Oceanic subgroup, which we label "Temotu," and that the Temotu group is probably a first-order subgroup within the Oceanic family. In section 3, we examine a variety of constructions and morphemes in Äiwoo, the language of the Reef Islands, to see whether they have plausible Oceanic sources. The answer in most cases is that they do. This is important, as several of these constructions have in the past been given as evidence that the RSC languages have a Papuan origin. We conclude that the RSC languages are Austronesian and that there is no need to posit a Papuan element to explain their origin.

1. INTRODUCTION. The languages that we are concerned with in this paper are located in the Temotu Province of the Solomon Islands. Santa Cruz Island is roughly 390 km from Makira in the main Solomons archipelago to the west and about 270 km from the northernmost Torres Islands of Vanuatu to the south (see map 1).[1] The languages of the area are listed in (1) together with alternate names and abbreviations.[2] Their approximate locations are shown on map 2. The language or languages of Santa Cruz Island (also known as Nedö or Deni) form a chain of dialects. We refer here simply to two for which Tryon and Hackman (1983) supply lexical data, Malo (here labeled Natügu) and Nanggu (here Nagu). Omitted from (1), but included in map 2, are the three Polynesian languages Vaeakau–Taumako (= Pileni), Anuta, and Tikopia.

1. Næss provided the Äiwoo field data and analysis except where indicated, and described aspects of Äiwoo grammar in ways that called into question accounts that assume contact. Ross did the historical phonology and comparisons and is largely responsible for the text of the paper. We are grateful to Alexandre François, Peter C. Lincoln, and John Lynch for their comments on earlier drafts, to Brenda Boerger for sharing data from Natügu, and to Ross Clark for sharing his work on the Reefs–Santa Cruz languages with us.

2. Other language abbreviations are POc, Proto-Oceanic; PTm, Proto-Temotu; [P]RSC, [Proto-]Reefs–Santa Cruz; [P]UV, [Proto–]Utupua-Vanikoro. We have chosen to write names of languages phonemically, as far as our knowledge allows. This means, inter alia, that prenasalization of voiced stops is not transcribed.

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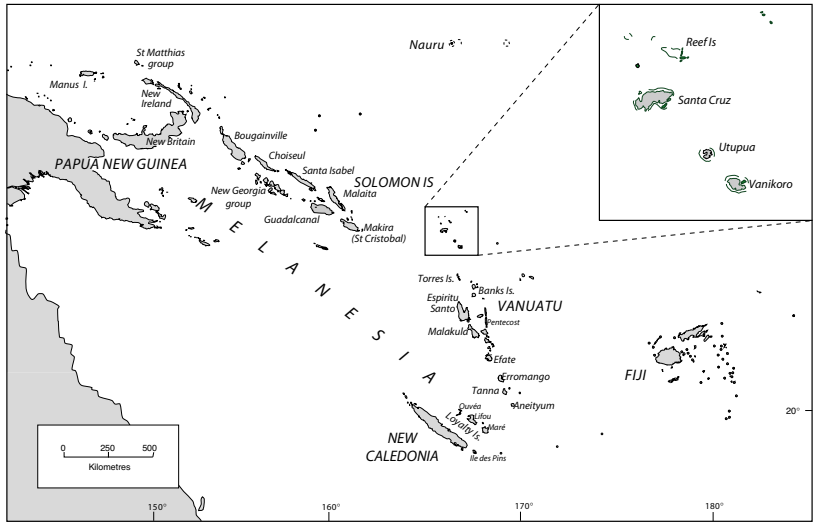
(1) • Reefs–Santa Cruz group
–Äiwoo (= Reefs) [AIW]
–Natügu (= Malo, Lödäi, Nedö) [NAT] [3]
–Nagu [NAG]
• Utupua
–Nebao (= Aba) [NEB]
–Asuboa [ASU]
–Tanibili [TNB]
• Vanikoro
–Buma (= Teanu) [BUM]
–Vano (= Vana) [VNO]
–Tanema (= Tanima, Tetau) [TNM]

There are two Temotu historical topics that we will not consider here. One is contact between Polynesian and Temotu languages (see Næss and Hovdhaugen 2007). Vaeakau-Taumako certainly, and perhaps Anuta and Tikopia as well, have left their mark at least in the form of borrowings on Temotu languages. The second topic is the amazing diversity of the Temotu languages. This is less surprising when one considers the distances between them—the Reef Islands are some 70 km north of Santa Cruz, for example—but distance does not explain the diversity François (2006) finds among the languages of Vanikoro alone.

Instead, our focus is on the genealogy of the languages in (1) and especially upon Äiwoo. The UV languages have been taken to be Oceanic (Tryon and Hackman 1983, Tryon 1994). The genealogy of the RSC group has been questioned ever since linguists have had any knowledge of them (i.e., since Codrington 1885), but our starting point here

MAP 1.

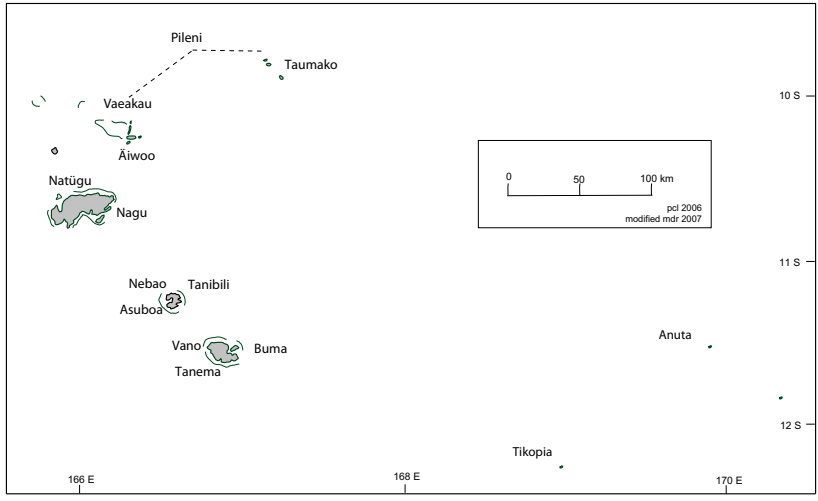


3. Tryon and Hackman (1983) also supply a wordlist for Lwepe, but this is so similar to Malo that we have not taken account of it.

will be two oft-cited papers read at the Second International Conference on Austronesian Linguistics in January 1978 and published as Lincoln (1978) and Wurm (1978). The authors take opposing views. Lincoln (1978:929) begins his paper: "The main theme of this paper is that the Reefs–Santa Cruz (RSC) languages could be classified as Austronesian—or more specifically as Oceanic languages—free from the influence of other language families in the Pacific." Wurm (1978:971), on the other hand, suggests that the RSC languages are descendants of "a non-Austronesian language or languages and that they have incompletely taken over an Austronesian language." He goes on to suggest that there have been several different Austronesian inputs.

We quote Lincoln's opening sentence because others have read him as saying that RSC languages show signs of Papuan contact (Tryon 1994:613; Dunn, Reesink, and Terrill 2002:41), but in the sentence cited above Lincoln specifically eschews Papuan influence on the RSC languages. His position is more radical than his colleagues have acknowledged, and might have received more attention if its radicalism had been recognized. He was not the first radical to take up the cudgels against Wurm's view of RSC as Papuan, however. To conclude his paper, Lincoln quotes the closing sentence of La Fontinelle (1974) who, after presenting a brief phonology and grammar sketch of the Neo dialect of Santa Cruz, notes how similar it is to languages in Vanuatu and New Caledonia and asserts: "… et, en conclusion de cette première étude du Néo, nous optons, au contraire, pour le rattachement de ce dialecte au groupe des langues mélanésiennes."[4] Our position is similar to La Fontinelle's and Lincoln's: the RSC languages—and UV—are Oceanic, and it is unnecessary to posit a Papuan element in their histories.

MAP 2.



4. "… and to conclude this first study of Neo, we opt, on the contrary, to assign this dialect to the Melanesian [Oceanic] language group."

Wurm argues that the RSC languages are Papuan but have undergone contact-induced change through the presence of Oceanic languages. He argues this on two grounds: (i) there is a large proportion of Oceanic vocabulary in the RSC lexica, but regular sound correspondences with other Oceanic languages cannot be established, so the Oceanic words must be loans; (ii) there are grammatical features in the RSC languages that he finds atypical of Oceanic but present in East Papuan languages. These features are principally a variety of gender or noun-classifying devices and the agglutinative verb complexes with their many components.

In a review of possible RSC alternative histories, Clark (1999) shows that Natügu and Nagu reflect Oceanic lexical items with signs of a regular phonological history and reflexes of Oceanic bound morphemes, and gives reasons for believing that there are no statistically significant grounds for positing the presence of Papuan lexicon in Natügu. He remains agnostic on the question of whether Oceanic–Papuan contact forms part of the history of the RSC languages.

More is known today than was known in 1978, both about the Temotu languages and the history of Oceanic and about the typology of language contact situations. A source for Temotu as a whole is Tryon and Hackman's (1983) wordlist collection. For UV we also have Tryon's short grammar sketches (Tryon 1994, 2002). For Santa Cruz we have only the data cited by Wurm (1976, 1978), Lincoln (1978), and Tryon (1994), all of it collected by Wurm, together with Natügu pronoun paradigms and some verbal morphology from Brenda Boerger (pers. comm.). For Äiwoo, however, we have a goodly quantity of material collected in the field and analyzed by the second author of this paper (Næss 2005, 2006a, 2007a, 2007b) and by Frostad (2006).[5]

Thanks to these materials and to an improved knowledge of Oceanic lexicon and POc phonology, it has been possible to recognize Temotu reflexes of POc etyma and to establish sound correspondences for the Temotu languages, including RSC (2.2–2.3). This answers one of Wurm's objections to classifying them as Oceanic. We have been able to go further, however, and to show that they constitute a single group, that this group probably has no members outside the Temotu area, and that the group is probably a primary subgroup of Oceanic (2.4). This is counterevidence to a recent archaeological claim that speakers of the Southeast Solomonic languages have their origins in RSC (Sheppard and Walter 2006).

Wurm's arguments for Papuan contact in Temotu linguistic history are partly typological. Post-1978 contact studies provide some clarity on the significance of typology for diagnosing contact.[6] It is bound forms that reflect the genealogy of a language. Syntax changes relatively easily as a consequence of contact. A good deal of Äiwoo (and for that matter Utupua) bound morphology is Oceanic, pointing to an Oceanic pedigree. But with an increased knowledge of Oceanic typology[7] and Næss's typologically informed description of Äiwoo grammar, some of Äiwoo's alleged peculiarities turn out to be less peculiar than they seemed to Wurm. Its noun-classifying devices (3.2) and verb com-

5. Other materials on Äiwoo that were not consulted in detail in the preparation of this paper are Wurm, Bwakolo, and Moiyâ (1985), Næss (2006b), and Vaa (2006).

6. The efflorescence of contact studies among historical linguists (rather than just creolists) can be dated to the publication of Thomason and Kaufman (1988). On diagnosing types of contact-induced change in Melanesia, see Ross (2003a).

plexes (3.3) can be plausibly derived from early Oceanic grammatical constructions. We take it that what is true of the history of Äiwoo is almost certainly also true of the history of the Santa Cruz languages, but this, of course, remains to be demonstrated.

1.1 GENEALOGICAL ISSUES. Lurking behind the topic of the previous paragraph is a larger issue, namely, what does it mean to say that a language is Oceanic or that it is Papuan? We take the comparative linguist's conventional position: it makes sense to say that a language is Oceanic if a group speaks a language that either (a) has been passed from generation to generation since Proto-Oceanic (POc) times, or (b) has been acquired by a community's shift to a language of which (a) is true. This implies no rejection of contact-induced change. Generational continuity does not exclude the bilingualism that engenders contact-induced change, and—much more rarely—shifting speakers may retain features from their former language.

What does it mean to say that a language is Papuan? "Papuan" is a residual category, a label for all non-Austronesian and non-Australian languages spoken in a region centered on New Guinea but stretching from Timor to the Solomons (except for languages that have entered the region since European contact). Recent work suggests that Papuan languages belong to more that twenty genealogical groups (Ross 2005), and if we want to say that a language is Papuan, we accordingly need to name the group to which it belongs. Wurm suggests that the alleged Papuan elements in Temotu languages are East Papuan (although he trawls further afield at times), but the integrity of East Papuan is also controversial, as it seems to consist of eight genealogical groups, none obviously related to any of the others (Ross 2001, Dunn, Reesink, and Terrill 2002).

Perhaps the indefiniteness of the term "Papuan" has contributed to an unhappy practice among Oceanic linguists of attributing to unnamed "Papuan" sources features of Oceanic languages that cannot be readily attributed to their ancestry. Capell (1943) was an early adopter of this practice, regarding the Oceanic languages of New Guinea as "pidgins" and dividing them up according to their alleged Papuan elements. Most recently Blust (2005) has done "a surprising thing," as Pawley (2006:243) puts it: he argues for the presence of Papuan speakers in Vanuatu and New Caledonia in order to account for allegedly non-Oceanic typological features in the languages of the region. This proposal flies in the face of relevant archaeological evidence, and Pawley (2006) has argued in some detail against Blust's position, which is based on biological and cultural, as well as linguistic, arguments. Pawley argues that there have never been Papuan speakers in southeast Melanesia (which he defines as the islands of the Temotu Province, Vanuatu, New Caledonia, the Loyalties, and the Fiji group). The essence of Pawley's linguistic argument is that the typological features that Blust regards as Papuan can be accounted for as Oceanic. One of them is the presence of serial verb constructions, which are reconstructible in POc (Ross 2004a).[8]

7. Relevant contributions concern the analysis of possessive constructions in Oceanic (Brown and Palmer 2006, Lichtenberk 1983, 1985, Lynch 1996, 2001b, Ross in prep.), of possessive-like verbal morphology in Oceanic verb complexes (Ross 1982, Palmer 2002), and of multistem verb complexes in Oceanic languages (Crowley 2002, Early 1993, Margetts 1999, 2005).
8. Whether the presence of SVCs in POc is a result of Papuan influence is a separate question.

The Temotu area lies on the northern fringe of Pawley's southeast Melanesia. One of Blust's assumptions is that the RSC languages are Papuan, and implicitly that the Temotu area served as a jumping-off point for Papuan speakers to reach the rest of southeast Melanesia. If there are no Temotu Papuan languages, Blust's scenario becomes yet more unlikely. If one looks at a map of the Pacific, of course, the distance between Santa Cruz and the easternmost Papuan language, Savosavo, looks small. But it is 680 km in a straight line from Santa Cruz to Savo, 390 of them across open ocean.

The archaeology indicates that the Reef and Santa Cruz islands had been settled by Lapita people around 3200 BP and that this was the first human settlement there (Green 2003). This makes it one of the very earliest Lapita settlements outside the Bismarcks. One would expect the whole of northwest Melanesia from the Bismarcks to the eastern end of the Solomons archipelago to have been settled before this, but on present evidence this does not seem to have occurred. At the earliest the New Georgia group in the western Solomons shows signs of settlement 300–400 years after the Reefs and Santa Cruz (Felgate to appear). The apparent lack of early Lapita settlements in the Solomons has caused Sheppard and Walter (2006) to propose that Lapita settlers somehow leapfrogged the Solomons to arrive in the Temotu area. It is not our brief to engage in archaeological argument, but if the Temotu languages form a primary subgroup, then this suggests that the arrival of their ancestors was separate from the arrivals of either the Southeast or Northwest Solomonic groups in the areas they currently occupy.

Given the early settlement of the Temotu group and their isolation, it is reasonable to suggest that the Temotu languages, including RSC, are Oceanic languages that owe their oddities to developments that have occurred independently of the rest of Oceania.

1.2 ORTHOGRAPHY. The phonemes *b, d, g* are prenasalized throughout UV, on Santa Cruz, and in the northern dialects of Äiwoo. In the practical orthographies of Äiwoo and Santa Cruz, /ñ/ and /ŋ/ are written as *ny* and *ng,* respectively, but we have used *ñ* and *ŋ* in this project to facilitate searching in our database. In Äiwoo the pairs /n/~/ñ/, /t/~/s/, and /d/~/ɟ/ are neutralized before /i/ and are here written *ñ, s,* and *j,* respectively; they are distinct elsewhere.

RSC vowel phonemes and their representation in the practical orthographies used by Wurm for Santa Cruz and Næss for Äiwoo are shown in (2). Parenthesized vowels occur only in Santa Cruz languages.

(2)

i	(*ü*) [ʉ]	*u*
e	(*ë*) [ə]	*o* [o]
ä [æ]	(*ö*) [ɞ]	*â* [ɑ,ʌ,ɔ]
	a	

Wurm (1978:969) uses *a̲* instead of *â* and gives its phonetic value as [ɔ,ɒ]. He gives the phonetic value of *ë* as [ʌ].

The languages of Vanikoro have a five-vowel system, /i e a o u/ (Alexandre François, pers. comm.). This is probably also true of the languages of Utupua, but we do not know this for certain and thus retain the phonetic distinctions in Tryon and Hackman's wordlists, using the RSC orthography to represent them.

2. TEMOTU HISTORICAL PHONOLOGY. Some initial sense of the degree of relationship among the Temotu languages and with other Oceanic languages can be gained by an examination of the POc and Temotu numerals from 1 to 9 in table 1. Once one recognizes that the disyllabic form of each numeral from 2 to 9 has been truncated by the loss of its second syllable and that in most cases the resulting monosyllable is preceded by another syllable that was once a prefix, then some sense of systematicity emerges in table 1. The monosyllables display regular sound correspondences (cf. table 2). Furthermore, the numerals from 1 to 4 allow us to see which languages use additive (Äiwoo, Natügu, Nebao, and Tanibili) or subtractive (Nagu) forms—shown in italics—for the numerals 6 to 9. Asuboa, Buma, Vano, and Tanema have full decimal systems.

Closer investigation reveals more Oceanic features. In Äiwoo the numbers 6–9 are formed with a morpheme *pol*V-, perhaps cognate with Bali-Vitu and Bola *polo-*. The prefixed syllables probably reflect earlier numeral classifiers. The general POc numeral classifier was *puaq 'fruit', which is perhaps reflected as the first syllable of Äiwoo *u-vä* '4'. Asuboa *t*V-, *si-*, and *su-* are conditioned reflexes of a PTm *tV-, presumably reflecting the POc classifier *tau 'person' (Lynch, Ross, and Crowley 2002:73–74), as are the initial syllables of Buma and Vano 2–9 and Tanema 3 and 4. A number of initial syllables in Äiwoo, Nagu, Nebao, and Tanema reflect a PTm *lV- of unrecognized origin.

Some of the forms here can also serve as a warning. Nebao *varo* '8' and *wa-hia* '9' look suspiciously like reflexes of POc *walu '8' and *siwa '9', but in the context of the number systems of the individual languages we see that they belong to an additive system and mean '(five) plus three' and '(five) plus four'.

The forms in table 1 also provide a foretaste of the unexplained in Temotu historical phonology. Truncation of disyllabic roots is normal in RSC languages, but unexpected in UV.

2.1 SOUND CORRESPONDENCES. Establishing the sound correspondences of the Temotu languages is a major step in establishing that they are Oceanic. Consonant correspondences are given in table 2. More lexical data are urgently needed, as some reflexes are attested by only one etymon, and POc *j and *y are omitted for want of data. Most reflexes are better supported, however. There are several facts about the phonologi-

TABLE 1. NUMERALS IN TEMOTU LANGUAGES

	POc	Aiw	Nat	Nag	Neb	Asu	Tnb	Bum	Vno	Tnm
1	*ta-sa	nyigi	tʌe-sʌ	tëte/ëte	tua	sika	suo	iune	tilu	keo
2	*rua	li-lu	li	la-li	l-lu	yuw	bu-yu	ti-lu	ta-ru	la-lu
3	*tolu	eve	tü	lʌ-tü	tʰɔ	tou	bo-kʷo	te-te	te-lu	a-o
4	*pat[i]	u-vä	pʷä	lʌ-fɔ	hia	si-via	mā-piɔ	te-va	ta-va	a-va
5	*lima	vi-li	nʌlvü	lʌ-mëf	haŋi	si-ni	kavili	ti-li	te-li	le-li
6	*onom	pole-gi	e-sʌ-mʌ	lʌ-mëtʰemë	uru	su-ɔ	kavili suɔ	tu-o	ta-wo	o
7	*pitu	pole-lu	ë-li-mʌ	tumë-tu	va-lu	ti-bi	suo-vi-yo	ti-bi	te-bi	oi-bi
8	*walu	pole-e	ë-tü-mʌ	tumë-li	va-ro	ta-a	ve-vi-ro	t-ua	ta-pʷa	ebisoa
9	*siwa	polo-uvä	ë-pʷä-mʌ	tumë-te	wa-hia	to-iju	vere-ve-pio	ti-di	ta-du	suaidi

cal histories of Temotu languages that cannot be readily encapsulated in a table of sound correspondences. These are described in 2.2 and 2.3.

We attempt only a rough sketch of phonological history here, partly because the data do not allow us to fill in many details and partly because our focus is on Äiwoo. We shall not deal with the histories of vowels, other than to say that they are rather complex, involving deletion, epenthetic insertion, and harmony.

TABLE 2. REFLEXES OF POC CONSONANTS AMONG TEMOTU LANGUAGES†

	Reefs/Santa Cruz			Utupua			Vanikoro		
	AIW	NAT	NAG	NEB	ASU	TNB	BUM	VNO	TNM
*p	v	v	v	v (h, Ø)	v (p, Ø)	v, p	v, p	v, p	v, p
*p/_*u	—	—	—	—	—	Ø	Ø	Ø	Ø
*p/_*u, o	Ø	Ø	Ø	—	w‡	—	—	—	—
p/_#	—	—	—	—	…	p	Ø	p	v
*b	b	b	b	b	b	b	b	b	b
*m	m	m	m	m	m	m	m	m	m
*w	w	…	…	Ø	Ø	Ø, w‡	Ø, w	Ø, w	Ø
*pʷ	…	pʷ	pʷ	vʷ	w	p	p	p	b
*bw	…	…	…	…	…	b	b	…	…
*mʷ	mʷ	m	m	mʷ	m	…	m	m	…
t/#_	t	t (l)	t	r (t)	t	t, r, kʷ	t	l, t††	∅, t
*t/_*u	—	—	—	—	y	s	s, k	—	s
*t/_*u, i	t	l	…	r, t	s	—	—	s	—
*t/V_V	Ø	l	l	r, t	d	t, r, kʷ, Ø	t	l	t
*d	d	…	d	…	…	j	d	d	d
*r	l	l	l	l	l, n, Ø	l (Ø)	l	l	l
*r/_*u	l	l	l	l, Ø	y, Ø	y	l	r	l
r/_#	l	l	l	—	—	—	r	r	r
*dr	d	d	d	…	d, j	j/_i	d	d	d
*s	s	…	…	…	Ø, s	Ø	s	s	s, d, c
s/_#	—	—	—	—	—	—	r	r	r
*l	l	l	l	l (Ø)	n, Ø	l (Ø)	l	l	l
*l/_*u	l	l	l	l	y	y	l	l	l
*n	n	n	n	n	n	n	n	n	n
*c	…	…	…	Ø	Ø	s, Ø	Ø	y, Ø	Ø
*ñ	…	…	…	n	n, y	n	…	…	…
k/#_	k, Ø	k	k, Ø	Ø	k, Ø	k, Ø	Ø	k	k
*k/*V_V	Ø	Ø	…	…	Ø	Ø	Ø	Ø	Ø
k/_#	—	—	—	—	Ø, s	Ø, y	k	k	k
*g	…	…	…	g	g	g	…	…	…
*ŋ	ŋ	ŋ	ŋ	ŋ	ŋ	…	ŋ, g	ŋ	…
*ŋ/_*i	ŋ	n	n	n	ŋ	ŋ	ŋ	ŋ	ŋ
*q	k, Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø
*R	l	l, Ø	l, Ø	Ø	l, Ø	Ø	l, Ø	l	l, Ø
R/_#	—	—	—	—	—	—	r	r	r

† The correspondences in table 2 are the outcome of a re-study of Tryon and Hackman's Temotu wordlists in the light of work in the intervening quarter-century, and differ in various ways from the correspondence tables in Tryon and Hackman (1983:77–108). Parentheses around a segment indicate that it is less common than the unparenthesized reflex. The notation "…" indicates the absence of a reflex, and "—" that the relevant environment does not occur, e.g., the language does not retain POC final consonants.

‡ The phone *w* may here represent the phonetic transition between an unrounded and a rounded vowel or vice versa, i.e., phonemic Ø.

†† Nouns reflecting POC *t have initial *l-*, verbs have *t-*.

2.2 CANONIC FORMS. The canonic forms of Temotu languages differ widely, even though there is reasonable evidence that they constitute a subgroup and are descended from a single interstage language, Proto-Temotu (PTM) (see 2.4). The development of these differences is discussed in this section.

PTM must have retained at least POC final *-p, *-m, *-s, *-r, *-R, and *-k, as they are reflected in Vanikoro languages, followed by an added vowel, as shown in (3) through (8). An added vowel suggests that *-q was retained until relatively recently.[9] POC *-m and traces of other POC final consonants are also present in Utupua languages. Generally, however, Utupua languages have lost POC final consonants. Utupua cognates, where they are known, are shown in parentheses below. Reflexes of final consonants and added vowels are shown in bold.

(3) ***-p**:[10]
  a. POC *maqurip 'alive' > BUM *malu**o*** VNO *mili**pie*** TNM *magili**va*** 'life' (TNB *migi**pio***)

In Buma *maluo* 'life', *-o* appears to reflect the added vowel after a now lost reflex of final *-p.

(4) ***-m**:
  a. POC *rodrom 'be dark, be night' > BUM *nede**mo*** VNO *nedu**me*** TNM *lado**me*** 'night'
  b. POC *lalom 'inside (N)' > BUM *ne-le**ma*** 'inside (ADV)'
  c. POC *rabum 'grass' > BUM *abo* VNO *abu**me*** TNM *abo**me*** (NEB *abë**më*** ASU *lɔbu**mɔ*** TNB *ubo**mɔ***)

In (4c) Utupua languages also retain final *-m. This is the only instance in our data where all three Utupua languages reflect a POC final consonant.

(5) ***-s**:
  a. POC *manipis 'thin' > BUM *meñevi**ro*** VNO *menievi**re*** TNM *mepi**ri***
  b. POC *panas 'hot' > TNM *pana**ra*** (but BUM VNO *pana*) (TNB *kei-pono*)

In (5b) Buma and Vano do not reflect *-s, but Tanema does: we have no explanation for this.

(6) ***-r**:
  a. POC *laur 'sea, seawards' > VNO *lau**re*** 'reef'
  b. POC *b$^{(w)}$arapu 'long' > *bapur > PUV *biau**rë*** > BUM *biou**ro*** VNO *beu**re*** TNM *va-beu**ra*** (ASU *a-bawâ* TNB *kei-beu*)

PUV *biaurë 'long' reflects POC *r as a final consonant (the medial reflex would be PUV *l): by inference it reflects a metathesized and consonant-final form, *bapur, of POC *b$^{(w)}$arapu.

(7) ***-R**:
  a. POC *qauR 'bamboo' > BUM *jo-ko**ro*** VNO *je-wi**re*** TNM *o-kau**re***
  b. POC *waiR 'water' > BUM ***e**ro* VNO *wi**re*** TNM *n-i**ra*** (NEB *n-ie*, ASU *n-io*, TNB *no-wio*)
  c. POC *qio(r,R) 'spear, arrow' > VNO ***o**re* TNB VNO ***o**ra*** 'bow'
  d. POC *pusuR 'bow' > BUM *viso**ne***

9. POC final *-t and *-n are lost. We have no evidence about *-l or *-ŋ.

10. The Vano and Tanibili reflexes in (3a) are odd in reflecting the *-io* development (see 2.3).

Buma reflects *-R as *-n-* rather than as expected *-r-* in (7d).

(8) ***-k**:
  a. POc *manuk 'bird' > BUM *menu**ko*** VNO *menu**ka*** TNM *manu**xa*** (TNB *miñi**a***)
  b. POc *ñamuk 'mosquito' > BUM *mu**ko*** VNO TNM *mu**ka*** (ASU *mu**so*** TNB *nomu**yo***)

The *-a* of TNB *miñia* 'bird' appears to reflect an added vowel after a now lost reflex of *-k. The listed reflexes of POc *ñamuk 'mosquito' appear to reflect a form that has lost its first syllable, PUV *mukë. Vanikoro languages also reflect an added vowel in items reflecting final *-q, but the reflex of *q itself has vanished:

(9) ***-q**:
  a. POc *meRaq 'red' > BUM *molo**e***
  b. POc *tanoq 'earth' > BUM *tanâ**e*** VNO *leno**e***
  c. POc *buaq 'areca nut' > BUM *bui**oe*** TNM *boi**e***

A few alienable nouns in Vanikoro and Utupua languages have an accreted initial *nV-*, as in (7b), reflecting the POc determiner **na*, but this accretion seems quite unpredictable. It seems evident that PTM retained the POc determiner in its NP construction, but it has been lost as a separate morpheme in all the modern Temotu languages.

RSC languages have gone a step further than their sisters on Utupua, as (10) and (11) show. POc nouns—except for some inalienables—are reflected with loss of their final syllable (*-CV# or *-CVC#). We label this syllable-loss "truncation." In Äiwoo there is also regular accretion of initial *n*V-, reflecting POc *na.[11] In Natügu and Nagu this accretion is sporadic. Wurm (1976:647) believed that the "petrified article forms" *n*V-, *t*V-, and *l*V-were "loosely associated with different semantic areas," but *n*V- simply occurs on directly inherited nouns, and *t*V- on nouns borrowed from a Polynesian language. The source of *l*V- is not known.

(10) POc disyllabic nouns
  a. POc *api 'fire' > AIW *ñie* NAT *ñë*
  b. POc *pose 'paddle' > AIW *näve* NAT *nëâ*
  c. POc *raqan 'branch' > AIW *nula* NAT *nëla* NAG *lëlaa*
  d. POc *kutu 'head louse' > AIW *nou* NAG *nâwi* (NAT *tëkutu* is a Polynesian loan)
  e. POc *pudi 'banana' > AIW *nou*
  f. POc *wakaR 'root' > AIW *nuwo* 'bottom, base'[12]
  g. POc *laŋo 'housefly' > AIW *nulâ*
  h. POc *bu[s,t]o 'navel' > AIW *nubu*
  i. POc *mauRi 'left' > AIW *numou*
  j. POc *poñu 'turtle' > NAT *nʌü*[13]
  k. POc *bebe(k) 'butterfly' > NAT NAG *bë*
  l. POc *boŋi 'night' > AIW *bu* 'night' NAT NAG *bo* 'black'
  m. POc *nus[ao] 'squid' > NAT *nüni*

11. There are numerous nouns in RSC languages that are not directly inherited reflexes of a POc etymon and which consequently lack *nV-*. Äiwoo noun forms in compounds also lack *nV-*.
12. The meaning suggests that this may instead reflect POc *puqun 'bottom, base'.
13. AIW *toponu* is a Polynesian loan; AIW *eâu-* occurs in compounds and is cognate with NAT *nʌü*.

n. POc *qawa 'mouth' > NAT *nao*
o. POc *ŋis(a,i)-'molar tooth' > NAT *nüŋi* NAG *nüŋü*
p. POc *waga 'canoe' > NAT *nuwë*

(11) POc trisyllabic nouns
a. POc *bakewa 'shark' > AIW *nubââ* NAT *b^{v}a* NAG *nüg^{w}a*
b POc *baReko 'breadfruit' > AIW *ñibälo* NAT *bia*
c. POc *qalipan 'centipede' > NAT *nalë* NAG *nale*

It seems that truncation did not occur if one of the syllables of a POc disyllabic noun was vowel-initial:

(12) *VCV(C):
a. POc *aŋin 'wind' > AIW *ñeŋi*

(13) *CVV(C):
a. POc *pua(q) 'fruit (N)' > AIW *nuwa* NAT *nëa* NAG *nâa*
b. POc *waiR 'water' > AIW *nuwoi*
c. POc *laur 'open sea' > AIW *nelo* 'sea' NAT *pë-la*

Verbs and (at least some) inalienable nouns retain their final syllable, presumably because at the time truncation occurred the final syllable of the root was not the final syllable of a phonological word. Inalienable nouns typically have a suffix indicating the person and number of the possessor. The verbs require further investigation.

A large majority of POc noun roots were disyllables, and loss of the final syllable leaves only a single-syllable root in RSC languages, as (10) shows. This evidently led to a high degree of homophony and consequently to lexical replacement and compounding. This in turn means that even many basic vocabulary items do not obviously reflect a POc form and that reflexes of even initial consonants are relatively rare (as Wurm 1976:646 noted). Truncation means that RSC reflexes of POc medial consonants are rarer still. Those RSC reflexes that can be identified, however, display regularity. The only exceptions are POc *k and *q, which each split into *k* and zero (a common enough split in Western Oceanic languages), and *R, which is sporadically deleted (as it is in Mussau and in the languages of Remote Oceania; see 2.4).

One phonological change, syncope, preceded truncation.[14] If the pre-PRSC reflex of a POc disyllable had the form *BVLV, where *B was a bilabial and *L either pre-PRSC *l or *n, then the first vowel was lost, giving cluster-initial PRSC *BLV. If the resulting form was a noun, it did not undergo truncation because it was now a monosyllable. Natügu and Nagu usually (and Äiwoo in one instance) retain the *BL cluster, but it is usually simplified in Äiwoo and sometimes in Natügu and Nagu (PRSC *pl > AIW *l, v, p*, PRSC *pn > AIW *p*, PRSC *mn > NAT *m*, PRSC *ml > *bl > NAT *p*). Reconstructions for two putative interstages, pre-PRSC and PRSC, are shown below in order to show the sequence of changes, but these reconstructions are at best approximate, and their vowels are little better than guesses.

14. This rule was presented in a somewhat different form by Clark (1999).

(14) a. POc *pulu 'body hair, feathers' > pre-PRSC *pulu > PRSC *na plu > AIW *ñiluu* 'body hair, feathers', NAT *nöplö* 'feathers', NAG *nöplü* 'body hair'
b. POc *puluq 'ten' > pre-PRSC *pulu > PRSC *na plu > NAT *nʌpnu,* NAG *nëpnu*
c. POc *patu 'stone' > pre-PRSC *palu > PRSC *na plë > AIW *ñiivä,* NAT *ë-plë,* NAG *â-pya*
d. POc *panaq 'shoot, arrow' > pre-PRSC *pana > PRSC *na pna > Aiw *e-pâ* 'shoot', *ño-paa* 'fishing arrow', *ñe-pâ* 'fighting arrow', NAT *nipna* 'arrow'
e. POc *penako 'steal' > pre-PRSC *penao > PRSC *pnä > AIW *pä, pââ,* NAT *pla-tile,* NAG *plã*
f. POc *pano 'go away from speaker' > pre-PRSC *pano > PRSC *pno > AIW *pu*
g. POc *bulan 'moon' > pre-PRSC *bula > PRSC *ple > AIW *nepe*
h. POc *mata 'eye' > pre-PRSC *mala > PRSC *na mnâ (consonant assimilation) > NAT *mâ,* NAG *mnâ*
i. POc *meRaq 'red' > pre-PRSC *mela > PRSC *mlâ > AIW *o-plo,* NAT *pâ,* NAG *i-bla*
j. POc *marawa 'green' > pre-PRSC *malawa > PRSC *mlâ(wa) > NAG *i-blâ-ŋâ*
k. POc *madri(d)riŋ 'cold' > pre-PRSC *madiri > PRSC *mli(ri) > NAG *i-mya*

POc *p is normally lenited in RSC languages, becoming zero before *u in Äiwoo and before *u or *o in Natügu and Nagu, and *v* elsewhere (cf. 10b, 10e, 10j, and 13a). However, syncope evidently occurred before lenition, and blocked the latter, so that POc *p is reflected as *p* in the examples in (14). Two Äiwoo examples, *ñiluu* 'body hair' in (14a) and *ñiivä* 'stone' (14c), defy this generalization, but lack of data prevents us from investigating these apparent exceptions further.[15] Unlenited *p* occurs also after cluster simplification, in Äiwoo *pä, pââ* 'steal', *pu* 'go', *nepe* 'moon', and in Natügu *pâ* 'red'. It seems likely that cluster simplification is also the source of the unlenited voiceless stops *t* and *k*.

(15) a. POc *tuna 'eel' > pre-PRSC *tuna > PRSC *tnâ > AIW *neta* 'eel', NAG *neta, nâtnâ* 'fish'
b. POc *tanoq 'earth' > pre-PRSC *tano > PRSC *tnâ > NAT *dë-tā,* NAG *mei-tnâ*
c PRSC *tnu 'name' > NAT *dë-tü,* NAG *nâ-tnu*
d. POc *kilala 'know' > pre-PRSC *kilala > PRSC *klâ(la) > AIW *kää,* NAT *klâ*

It is almost certain, however, that *p*, *t*, and *k* have other sources beside cluster reduction.

2.3 MULTIPLE REFLEXES. A number of multiple reflexes of POc phonemes are shown in table 2, especially in the languages of Utupua. In principle there are several reasons for alternant reflexes:

1. they are allophones of a single phoneme;

15. In view of the *-ä* of *ñiivä* 'stone', it is possible that the latter reflects truncation, not syncope.

2. they are the result of an incomplete sound change, that is, one that has not (yet) affected all eligible lexical items;
3. they reflect conditioning that has not been recognized/identified;
4. they are the outcome of borrowing from a related language. This last, borrowing, has been invoked to explain aspects of Temotu linguistic history. In this section we show that at least some of the multiple reflexes in table 2 are the results of conditioning and that the need to appeal to borrowing is quite small.

The top row of the table shows *v* and *p* as alternant reflexes of *p in five languages. The phone *v* appears to be the default reflex in every Temotu language, and it is thus *p* that requires explanation. One context in which *p* regularly occurs is before the word-final vowel sequence *-io* in Tanibili, *-ie* in Vano. Because [p] far more frequently becomes [v] in the world's languages, especially between vowels, we infer that lenition has been blocked in this environment in these languages but occurs elsewhere. It is not blocked before word-final *-io* in Asuboa: see (16a-ii) and (16c-ii). Where do Asuboa *-vio*, Tanibili *-pio*, Vano *-pie* come from? As the PUV reconstructions in (16) show, we think they reflect PUV *-pë, where *-ë was a neutralized word-final vowel (schwa, we assume).

(16) a. POc *api 'fire' > PUV *apë >
  i. NEB *n-eve* (< *evie ?) TNM *ñiava*
  ii. ASU *ñ-ivio* TNB *no-ipio* VNO *n-epie*
 b. POc *qupi 'yam' > PUV *upë >
  i. BUM *uwâ* TNM *uva*
  ii. TNB *no-upio* VNO *upie*
 c. POc *topu 'sugarcane' > PUV *topë >
  i. BUM *tâ* TNM *ova*, *rova*
  ii. ASU *tovio* TNB *no-kopio* VNO *lepie*
 d. POc *maqurip 'alive' > PUV *ma[g]ulipë >
  i. BUM *maluâ* TNM *magiliva*
  ii. TNB *migipio* VNO *milipie*

This diphthongization of PUV *-ë is an unusual change, and we do not know why it blocked lenition of *-p- in Tanibili and Vano.

Schwa diphthongization is a regular process, also attested word-finally when there is no preceding *-p-, as the examples in (17) show. Note the difference in the distribution of reflexes. In (16) Nebao (Utupua), Buma, and Tanema (Vanikoro) occur as the (i) reflexes, that is, those that do not undergo diphthongization, while Asuboa, Tanibili (Utupua), and Vano (Vanikoro) occur as the (ii) reflexes, which do undergo diphthongization. In (17) the division instead is into Vanikoro and Utupua. Vano apparently has diphthongization only after *-p- and otherwise behaves like the other Vanikoro languages. Vanikoro etyma in which a POc final consonant survives do not undergo schwa diphthongization: it is not clear why this is the case. Asuboa and Tanibili (Utupua) both undergo diphthongization of the final vowel that remains after the final consonant is dropped (Nebao usually doesn't).

(17) a. POc *aŋin 'wind' > PUV *ŋë >
  i. VNO *nini-ŋa*
  ii. ASU *ni-ŋio* TNB *no-ŋio*

b. POc *waiR 'water' > PUV *werë >
   i. BUM *ero* VNO *wire* TNM *n-ira*
   ii. post-PUV *wë > NEB *n-ie* ASU *n-io* TNB *no-wio*
c. POc *niuR 'coconut' > PUV *ñurë >
   i. BUM *luro*
   ii. post-PUV *në > NEB *na-në* ASU *u-ñio* TNB *no-ñio*
d. POc *meRaq 'red' > PUV *mërë(q)ë >
   i. BUM *moloe*
   ii. post-PUV * më > NEB *i-me* TNB *kei-mo-mio*
e. POc *mauRi 'left' >
   i. PUV *mauRë > NEB *muyë* BUM *mouro* VNO *maure*
   ii. post-PUV *mauë > TNB *ko-muyo*
f. POc *ñamuk ' mosquito' > PUV *mukë >
   i. NEB *muyë* BUM *muko* VNO TNM *muka*
   ii. post-PUV *muë > ASU *muso* TNB *no-muyo*

Although questions about diphthongization remain to be answered, it is significant in two respects. First, the examples in (16) cut across the Utupua/Vanikoro boundary. Because the change is an unusual one, it implies that the UV languages still formed a dialect network when diphthongization occurred. Second, the regular patterning of diphthongization indicates that it—and the blocking of *-p-lenition—are the outcomes of language-internal change. At least in these cases, the presence of *v* and *p* as alternant reflexes of POc *p does not result from borrowing but from conditioning.

Two other items reflecting unlenited *p* are shown in (18).

(18) a. POc *penako 'steal' > NEB *be-n^{h}o* BUM *punuo* VNO *a-penoa*
b. POc *panas 'be hot' > NEB *i-n^{h}e* TNB *kei-pono* BUM VNO *pana* TNM *panara*

Note that Nebao *n^{h}* is the regular reflex of the POc sequence *pVn- (cf. *ra-n^{h}ë* 'village' < *panua, *na-n^{h}a* 'shoot (an arrow)' < *panaq).

The items in (18) are part of a larger Temotu pattern whereby, if an initial *p-, *t-, or *k- has both a fortis and a lenis reflex in a given language, verbs reflecting that initial display the fortis reflex, whereas nonverbs usually display the lenis reflex, (though Tanibili is a partial exception). Care is needed here. Evidence is only valid where a language has both fortis and lenis reflexes of a particular POc voiceless stop. For example, Äiwoo, Nagu, Asuboa, Buma, and Tanema have no lenis reflex of *t-, so fortis reflexes of *t- in these languages are irrelevant. Word-initial contrasts between fortis and lenis reflexes are shown in (19). The gaps may be real or may be due to lack of data.

(19)

	AIW	NAT	NAG	NEB	ASU	TNB	BUM	VNO	TNM
*p-	—	—	—	—	p/v	p/v	p/v	p/v	p/v
*t-	—	t/l	—	t/r	—	t/r	—	t/l	—
*k-	k/Ø	—	k/Ø	—	k/Ø	k/Ø	—	—	—

The (a) examples in (20) and (21) are verbs with fortis initials, while the (b) examples are nonverbs with lenis initials:

(20) a. i. POc *taRaq 'chop with adze' > NEB *ta* VNO *tale* 'cut'
ii. POc *taŋis 'cry' > NEB *tane* VNO *teŋi*
iii. POc *tuqur 'stand' > NAT *tu, tulë* VNO *tu*
iv. *exception:* POc *tubuq 'swell' > TNB *rorobi*
b. i. POc *taliŋa 'ear' > NEB *rañu*
ii. POc *tanoq 'earth' > NEB *ranë* 'earth, village, island'
iii. POc *topu 'sugarcane' > NAT *në-lü* VNO *lepie*

(21) a. i. POc *keli 'dig' > AIW *kei, kili*
ii. POc *kani 'eat' > ASU *ka* (but TNB *aya*)
iii. POc *kaRat 'bite' > ASU *kala*
iv. POc *kilala 'know' > NAG *i-kiɔu* TNB *k*^{w}*ɔu*
b. i. POc *kutu 'head louse' > AIW *no-u* NAG *nâwi* ASU *no-wio* TNB *no-ut*

Again it is clear that these are instances not of borrowing but of conditioning, even if it is not completely clear what the condition is.

The largest set of alternant reflexes in table 2 consists of the Tanibili reflexes of *t, which include *t, r, k, s,* and Ø. The analysis is complicated and not always conclusive.

1. *s* occurs before present-day *-u* (e.g., *nusu-* 'offspring' < POc *natu, *visuyo* 'star' < POc *pituqun, *suu* 'stand' < POc *tuqur), but not in etyma in which POc *-u is reflected as a vowel other than *-u* (*no-voto* 'stone' < POc *patu, *no-utâ* 'head louse' < POc *kutu).
2. *k*^{w} occurs morpheme-initially before *-o (e.g., *no-k*^{w}*opio* 'sugarcane' < POc *topu, *bo-k*^{w}*o* 'three' < POc *tolu).[16]
3. The zero reflex occurs unpredictably in *ami-* 'father' (< POc *tama) and *me-me* 'die' (< POc *mate). It is possible that *ami-* reflects a *t-less vocative POc *ama 'Dad', and that the other case is either wrongly etymologized by us or else borrowed.
4. *t* and *r* are respectively the fortis and lenis reflexes of *t, but their occurrence is unpredictable. Tanibili does not conform fully to the generalization made above about fortis and lenis reflexes (see 20a-iv). This may represent allophonic variation, a sound change in progress, or borrowing from a neighbor with the same fortis/lenis distinction, presumably Nebao.

We have shown here that the multiple reflexes in table 2 generally display a fair level of systematicity, while granting that there may be some irregularities resulting from local borrowing. However, there is a great deal more to be learned about Temotu phonological history.

2.4 SHARED INNOVATIONS AND SUBGROUPING. Our purpose in this section is to identify subgroups on the basis of shared innovations. Three questions need to be answered:

1. Do the Temotu languages form a single subgroup?
2. If so, does this subgroup belong to some larger subgroup within Oceanic?
3. Are there subgroups *among* the Temotu languages? If so, what are they?

16. There is an apparent exception: Tanibili *k*^{w}*esi-* 'sister', apparently reflecting POc *taci 'younger same-sex sibling'. However, Peter Lincoln (pers. comm.) points out that Banoni *kasi-* 'younger same-sex sibling' is also exceptional. Possibly the Banoni and Tanibili forms have a common source.

Questions 1 and 2 are answered in 2.4.1, question 3 in 2.4.2.

2.4.1 A single subgroup? Questions 1 and 2 can almost be answered in one fell swoop: the Temotu languages form a subgroup, and this subgroup is not part of any other known subgroup of Oceanic—with one possible exception. That is, Temotu is not especially related to the Admiralties, Western Oceanic, Southeast Solomonic, or Remote Oceanic grouping (the integrity of the last is in any case open to question). There is, however, evidence that connects it with the tiny St. Matthias group, consisting of just two languages, Mussau and Tench, located to the north of New Ireland and to the east of the Admiralties.

The primary subgroups of Oceanic languages are identified partly on the basis of their reflexes of the POc liquids *r, *l, and *R. The Temotu nonfinal reflexes of the POc liquids in table 2 are set out in (22).[17]

(22)	Aiw	Nat	Nag	Neb	Asu	Tnb	Bum	Vno	Tnm
*r	l	l	l	l	l, n, Ø	l (Ø)	l	l	l
*r / _*u	l	l	l	l	y	y	l	r	l
*l	l	l	l	l (Ø)	n (Ø)	l (Ø)	l	l	l
*l / _*u	l	l	l	l	y	y	l	l	l
*R	l	l, Ø	l, Ø	Ø	Ø	Ø	l, Ø	l	l, Ø

Two facts emerge from (22). First, the *R row differs clearly from the *r and *l rows. Second, the *r and *l rows are similar enough for it to be likely that they had merged as a single phoneme *l in PTm. Particularly striking is the fact that both display a special set of reflexes before *u, becoming *y* in Asuboa and Tanibili. It seems unlikely that this would have happened if the PTm or Proto-Utupua reflexes of *r and *l were separate phonemes. Data supporting the *l and *r rows are given below, default reflexes in (23) and (24), reflexes before *u in (25) and (26).

(23) a. POc *raqan 'branch' > Aiw *nu-la* Nat *në-la* Nag *lë-laa* Neb *lae* Bum *e-la* Vno *e-le-la*
b. POc *raun 'leaf' > Nat Nag *leu* Neb *lu-ñe* Asu *nonâ* Tnb *lu-biogulo* Tnm *le-le*

(24) a. POc *lima 'five' > PTm *-li > Aiw *vi-li* Nat *nʌ-lvü-n* Asu *si-ni* Bum *ti-li* Vno *te-li* Tnm *le-li*
b. POc PTm *laur 'sea' > Aiw *ne-lo* Nat *pëla* Neb *na-luë* 'sea' Vno *laure* 'reef'

(25) POc *rua 'two' > PTm *-lu > Aiw *li-lu* Nat *li* Nag *la-li, tü-li* Neb *l-lu* Asu *yuw* Tnb *bu-yu* Bum *ti-lu* Vno *ta-ru* Tnm *la-lu*

(26) POc *luaq 'vomit' > Aiw *lâ* Neb *liâ* Asu *yua* Tnb *yuâ* (Bum *lo-ro* Vno *la-roa* Tnm *lo-ro*)

Superficially against the hypothesis that POc *r and *l merged in PTm are the differences between the *r and *l rows in (22). But the differences are trivial and probably an artefact of the small data set.[18] The fact that both *l and *r are reflected as Asumboa *n* is more significant, as the shared change implies that they are reflected by a single phoneme.

17. Word-final reflexes are omitted, as they behave differently and are not readily comparable with reflexes in other subgroups.

18. For example, the presence of Asu *l* as a reflex of *r but not of *l quite possibly reflects the absence of relevant Asuboa items reflecting *l.

The difference between the Vano reflexes in the lines labeled *r / _*u and *l / _*u (*r* and *l*) is problematic but probably caused by insufficient relevant Vanikoro data. The major witness for *r / _*u is POC *rua 'two' in (25), for *l / _*u POC *luaq 'vomit' in (26). It is not clear whether the words listed in parentheses reflect *luaq or not and, if they do, which section of the word (e.g., Buma *lo* or Buma *ro*) reflects *luaq. In table 2 and in (22), we have assumed that the first syllable reflects *luaq, but this is an ad hoc decision forced on us by lack of relevant data.

Despite these difficulties, it seems probable that POC *r and *l did merge as PTM *l. In (27) we compare the mergers (in bold) of liquids that define primary subgroups of Oceanic.

(27) POC	Admiralties	Western Oceanic	Southeast Solomonic	Remote Oceanic	St. Matthias	Temotu
*r	*r	***r**	*r	*r	***l**	***l**
*l	*l	*l	***l**	*l	***l**	***l**
*R	*Ø-, *-R-	***r**	***l**	*Ø, *R	*Ø, *R	*Ø, *R

Variation in the retention of *R in Remote Oceanic, St. Matthias, and Temotu generally represents loss of *R in a majority of etyma, but the member languages of neither Remote Oceanic nor Temotu agree on the etyma it is lost in.

Notable in (27) is that *r and *l merge as PTM *l. The only other subgroup where this occurs is St. Matthias. Western Oceanic merges POC *r and *R, Southeast Solomonic POC *l and *R. We do not want to claim on account of the shared merger that Temotu and St. Matthias form a subgroup. After all, every possible merger of two out of three liquids occurs, so the probability of two groups making the same merger independently is quite high. However, we may note that the archaeology indicates that Temotu and St. Matthias were among the earliest settlements away from the Oceanic homeland in the Bismarck Archipelago, and it remains to be seen whether this is reflected in other linguistic commonalities.

One other Temotu–defining phonological innovation in table 2 is loss of POC intervocalic *k, but this also occurs in various other Oceanic languages.

Further support for the integrity of the Temotu subgroup is found in three apparently idiosyncratic phonological innovations in individual lexical items. The three items display similar innovations, namely loss of the initial consonant, reflected in all Temotu languages, and loss of the resulting initial vowel, reflected in all Temotu languages except Äiwoo. In the RSC languages, where truncation occurs (illustrated in 10–11), this means that these items reflect the second syllable of the POC etymon rather than the first.

(28) a. POC *Rum$^{(w)}$aq 'house' > PTM *um^{w}aq >
PRSC *um^{w}a > AIW *nu-umä* 'village' NAT *ma* NAG *ma-at^{h}u*
PUV *mayë > NEB *naa-më* ASU *numuo* TNB *no-m^{w}a*
BUM VNO *m^{w}oe*

b. POC *lima 'hand, arm' > PTM *ima >
PRSC *ima > AIW *ñ-ime* NAT *mü* NAG *nümü*
PUV *ma > ASU *na-ma*-TNB *na-ba* BUM *ma* VNO TNM *me*

c. POC *ñamuk ' mosquito' > PTM *amuk >
PRSC *amu > AIW *n-amo* NAT mo
PUV *mukë > NEB *muyë* ASU *muso* TNB *no-muyo* BUM *muko*
VNO *muka* TNM *muka*

Because loss of *CV- in (28a,b,c) is attested in Natügu, Nagu, and the UV languages, it is tempting to place all these languages in a subgroup in opposition to Äiwoo. This, however, neglects the evidence provided by truncation in (10) and (11), which indicates strongly that the RSC languages form a subgroup. We infer that in PTM these items had lost their initial consonant, and that the resulting initial vowel was lost independently in Natügu and Nagu (both Santa Cruz) on the one hand and in PUV on the other.

2.4.2 Internal subgrouping. Here we review the evidence for subgroups within Temotu.

The RSC and UV groups are each characterized by one idiosyncratic phonological innovation: RSC by loss of initial *t- in (29) and UV by loss of *-l- in (30).

(29) POC *taŋis 'cry' > PRSC *aŋi > AIW *eŋi* NAT NAG *yëni* (but PUV *taŋi > NEB *tane* ASU *siŋi* BUM *e-teŋi* VNO *teŋi* TNM *taŋi*)

(30) POC *taliŋa 'ear' PUV *taiŋa- > NEB *rañu* ASU *siŋo-* BUM *tańa* VNO *mabe-liŋe* TNM *añe*

2.4.2.1 Reefs–Santa Cruz. The shared innovations of truncation and syncope (2.2) provide substantial phonological evidence for a RSC subgroup.

2.4.2.2 Utupua-Vanikoro. The UV group is defined phonologically by the loss of nonfinal POC *q, but this is not strong evidence, as the same loss occurs in the Santa Cruz languages.

Diphthongization (2.3) in UV languages cuts across the boundary between Utupua and Vanikoro but, unusual though it is, its distribution (Asuboa, Tanibili, Vano) does not correspond with any other features that might define a subgroup, and it seems likely that it somehow spread from language to language at a time when these languages still formed some kind of speech community.

2.4.2.3 Utupua. The final consonants of Utupua languages represent shared retentions, not shared innovations, and thus tell us nothing about subgrouping, but the unequivocal losses of POC word-final *-r, *-s, *-q, and *-R in Utupua languages (retained in Vanikoro, or recently lost in the case of *-q) are a shared innovation that defines them as a subgroup. So, too, is the complete loss of POC *R.

2.4.2.4 Vanikoro. No innovations define Vanikoro. There are perhaps a few shared lexical innovations, but as François (2006) has noted the lexica of the Vanikoro languages are quite diverse, and our small database does not allow us to make definitive statements about them. It seems possible that the Vanikoro languages do not form a subgroup, but that their grammatical similarities, also noted by François (2006), are due as much to contact among themselves as to shared inheritance. This means that, until it can be shown otherwise, we must assume that the UV subgroup has four "branches": Utupua, Buma, Vano, and Tanema.

3. ÄIWOO MORPHOSYNTAX. Claims about the "Papuan" origin of Äiwoo have been based on features of its morphosyntax. In this section we examine Äiwoo morphosyntax and show that even its allegedly "Papuan" features can be plausibly derived from

early Oceanic structures. Much of this has already been achieved by Næss's re-description of the language in various papers, published and unpublished.

It is widely accepted among students of contact-induced change that there is a cline running from the most bound structures, (i.e., bound morphology) to the least bound (i.e., constituent order), and that the more bound a structure is, the less likely it is to undergo contact-induced change, and vice versa. A corollary of this observation is that bound structures are more likely to be preserved over time and are therefore more likely to provide evidence of a language's genealogy.

The generalization about which morphosyntactic structures are more likely to undergo contact-induced change follows from a larger but less often stated generalization about which morphosyntactic structures are more likely to undergo change generally. Changes in constituent order within a declarative clause, for example, are more likely to occur in languages with alternative clause orders (often used for information-structure functions like topicalization and focus). A change in the relative token frequencies of these orders results in a different order being grammaticized as the new default declarative order. Change in adpositional phrase order, from preposition to postposition or vice versa, works differently, because most languages do not allow alternative orders in adpositional phrases, at least not with the same adposition. New adpositions emerge through grammaticization of nouns or verbs, resulting in the creation of a new adpositional construction that over time may replace the old one. Changes like these may be triggered, reinforced, or hurried by contact (i.e., bilingualism), but they are not different in essence from changes that occur without contact.[19] This has the methodological consequence that morphosyntactic change in language X only provides circumstantial evidence of contact. This evidence takes the form of constructions in neighboring languages that provide models for X's new constructions.

A number of the constructions that occur in Äiwoo have been attributed to contact, but there is no serious circumstantial evidence for this. Instead there is reason to suppose that they have come into being without contact during the 3,000 years of Temotu's relative isolation.

3.1 CLAUSE TYPES, TRANSITIVITY AND PRONOMINALS

3.1.1 Pronominals

3.1.1.1 The Äiwoo paradigms. Äiwoo's "minimal–augmented" system of pronominals shown in table 3 is unusual.[20] A similar system exists in the Santa Cruz languages. The system represents an organization of person and number such that there are four "persons," 1, 1+2, 2, and 3. We abbreviate 1+2 as 12 here. The terms "minimal" and "augmented" replace singular and plural because minimal 12 is effectively dual ('I and you'), not singular, while augmented 12 refers to three or more people ('I and you', where 'you' is two or more). To this distinction Äiwoo (but not Santa Cruz) adds a "unit–

19. See the account of the contact-induced change from prepositional to postpositional phrases in Takia in Ross (1996:188–90) and its interpretation in terms of grammaticization by Heine and Kuteva (2005:86–89).

20. Minimal–augmented paradigmatic structure was first described for Ilocano (Austronesian, Philippines) by Thomas (1955). The labels "minimal–augmented" and "unit–augmented" are due to McKay (1978).

augmented" number, indicated by the suffix *-le*, added directly to free and possessor pronouns, but to the end of the verb phrase if it refers to the subject:[21]

(31) Ki-li-lolopâ-lie-le.
1PF-S:3A-RDP.talk-RECP-UA
'They (two) are talking/chatting to each other.'

Unit–augmented number is minimal number plus one. With the three simple persons 1, 2, and 3 it functions as a dual. With 12 it functions as a trial ('I and you two'), so that 12 augmented refers to four or more people.

The pronominals in table 3 include the four sets familiar from many Oceanic languages (Ross 2004b): free, subject prefixes, object suffixes, and possessor suffixes. Unusually for Oceanic, however, Äiwoo subject prefixes are restricted to intransitive clauses, as in (32) and a fifth set—of *suffixes*, illustrated in (33)—coreferences transitive subjects.

(32) a. i-ku-wä
S:1M-IPF-go
'I go'

b. mi-ku-wä
S:2M-IPF-go
'you go'

c. ku-lu-pwä
IPF-S:3A-go
'they go'

As (33a) shows, the transitive subject suffix precedes the object suffix.

(33) a. Ki-togulo-nee-mu.
IPF-hit-A:1M-O:2M
'I hit you.'

b. Ki-togulo-no-Ø.
IPF-hit-A:1M-O:3M
'I hit him/her/it.'

There are a number of coocurrence restrictions on the two transitive sets. One is that the A:3M form is zero if it occurs with O:3M (34a) but *-gu* otherwise (34b).

TABLE 3. ÄIWOO PRONOMINAL PARADIGMS

	FREE (F:)	INTRANSITIVE SUBJECT (S:)	TRANSITIVE SUBJECT (A:)	OBJECT (O:)	POSSESSOR (P:)
1M	iu	i-	-no, -nee	Ø	Ø
12M	iuji	ji-	-ji	-ji	-ji
2M	iumu	mu-, mi-	-mu	-mu	-mu
3M	ine, inâ	Ø	-gu, Ø	Ø	Ø
1A	iuŋo[pu]	me-	-ŋo[pu]	-ŋo[pu]	-ŋo
12A	iude	de-	-de	-de	-de
2A	imi	mi-	-mi	-mi	-mi
3A	ijii	lu-, li-	-i	-i	-i

21. Abbreviations conform to the Leipzig Glossing Rules with the following exceptions. The convention for glossing pronouns is X:*n*Y, where X is one of F, free; S, (intransitive) subject; A, transitive subject; O, object; or P, possessor; *n* is the person (1, 12, 2, 3); and Y is number: one of A, augmented; D, dual; M, minimal; P, plural; S, singular; or T, trial. Other abbreviations used in glosses are: CJ, conjunction; COLL, collective; DEIC, deictic; DFLT, default; DIR, directional; I, inclusive; IPF, imperfective; LIG, ligature; MASC, masculine; NZ, nominalizer; OBL, oblique proforms; PCL, possessive classifier; PF, perfective; PH, phasal aspect; PREP, preposition; R, realis; RDP, reduplication; UA, unit-augmented.

(34) a. Nuwopa-ee i-lââ-Ø-Ø John.
house-DEM PF-build-A:3M-O:3M John
'John built this house.'

b. Ki-togulo-gu-i.
IPF-hit-A:3M-O:3A
'He hit them.'

Apart from the sequence *-nee-mi* A:1M-O:2A, if the transitive subject is anything other than A:3M, a plural object is indicated by means of a free pronoun following the verb:

(35) I-togulo-no jii.
PF-hit-A:1M F:3A
'I hit them.'

3.1.1.2 History of forms. What can be said about the history of Äiwoo pronominal paradigms and forms? A salient feature of the forms in table 3 is that the object and possessor sets are identical, so we can talk about an "object/possessor" set. The transitive subject set differs from it only in 1M and in the 3M alternant *-gu*. The non-3 members of the free paradigm are also created from the object/possessor suffixes, attached to the base *iu-*. The 3M forms consist of the base *i-* (a reduction of *iu-*?) and the deictic clitics *-ne* PROXIMAL and *-nâ* DISTAL. The second component of the 3A form, *-jii*, is otherwise unattested. The intransitive subject prefixes also bear a strong resemblance to the object/possessor suffixes, but differ from them in 1M, 1A, and 3A.

The object/possessor suffixes reflect the POC possessor suffixes. As POC had distinct free, subject prefix, object suffix, and possessor suffix forms (Lynch, Ross, and Crowley 2002:67), it is clear that Äiwoo reflects a good deal of paradigmatic leveling—but this is not uncommon in Oceanic languages, where object suffixes tend to be replaced by possessor suffixes (but not vice versa),[22] and free forms are sometimes replaced by erstwhile emphatic forms consisting of a stem and possessor suffixes (i.e., an inalienable noun). For example, Gapapaiwa, like a number of its closer relatives in southeast Papua, uses a single set of object/possessor suffixes and has free pronouns that reflect the POC emphatics formed from the inalienable noun *tau 'person, body' (e.g., Gapapaiwa *taku* F:1S < POC *tau-gu, *tam* F:2S < POC *tau-mu, etc.), but maintains distinct subject prefixes (McGuckin 2002).

Leveling in PTM affected only object suffixes, which had been displaced by the possessor suffixes.[23] After PTM split into PRSC and PUV, their pronoun systems went their own ways. In PRSC leveling across paradigms resulted in an Äiwoo-like system.

There is widespread evidence that in POC *rua '2' was suffixed to plural pronouns to form duals, *tolu '3' to form trials, and *vat[i] '4' to form paucals.[24] Oceanic languages have reduced this system in various ways. Some have dropped one or more of the numeral-suffixed sets, paucal first, then trial, then dual. PTM evidently dropped the paucal

22. A triggering factor in this replacement is probably the fact, established by Evans (1995), that POC had a defective object suffix paradigm. There were no nonsingular non–third-person suffixes, and free pronouns were used instead.

23. The only UV language to retain suffixes to mark the object is Tanibili. In the other UV languages free pronouns serve as objects.

24. Lihir (New Ireland) and Mussau (St. Matthias) reflect this five-way number-marking system in its entirety (Neuhaus 1954; Brownie and Brownie 2007).

set, as no reflexes of it are found. It retained singular, dual, trial, and plural pronouns. In this regard too, PRSC and PUV went in different directions. PUV appears to have lost the plurals, leaving the erstwhile trials as its new plurals. PRSC, on the other hand, seems to have dispensed with the duals and trials, except for the first-person inclusive dual, which became the 12M form in the reorganized system.

Table 4 shows the Äiwoo object/possessor suffixes in comparative perspective in the light of the discussion above. The parenthesized third-person Äiwoo forms are attached to *i-* to form the free pronouns. The cognacy of Äiwoo 2M, 12A, and 2A forms with Oceanic forms is self-evident. The other forms are more troublesome, but an account can be offered for all except *-ŋo* 1A. Äiwoo *-le* 'unit-augmented marker' reflects PTM *-ru 'dual marker'.

Äiwoo has seemingly lost the 1S form. However, the expected 1M form is *-gu*, which turns up as an alternant 3M form (table 3). Næss (2007a) writes as follows (with her example renumbered to fit the numbering sequence in this paper):

> … the apparently anomalous *-gu* [A:3M] in Äiwoo has most likely been reanalyzed from a [A:1M] form. There is no suffix for [O:1M], and the use of *-gu* with no object indexing unambiguously implies [O:1M]:
>
> (36) i-togulo-gu(-Ø)
> PF-hit-A:3M(-O:1M)
> 'He hit me.' *'He hit you/him/her ...'
>
> If *-gu* originally indicated [O:1M], with the [A:3M] participant being unmarked as it is elsewhere in the paradigm, the suffix could have been reanalysed in sentences like [36] to refer to the [3M] subject.

The consequence is that the [1M] slot is left empty.

TABLE 4. ÄIWOO OBJECT/POSSESSOR SUFFIXES IN COMPARATIVE PERSPECTIVE †

	POC	PTM		AIW	NAT	NAG		ASU	TNB
1S	*-gu	*-gu	1M	Ø	-ŋä	-nu		-ge	-gu
2S	*-mu	*-mu	2M	-mu	-m	-m		-me	-mo
3S	*-ña	*-ña	3M	ablaut, (-nâ)	-de	-de		-na	-ñi
1IP	*-da	*-da-	12A	-de	-gu	-da-m^{w}e		—	—
1EP	*-mai	*-me	1A	-ŋo	-gö	-gā		—	—
2P	*-m[i]u	*-mu	2A	-mi	-mu	-m^{w}e		—	—
3P	*-dra	*-da	3A	-i, (-jii)	-dö	-ŋö		—	—
1ID	*-da-rua	*-da-ru	12M	-ji	-gi	-da		-jia	-sii
			12UA	-de-le					
1ED	*-mai-rua	*-me-ru	1UA	-ŋo-le	—	—		-ma	-me
2D	*-m[i]u-rua	*mu-ru	2UA	-mi-le	—	—		-mia	-me
3D	*-dra-rua	*-da-ru	3UA	-i-le	—	—		-ja	-golo
1IT	*-da-tolu	*-da-to		—	—	—	1IP	-goto	-mite
1ET	*-mai-tolu	*-me-to		—	—	—	1EP	-me-to	-mi-te
2T	*-m[i]u-tolu	*-mu-to		—	—	—	2P	-mo-to	-mo-k^{w}e
3T	*-dra-tolu	*-da-to		—	—	—	3P	-jo	-go-k^{w}o

† We provide the Asuboa and Tanibili forms for comparison only. Their analysis is outside the scope of this paper.

We take it that this reanalysis was transferred by analogy from the object set to the possessor set. Although the default 3M possessor suffix remains zero, if the possessum is pluralized, the sequence *-gu-i* A:3M-O:3A appears on it:

(37) kuli no-gu-i
dog POSS-A:3M-O:3A
'his dogs'

Problematic for the reanalysis hypothesis are transitive clauses with a nonthird person object pronoun like 'he hit you' (*i-togulo-gu-mu* < 'I hit you') or 'he hit you (A)' (*i-togulo-gu-mi* < 'I hit you (A)'), but it is possible that the greater token frequency of 'he hit me' won out, forcing the change in function of *-gu*.[25]

Table 4 shows the 3M form as "ablaut." This refers to a fronting and/or lowering of the vowel, seen in the 3M and 3A forms of (38).

(38) POC	'father' *tama-	'eye' *mata-
P:1M	tumo	ñibe
P:12M	tumo-ji	ñibe-ji
P:2M	tumo-mu	ñibe-mu
P:3M	tumä	ñibä
P:1A	tumo-ŋo	ñibe-ŋo
P:12A	tumo-de	ñibe-de
P:2A	tumo-mi	ñibe-mi
P:3A	tuma-i	ñibä-i

These vowel changes presumably reflect harmony with the possessor suffixes. The now lost 3M suffix was most probably a reflex of POC/PTM *-ña 3S. Parenthesized Tanibili *-ñi* 3S in table 3 reflects PTM *-ña, implying that PTM *-ña preserved the palatal nasal.[26]

The parenthesized 3A free-form partial *-jii* reflects either POC *-dra P:3P or, more plausibly, the early Oceanic form *-dri[a], with widespread reflexes in Western Oceanic languages. The origin of the corresponding suffix, *-i* 3A, is puzzling. As an object suffix it is limited to cooccurrence with *-gu* A:3M, discussed above. Formally it looks like a reflex of the POC transitive suffix *-i, and it is possible that this is what it is, but arguing for this requires several ad hoc steps which we will pass over here.

Finally, we would predict that *-ji* 12M would reflect POC *-da-rua 1ID. Unfortunately we have no evidence as to what happens in Äiwoo to POC *d before a front vowel, assuming a reduction to, say, PRSC *-du, but Asuboa *-jia* and Tanibili *-sii* 1ID are plausible cognates.

3.1.1.3 How the Äiwoo system arose. Cysouw (2003:89–90, 260–62) suggests that minimal-augmented paradigms are derived from paradigms with a first-person nonsingular inclusive/exclusive distinction, because a minimal-augmented system represents a simple addition to an inclusive/exclusive system by increasing to four the number of

25. There is perhaps one other fossilized reflex of *-gu P:1S in Äiwoo. The food classifier, *na* in its 3M form, belongs to a paradigm of suffixed forms like those in (38) below. The 2M form is *na-mu*, as expected. The 1M form, where we expect no affix, is *nugo*. The stem *na* reflects POC *kana- with loss of the first syllable (3.2.1), and *nugo* may well be a reflex of *kana-gu, i.e., with the 1S/1M suffix.

26. It is uncertain whether Äiwoo 1M *ñibe* reflects PRSC *na mnā (< POC *mata; cf. [14h]).

persons recognized in both singular and plural. The RSC system reflected in Äiwoo was also apparently derived from an inclusive/exclusive system, but if the account above is even approximately correct, then by reduction (of the dual number) rather than addition.[27]

3.1.1.4 Äiwoo intransitive subject forms. We noted earlier that *lu-, li-* S:3A is exceptional in following the aspect/mood marker, whereas the other subject prefixes precede it. The fact that it is closer to the verb stem suggests that it is the only surviving member of a set of older subject prefixes. If this is so, then *lu-, li-* reflects the POC subject prefix *ra-* S:3P (Lynch, Ross, and Crowley 2002:68), and the other subject prefixes are innovations based on the forms in the other paradigms—with the exception of *i-* S:IM. There has always been a tendency to innovate new subject prefixes from reduced forms of the free pronouns, and *i-* may reflect a reduced form of POC *iau F:1S.

3.1.1.5 Äiwoo transitive subject forms. In most Oceanic languages there is a single set of prefixes coreferencing both intransitive and transitive subjects, and there is overwhelming evidence that POC subject markers were prefixal, at least in independent clauses (Lynch, Ross, and Crowley 2002:60–62). This leaves us with the question, how come Äiwoo transitive subject pronominals are suffixed and have possessive-like forms? We can do no more than offer pointers to an answer. There is just one other group of Oceanic languages, Northwest Solomonic, in which subjects are coreferenced by suffixed possessive-like forms (Palmer 2003, Ross 1982). These languages vary significantly in the distribution of these forms, but the Kokota (Santa Isabel) example in (39) illustrates the relevant facts, namely that the verb is followed by a suffixed auxiliary, to which in turn is suffixed the possessive-like subject pronominal, which precedes the object suffix.

(39) ara n-a go-no-gu-ni naŋha-na-na manei
F:1S R-S:1S be.insensible-AUX-S:1S-O:3S name-P:3S-that F:3S
'I don't know his name.' (Kokota, Palmer 2003)

Significantly, the auxiliary *no-* is identical in form with the short default possessive classifier (3.2.1) (cf. Kokota *no-gu totoyale* 'my photograph'), implying that this construction is descended from a possessed nominalization that has been reanalyzed as an independent verb form. In two Halia (Buka) dialects, Hanahan and Selau, the auxiliary has been lost, giving examples like (40).

(40) Ala e nu-ya-gu osono .
F:1S PRED eat-O:3S-S:1S taro
'I am eating taro.' (Selau, Ross 1982:22)

Admittedly neither (39) nor (40) exactly emulates the Äiwoo transitive construction. Kokota has simultaneous preverbal subject marking, but this seems to be a recent innovation, as other Northwest Solomonic languages, like Selau, don't have it. Selau has a simple sequence of two postverbal pronouns, but their order is O S, unlike the S O of Äiwoo and Kokota.

27. Cysouw's account is certainly true of the Austronesian minimal-augmented systems of the Philippines and northern Borneo, where the reflex of Proto–Malayo-Polynesian *kita* 'first-person inclusive nonsingular' is restricted to dual, i.e., IM, usage, and a new IA pronoun is formed by adding a suffix (often a second person singular form) to the reflex of *kita*.

Again, we are not suggesting that these forms are closely related to Äiwoo's, but rather that Äiwoo may have developed along lines parallel to those of Northwest Solomonic.

3.1.2 Clause types and transitivity. In terms of transitivity, Äiwoo has three verbal clause types: intransitive (with one argument), and transitive and semitransitive (both with two arguments) (Næss 2005, 2007b).

Structurally, the intransitive clause resembles the corresponding construction in many Oceanic languages. Intransitive clauses have default SV order and the subject is coreferenced by the verbal prefix (table 3):

(41) Tememe lâ Ø-wo-ute-kä=to go mi-li-tou=kâ.
child DEIC S:3M-go-back-DIR=PH to NZ-S:3A-give.birth=DEIC
'The child has gone back to his birth parents.'

The transitive clause with full noun phrase arguments has a constituent order unlike that of any Oceanic or Papuan language that we know, namely OVS, as (42a) shows. The subject and object are each coreferenced by the verbal *suffixes* listed in table 3. A semitransitive clause is used with a generic, plural or nonspecific object, and with a repeated or habitual action. Its verb is formally intransitive, has a subject prefix and SVO order. Examples (42a) and (43a) are transitive, while (42b) and (43b) are semitransitive.

(42) a. Nuwopa-ee i-lââ-Ø-Ø John.
house-DEM PF-build-A:3M-O:3M John
'John built this house.'

b. Ø-Ki-lâwââ nuwopa.
S:3M-IPF-build house
'He builds houses (for a living).'

(43) a. Bolo i-popoi-no.
ball PF-kick-A:1M
'I kicked the ball.'

b. Ileke, sigiläi li-lilu ku-lu-popoe-le bolo.
now young.man S:3A-two IPF-S:3A-kick-UA ball
'This time, two young men are kicking a ball/playing ball.'

The contrast between transitive and semitransitive clauses is one that is commonly found in Oceanic languages. Semitransitives are those that are commonly said to entail "object incorporation." In the Longgu (Southeast Solomonic) example in (44), the first clause is semitransitive, the second transitive. In the semitransitive clause the verb is unsuffixed (i.e., intransitive in form), the object noun is unsuffixed (i.e., nonspecific) and occurs within the verb complex, which is terminated by *na* 'perfect'. In the second, transitive, clause the verb has a suffix *-a* O:3S coreferencing the object *pilu=i*, which the singular enclitic *=i* marks as specific.[28]

28. The object in the second clause occurs outside the verb complex, but this is not formally marked in this example.

(44) m-arua goni pilu na, ara goni-a pilu=i…
CJ-S:3D build fence PF S:3P build-O:3S fence=S
'… and they both did some fence building, they built a fence …'
(Longgu, Hill 1992)

Thus Äiwoo semitransitives, like intransitives, resemble their counterparts in other Oceanic languages.

Table 5 shows the transitive and semitransitive forms of various verbs. The members of each pair are formally similar, but not related by a regular morphological process. However, the differences between the members of a pair resemble the contrast between unaffixed intransitive/semitransitive and suffixed transitive verbs in many Oceanic languages, where the transitive member is often marked by a reflex of the POc transitive marker *-i (Evans 2003:93–118). Indeed, it is reasonably easy to see that the pairs in the two topmost sections of table 5 reflect this contrast. The lower sections await a much better understanding of RSC historical morphology. The hypothesis that the POc transitive marker *-i is reflected in the transitive forms in table 5 receives further support from transitive verb complexes with more than one stem, which end in a transitive morpheme *-i* or *-ñi*.[29] Such verb complexes are quite common in other Oceanic languages and typically end in the transitive marker, commonly *-i* (Evans 2003:117–18).

(45) a. I-lolobāku-päko-**i**-kä.
PF-RDP. fold-good-TR-DIR
'Fold it properly.'

b. Nepä da-no nä-ngäbe-eke-**ñi**-kä-mu.
betel.mix PCL:BETEL-P:1M IRR-pound-fast-TR-DIR-A:2M
'Pound my betel quickly.'

The one feature of the transitive/semitransitive contrast that requires explanation is the OVS order of transitive clauses. We noted above (section 3) that constituent order change in clauses occurs when a less frequent order becomes more frequent and is grammaticized as the default order. How might OVS order have become grammaticized in Äiwoo?

One would expect the first element in the clause to be what Vallduví (1992:46) calls its "link" to preceding discourse. Typically, however, a link is a pronominal form. If the link is a full noun phrase, this is likely to be because two links are in contrast, as in *Sweet potatoes I like, but yams I hate.* In other words, in a VSO or VOS language such as POc appears to have been, OVS order would occur through topicalization of the object noun phrase. Precisely this occurs in Natügu, where transitive clauses have VSO order, but the object noun phrase may be fronted, giving an OVS order. What is not clear to us is why this order should grow in discourse frequency to become the unmarked choice. This is a puzzle that concerns OVS languages generally.

3.2 NOUN PHRASES. Wurm described what he called the "noun class markers" of Äiwoo in a number of publications (Wurm 1981a, 1981b, 1987, 1991, 1992), viewing them as a Papuan feature of the language. Næss (2006a) has re-described these "markers," dividing them into three categories—possessive classes, nominalizing prefixes, and

29. The alternation between *-i* and *-ñi* in Äiwoo is hard to explain, but unexplained transitive *-ni* forms occur in other scattered Oceanic languages (Tawala in southeast Papua, Hoava of New Georgia), and this is a reconstructive problem that remains to be solved (Evans 2003:189–90).

class prefixes—and has shown that they do not represent noun classes. We will only summarize that work briefly here, focusing on the history of these features and dividing the nominalizing prefixes into three sets: nominalizing prefixes proper, the 'person from' prefix, and gender-marking prefixes. Possessive classes are discussed in 3.2.1, nominalizing prefixes proper in 3.2.2, the 'person from' prefix in 3.2.3, class prefixes in 3.2.4, and gender-marking prefixes in 3.2.5 .

3.2.1 Possessive classes. Äiwoo possession is squarely Oceanic in typology, making a primary categorization into inalienable and alienable possession and a secondary categorization of alienable possession into a number of possessive classes that encode not the class of the noun but the relationship between the possessum and its possessor (Lichtenberk 1983). Two syntactic constructions typically encode these distinctions (Lichtenberk 1985). In the "direct" construction, inalienable possession is encoded by a possessor suffix. Äiwoo examples are in (38). In the "indirect" construction, alienable possession is encoded by a relational classifier which takes a suffix and precedes or follows the possessum noun. In Äiwoo it follows:

(46) a. nenu nugo
coconut eat:P:1M
'my coconut to eat'

b. nenu numo
coconut drink:P:1M
'my coconut to drink'

TABLE 5. SEMITRANSITIVE AND TRANSITIVE VERB FORMS

POc	GLOSS	SEMITRANSITIVE	TRANSITIVE
*pai	'weave'	vei	vili
*keli	'dig'	kei	kili
	'chop'	läke	läki†
	'wash'	okene	okeñi
	'tear'	vätäle	vätäli
	'kiss'	toŋe	toŋi
	'kick'	popoe	popoi
	'throw'	päe	päi
	'cook'	epave	epavi
*rasi ?	'grate'	lei	li
	'husk (a coconut)'	gou	gu
	'hold, carry'	tou	tu
	'pour'	ŋapou	ŋapu
	'fold'	lo-bâkou	lo-bâku
	'fold (something big)'	väbakou	väbaku
	'cut'	talowe	talu
	'cut (hair)'	välowe	välu
	'build'	lâwââ	lââ
	'pull'	eâwââ	eââ
	'count'	gâwââ	gââ
*paŋan	'eat'	väŋä	ŋä

† Some verbs in this table are synchronically analyzable into constituent morphemes (see 3.3.2.2), e.g., *lä-ke/läki*, where *lä-* is 'chop' and *ke/ki* 'snap'. This makes no difference to the point we make here, however.

c. nenu nou
coconut DFLT:P:1M
'my coconut as a possession'

d. nuwotäpi dano
betelnut chew:P:1M
'my betelnut (for chewing)'

e. ñibä nugu
basket utensil:P:1M
'my basket'

In a typical Oceanic language there are just three relational classifiers encoding food, drink, and general alienable possession, as in (47). These classifiers reflect the POc classifiers *ka- 'food', *m^{w}a- 'drink', and *nV- 'general alienable' respectively.

(47) a. na ke-gu niu
ART PCL:FOOD-P:1S coconut
'my coconut'(= 'the coconut whose flesh I eat')

b. na me-gu niu
ART PCL:DRINK:P:1S coconut
'my coconut'(= 'the coconut whose water I drink')

c. na no-gu niu
ART PCL:DFLT:P:1S coconut
'my coconut'(= 'the coconut I own') (Standard Fijian)

Fijian is a "short classifier" language: it has few classifiers and they are monosyllabic. A number of Oceanic languages, including Äiwoo, are "long classifier" languages: they have more classifiers, and these are typically disyllabic, reflecting directly possessed nouns that became classifiers (Ross in prep.). These languages are found in the RSC, St. Matthias, Southern Vanuatu, New Caledonia, and Micronesian groups. Remnants of long classifier systems are found in UV languages, the Admiralties, New Ireland, North and Central Vanuatu, and Nadrau Fijian. Mussau (St. Matthias) has the classifiers listed in (48):

(48)

CLASSIFIER	TYPE OF POSSESSION	MEANING AS NOUN OR VERB
ai-	trees	'tree, wood' (N)
ale-	building	'house' (N)
ane-	food	—
ɣolu-	juicy foods	'eat s.t. juicy' (V)
iema-	cutting instruments	'knife' (N)
ilimo-	water craft	'canoe' (N)
kalu-	abstract personal items	—
kapu-	personal relationships	'friend, sibling' (N)
kie-	domestic animals	—
kura-	things giving light	'fire'
ropi-	things to drink	'drink' (V)
uma-	pieces of land, gardens	—
une-	general things	—
usu-	things to suck juice from	'suck juice from' (V)

(Mussau, Brownie and Brownie 2007:77)

Examples of Mussau usage are given in (49) and (50). Each example shows different relational classifiers used with the same possessum noun.[30]

(49) a. ai-ɣi niu eteac
tree-P:1S coconut SG:II
'my coconut tree'

b. ropi-ɣi niu eteva
drink-P:1S coconut SG:I
'my coconut to drink' (Mussau, Brownie and Brownie 2007)

(50) a. uma-ɣi uri eteva
earth-P:1S banana SG:I
'my banana plant'

b. anɛ-ɣi uri eteva
food-P:1S banana SG:I
'my banana to eat' (Mussau, Brownie and Brownie 2007)

Long classifiers have received little attention in the literature, partly perhaps because very few can be reconstructed for POc. It seems that POc had classifiers like those in Mussau in (48) but all POc classifiers were still directly possessed nouns, with a flexibility that allowed the addition and subtraction of members to and from the classifier set, such that different languages inherited different sets. Classifiers that can be reconstructed for POc because they are reflected in more than one Oceanic subgroup are given in (51). The nouns from which they are derived are given beside them (* kanaŋ and *inumaŋ are nominalizations of *kani 'eat' and *inum 'drink' respectively) (Ross in prep.).[31]

(51)

CLASSIFIER	TYPE OF POSSESSION	NOUN	
*kana-	(cooked) food	*kanaŋ	'food'
*(q,k)oda-	raw food	*(q, k)oda	'raw food'
*inuma-	drink	*unumaŋ	'drink'
*natu-	baby	*natu	'offspring'
*Rum$^{(w)}$a-	house	*Rum$^{(w)}$aq	'house'
*kaiu-	plant	*kaiu	'tree'

Long classifiers denoting certain other categories turn up with some frequency in long classifier languages. The classifiers disagree in form, so no POc classifier is reconstructible, but there were probably also classifiers for chewable substances, canoes, domestic animals, and fire.

Long classifiers in Temotu languages are listed in (52) together with ancestral POc forms.[32] Äiwoo and Natügu both have sets with meanings found in other long classifier languages, albeit with fewer members than Mussau and Micronesian languages. UV languages have short classifiers, and Asuboa and Tanibili additionally have a single long classifier for fire, probably the relic of a larger Temotu set more like that of RSC.

30. In the Mussau examples, I and II denote different noun classes.

31. There is a clear historical relationship between the short classifiers *ka- 'food', *ma- 'drink' and the corresponding long classifiers *kana- and *inuma-, but a discussion of this relationship lies outside the scope of this paper.

32. Both items for 'chew' denote chewing betelnut: POc *d(r)amu- <*d(r)amut 'lime spatula', POc *mama- < *mamaq 'chew betelnut'.

(52)	POc	Aiw	Nat	Neb	Asu	Tnb	Bum	Vno
General	*no-	no	nä-	e-	e-	i-	i-	i-
Food	*kana-	na	[n]a-	a-	a-	a-	a-	a-
Drink	*inuma-	numä	mü-	mia-	na-ma-	mi-	me-	ma-
Chew	*d(r)amu-	da	—	—	—	—	—	—
Chew	*mama-	—	ma-	—	—	—	—	—
Fire	—	—	mnö-	—	no-ŋo-	kipi-	—	—
Utensils	—	nogo	kö-	—	—		—	—
—								
Locations	—	tä	ñä-	—	—	—	—	—

The Äiwoo set consists of relational classes all of which occur in other long classifier languages, and their usage, illustrated in (46), is much as in other Oceanic languages. Although Äiwoo has complicated this system in ways uniquely its own (Næss 2006a:273–74), there can be no doubt that in both form and function the possessive class system is Oceanic.

3.2.2 Nominalizing prefixes. Næss (2006a:276–81) lists eight Äiwoo nominalizing prefixes that are attached to a verb complex to form a noun. None of them can be said to have a classifying function. They are listed in (53).

(53)				
mi-	'one who/which'	pe-	'human collective'
gi-	'human male'	ñe-	'place'
si-	'human female'	de-	'thing, instrument'
me-	'human'	ñi-	'way, manner'

The prefixes do not all have the same distribution, but all can be attached to a verb complex.[33]

(54)			
mi-tu-mä-ji	NZ:entity-bring-DIR-A:1 2M	'the (thing) you and I brought'
gi-laki	NZ:male-be.small	'little boy'
si-ki-vetäŋä	NZ:female-IPF-destroy	'woman who destroys things'
me-ku-basiki sa	NZ:human-IPF-run front	'the one running in front'
pe-ku-pu-ŋeŋäle	NZ:COLL:human-IPF-go-back.and.forth	'messengers, negotiators'
ñe-ki-leluwo-i=lä	NZ:place-IPF-dance-A:3A=OBL	'the place where one dances'
de-ki-ŋab-ee-i=lä	NZ:thing-IPF-climb-UP-A:3A=OBL	'thing one climbs up'
ñe-o-mä=nä	NZ:manner-go-DIR=OBL	'the way/how it came here'

The first of these prefixes, *mi-*, has the widest distribution, performing the function of an attribute marker and relativizer. A verb used attributively is often (but not always) prefixed with *mi-*: *nuwopa mi-olo* (house NZ:entity-big) 'the big house'.[34] There is nonetheless good reason to analyze *mi-olo* as a nominalization ('a big one') here (Næss 2006a:277–78), an observation which is quite normal from a Western Oceanic perspective (Ross 1998a).

It is always difficult to determine the source of monosyllabic CV forms, and the prefixes in (53) are no exception. However, nominalizing affixes are relatively common in Oceanic languages. Lynch, Ross, and Crowley (2002) contains grammar sketches of

33. The prefixes *ñi-* and *ñe-* both have two allomorphs *ñi-*and *ñe-*, but there are structural reasons for treating them as separate prefixes (Næss 2006a:279). The enclitic =C*ä* is an oblique proform (see 3.3.1.3 above and Næss 2006a:281–83).

34. There are perhaps as few as two adjectives in Äiwoo: properties are generally encoded as verbs.

43 Oceanic languages: nine of these have two or more such affixes (see table 8 below), and several more have just one.

Three nominalizing affixes are reconstructible for POc:

(55)

POc AFFIX	GLOSS	RECONSTRUCTED EXAMPLE
infix *<in>, prefix *ni-	'perfective patient'	*k<in>ani'thing eaten'
suffix *-an or *-aŋ	'location'	*kan-an, *kan-aŋ 'eating place'
prefix *i-	'instrument'	*i-kani'thing one eats with'

There is evidence that these suffixes were in a considerable state of flux in early Oceanic, with alternative forms of the locative nominalizer *-an that included *-aŋ, *-ana, and *-aŋa, and extensions to its meaning such that its reflexes came to serve in many languages as abstract nominalizations, for example, 'eating' rather than 'eating place' (Ross 1998c:32–34).

Languages have a tendency to retain conceptual categories even though the structures that encode these categories may change, and so, perhaps as a consequence of this fluctuation, the POc affixes were often replaced by other devices in various daughter-languages, including Äiwoo. These devices were probably innovated by adapting and grammaticizing constructions that already occurred in POc. There is evidence, for example, that POc already had an alternative instrument prefix *ai-, reflected in Mussau (St. Matthias), Paamese, and Southeast Ambrym (both central Vanuatu). In Mussau, at least, it has a similar capacity to its Äiwoo counterparts to nominalize a whole verb phrase.

(56) ai-u-uŋu-e-utana
NZ:INST-RDP-work-PREP-garden
'garden tool' (Mussau, Brownie and Brownie 2007:36–38)

Some prefixes have arisen from the associative construction (see also 3.2.4 below), in which the category denoted by the head noun of a noun phrase is more closely defined by an embedded noun phrase. Glossing over details, the construction was [head noun + *ni + modifying noun phrase], illustrated in (57).

(57) a. *a polo ni niuR
ART liquid NI coconut
'coconut water'

b. *a Rum$^{(w)}$aq ni turuR
ART house NI sleep
'a rest house' (lit. 'a house of sleep') (Proto-Oceanic, Ross 1998b:249)

The modifying noun phrase could also be a nominalization, as in (57b). The Fijian reflex of the associative construction is illustrated in (58):

(58)

vale ni kana	house NI eating	'restaurant'
vale ni vei-vesu	house NI NZ:tie	'prison'
drau ni ulu	leaf NI head	'head hair'
drau ni kau	leaf NI tree	'leaf, leaves'
v ni vola	base NI write	'scribe, secretary'
v ni vudi	base NI banana	'banana tree'

(Standard Fijian, Schütz 1985:451, 455)

In Mussau, *ni is reflected as *ŋ-*, glossed NI, and the modifying noun phrase is itself a reflex of the instrumental nominalization with *ai-referred to above.

(59) tau ŋ-ai-nama-ŋ-asi
person NI-NI:INST-eat-LIG-taro
'taro-eater' (Mussau, Brownie and Brownie 2007:85–86)

Mussau has a variant of this construction in which the reflex of *ni is omitted and the modifying nominalization is placed straight after the head noun:[35]

(60) tau ni-nama-nama
person NZ-RDP-eat
'person who eats a lot'

This raises the question of whether POc also had a variant of the construction from which *ni was omitted. This is a question that may never be answered, but it is clear that *ni disappeared in a good many languages, allowing the head noun to be reanalyzed as a prefix, often undergoing the phonological attrition that is associated with grammaticization.

In Dobu (southeast Papua) and its closer relatives, both versions of the construction are grammaticized. POc *tau 'person' + *ni have become the Dobu prefix *toni-* 'owner/controller of', while POc *tau alone has become the Dobu prefix *to-* 'person who'. These and several other prefixes that result from this grammaticization are shown in table 6 (Arnold 1931:20). Dobu also has a prefix *me-* 'one which', which combines with adjectives: *me-gidarina* 'a small one', *me-sinabana* 'a big one' (Arnold 1931:21). The functional similarity of these prefixes to the Äiwoo prefixes in (53) is striking.

Nêlêmwa in New Caledonia also has several prefixes of this kind: *aa-* 'one who', *shâ-*'contents of', *pâ-* 'result, fruit', *baa-* 'instrument', *hna-* 'place'. It is clear from Bril's (2002:73–74, 78–82) examples that these prefixes, like those in Äiwoo and Mussau, may attach to full verb phrases.

Tamabo in northern Vanuatu also has such prefixes, shown in table 7 (Jauncey 1997:129–31, 137–38). Some of these (*vu-* 'tree', *ra-* 'leaf') have much narrower meanings than the Äiwoo prefixes in (53), but are functionally similar to the Äiwoo class prefixes discussed in 3.2.4 below. Note that *ta-* is a grammaticized reflex of POc *tau (cf.

TABLE 6. NOUN-DERIVING PREFIXES IN DOBU

PREFIX	GLOSS	EXAMPLE	GLOSS	ROOT	GLOSS
toni-	'owner, controller'	toni-waga	'boat captain'	waga	'canoe'
		toni-anua	'owner'	anua	'house'
to-	'person who'	to-paisewa	'worker'	paisewa	'work'
		-mʷasasa	'dead man'	mʷsasa	'die'
asa-	'place'	asa-paisewa	'workplace'	paisewa	'work'
		asa-mʷasasa	'deathbed'	mʷsasa	'die'
ʔebe-	'instrument'	ʔebe-sui	'razor'	sui	'shave'
		ʔebe-guinua	'tool'	guinua	'work'
me-	'person from'	me-Dobu	'person from Dobu'	Dobu	place name
goma-	'man from'	goma-Bunama	'man from Bunama'	Bunama	place name
sine-	'woman from'	sine-Bunama	'woman from Bunama'	Bunama	place name

35. Brownie and Brownie (2007) analyze *ni-* as an abstract nominalizer, which evidently reflects *<in>/*ni- in (53). It is possible, however, that the homophony of *ni- 'nominalizer' and *ni 'associative marker' has played a role in the history of the Mussau construction.

Mussau *tau* in [59] and [60], Dobu *to-* in table 6), *vu-* of POc *puqun 'base' (cf. Fijian *v* in [58]), *ra-* of POc *raun 'leaf' (cf. Fijian *drau* in [58]), while *i-* reflects POc *i- 'instrumental' in (55).

In table 8 we set out the nominalizing affixes of Äiwoo and the nine languages with more than one prefix found in Lynch, Ross, and Crowley (2002), as well as the languages just discussed. Affixes reflecting POc affixes are shown in bold. All or most of the remaining affixes are later innovations, some, at least, reflecting the grammaticization of nouns as nominalizing prefixes. Mussau *tau* in agentive *tau ŋ-ai-* is still a noun. Iaai *at* 'man' and *hna* 'place' are both nouns and prefixes. Dobu *to-*, Ulithian *too-*, Puluwat *haw-*, and Nadrogā Fijian *drou-* are prefixes cognate with Mussau *tau* and reflect POc *tau 'person'. Äiwoo *ñe-* appears to reflect POc *panua 'inhabited land, village'. Mussau *ni-* reflects POc *ni- 'perfective patient nominalizer', and it is possible that Äiwoo *ñi-* 'manner nominalizer' has the same origin.

Äiwoo *pe-* 'human collective' may reflect the POc reciprocal prefix *paRi-, the reflexes of which are sometimes attached to noun stems to form collective nouns. The examples below are from Vitu (Meso-Melanesian, New Britain) and Boumaa Fijian (Central Pacific).

TABLE 7. NOUN-DERIVING PREFIXES IN TAMABO

PREFIX	GLOSS	EXAMPLE	GLOSS	ROOT	GLOSS
ta-	'person from'	ta-ureure	'people from other islands'	ureure	'islands'
		ta-mariŋo	'people from the west'	mariŋo	'west'
vu-	'tree'	vu-abu	'*Barringtonia asiatica*'	abu	tree name
		vu-kalato	'nettle tree'	kalato	tree name
ra-	'leaf'	ra-haviha	'Malay apple leaf'	haviha	'Malay apple tree'
		ra-moli	'citrus leaf'	moli	'citrus plant'
vo-	'female human'	vo-natu-ku	'my daughter'	natu-ku	'child-P:1S'
		vo-tawai	'older sister'	tawai-m	'your older brother'
i-	'instrument'	i-vine	'arrow'	vine	'shoot'
		i-ɣeli	'digging stick'	ɣeli	'dig'

TABLE 8. A COMPARISON OF NOUN-DERIVING PREFIXES IN OCEANIC LANGUAGES

	'ONE WHO / WHICH'	FEMALE	AGENT	HUMAN COLLECTIVE	PLACE	INSTRUMENT	MANNER	ABSTRACT
Äiwoo	me-, mi	si-	—	pe-	ñe-	de-	**ñi-**	—
Mussau	—	—	tau ŋ-ai-	—	—	ai-	—	**ni-**
Dobu	me-	sine-	to-	—	asa-	ʔebe-	—	—
Roviana	—	—	—	—	**-ana**	**-ana**	—	**<in>**
Tamabo	—	vo-	—	—	—	**i-**	—	—
Anejom̃	—	—	—	nupu-	—	inta-	—	—
Nêlêmwa	—	—	aa-	—	hna-	baa-	—	—
Cèmuhî	—	—	ā-	—	ā-	b-	$b^{w}ɔ$-	—
Xârâcùù	—	—	a-	pa-	ù-	—	kèè-	xwā-
Iaai	—	—	at-	wa-	hna-	—	—	—
Ulithian	cɔɔ-	—	too-	—	—	—	—	—
Puluwat	li-	—	haw-	—	—	—	—	—
Nadrogā	—	—	drou-	—	—	**i-**	—	—

(61) a.

vari-tazi-ni	brothers/sisters	tazi	same-sex sibling
vari-go-ni	married couple	go	spouse

(Vitu, van den Berg and Bachet 2006:30)

b.

vei-tama-ni	fathers and children	tama	father
vei-wati-ni	married couple	wati	spouse
vei-vale	group of houses	vale	house

(Boumaa Fijian, Dixon 1988:176–77, Capell 1941:259)

We do not want to argue for the formal origins of Äiwoo nominalizers,[36] however, but rather to make the point that the Äiwoo prefixes are not particularly unusual in the Oceanic context. Forms similar in (i) function and (ii) morphological structure exist in other Oceanic languages, and the framework for forming them was present early in the history of Oceanic. The only notable differences between Äiwoo and the other languages in table 8 are that Äiwoo has more affixes and perhaps tends to nominalize more complex verb phrases than the others.

3.2.3 'Person from' prefix. One of the Äiwoo nominalizing prefixes, *pe-* 'human collective', also combines with location expressions to form nouns with the meaning 'person/people from', that is, either singular or collective in meaning; for example, *pe-Tiwo* 'person/people from Tuwo village'. The location expression may also be phrasal (and, in this example, itself contains a locative nominalization): *pe-ŋäi-ñi-eŋe* 'people from this place', where *ŋäi ñi-eŋe* (PREP NZ:place-this) is a prepositional phrase.

Prefixes with this function are fairly common in Oceanic languages. Again, no POc form can be reconstructed, but the concept is widely enough encoded to suggest that early Oceanic either had such a form or had a formulaic construction corresponding to it and that its presence in Äiwoo is unsurprising.

(62)

Dobu	me-	me-Dobu	'person from Dobu'
Tamabo	ta-	ta-Alotu	'person from Santo'
Lamen	li-	li-Epi	'the people of Epi'
Naman	de-	de-Rano	'person from Rano'
Avava	ma-	ma-Ramap	'person from Vinmavis'
Anejom̃	nupu-	nupu-tooŋa	'foreigner'
Nêlêmwa	shâ-	shâ-Pum	'person from Poum'
Ulithian	re-	re-yuliðiy	'Ulithian'

3.2.4 Class prefixes. Class prefixes are attached to either a noun or a verb to form a noun denoting a member of the class encoded by the prefix (Næss 2006a:283–86). They are listed in table 9, modified from Næss (2006a:284), where further examples are to be found. A majority of the prefixes in the table bear a formal relationship to their corresponding generic noun: they appear without initial *n*V- and have in some cases undergone further formal changes, particularly in their vowels.

Historically, at least, Äiwoo nouns formed with class prefixes are derived from compounds in which the first item (originally a noun) labels a class and the second item (noun or verb) narrows the denotation to a subtype within the class. Both items appear without

36. Äiwoo *me-* and *mi-* and Dobu *me-* are similar in form and function, and so are Äiwoo *si-* and Dobu *sine-* (although the latter is very restricted in function compared to Äiwoo *si-*), but we think that this may be due to chance.

nV-, a phenomenon that is the norm in noun compounds in certain Vanuatu languages (Lynch 2001a:227) and was perhaps the norm in POc. This compounding is, of course, the process we observed in 3.2.2 but, in the narrowness of the classes they denote, the Äiwoo class prefixes more particularly resemble prefixes like Tamabo *vu-* 'tree' and *ra-* 'leaf'. The main diachronic difference between the nominalizing prefixes and the class prefixes is that the former were probably grammaticized earlier, so that their sources are far less obvious than those of the class prefixes. Indeed, an alternative synchronic analysis of Äiwoo class prefixes is that they are not prefixes at all but formally unpredictable alternant forms of nouns that occupy the first position in a compound.

3.2.5 Gender-marking prefixes. Two of the nominalizers, *gi-* 'human male' and *si-* 'human female', are also used with noun stems to form gendered human nouns. They are attached to inalienable kin terms. These are listed in table 10, together with their collective equivalents, formed with *peliva-* and *pelivali-*. Four of these terms have known POc antecedents, listed in (63).

(63)

POc		Äiwoo
*natu-	'child'	-no
*taci	'same-sex sibling'	-te
*abu	'grandchild'	-bo
*nopu	'cross-sibling'	-[n]we

The combinations in table 10 appear to be lexicalized, as the stems do not occur on their own. The combination of lexicalization and Oceanic stems suggests that the Äiwoo prefixes are quite old and may well have an Oceanic origin.

3.3 VERB PHRASES. Some features of the verb phrase—subject and object pronominal affixes (3.1.1) and the encoding of transitivity (3.1.2)—have already been discussed. Here we deal with other morphological features and with complex verbs.

TABLE 9. CLASS PREFIXES AND CORRESPONDING GENERIC TERMS

PREFIX	MEANING	COGNATE GENERIC TERM	EXAMPLES
be-	'basket'	ñibä	be-nupo 'string basket' (nupo 'net')
bo-	'shark'	nubââ	bo-opa 'white shark' (opa 'white')
bu-	'soil'	nubo	bu-ŋâŋo 'clay' (ŋâŋo 'strong')
bulo-	'breadfruit'	ñibälo	bulo-nenu 'breadfruit sp.' (nenu 'coconut')
du-	'wild yam'	nuduwo	du-wopulo 'wild yam sp.' (opulo 'red')
na-	'crab, crayfish'	—	nâ-tâu 'crab sp.'
ña-	'tree'	ñenaa	ñä-ñie 'casuarina' (ñie 'fire')
oli-	'*Barringtonia* nut'	—	oli-ko 'type of cutnut'
opo-	'house'	nuwopa	opo-kuuko'holy house, chapel' (uko 'holy')
pä-	'seashell'	nuwâdâ	pä-viliñimä 'spider shell' (vili 'five', ñimä 'finger, hand')
po-	'fishing net'	nupo	po-bulou 'long net used to encircle fish' (ebulou 'long')
u-	'banana'	no-u	uelââ 'banana sp.' (elââ 'big PL')
u-	'*Terminalia* nut'	—	u-poläge 'nut sp.' (poläge 'hard')
ubu- / umu-	'betelnut'	—	umu-lili 'type of betelnut' (lili 'small')

3.3.1 Morphological features

3.3.1.1 Aspect/mood markers. Aspect and mood are marked by morphemes that precede the verb. In an intransitive clause they intervene between the subject prefix and the verb, unless the subject prefix is S:3A, when they precede it.

The aspect/mood markers are:

(64)

MARKER	MOOD	ASPECT
nâ/nä	irrealis	
ki	realis	imperfective
i	realis	perfective

As usual, it is dangerous to look for cognates among monosyllabic morphemes, but the temptation to derive *nâ/nä* in (65) from POC *na 'irrealis', reflected right across Oceanic (Ross 1988:360–75), is hard to resist.

(65) Kâ-no=ngä **nâ**-wowaa-wâ-gu-mu gi-no-u.
want-A:1M=OBL IRR-marry-DIR-A:3M-O:2M MASC-offspring-P:1M
'I want my son to marry you.'

3.3.1.2 Directionals. Directionals are monosyllables indicating the direction of an action with respect to the people involved in the speech situation. If a directional occurs in a verb phrase, it precedes subject and/or object suffixes, as in (66).

(66) ku-tu-woli-usi-**kä**-i-lc=to
IPF-carry-go.down-again-DIR-A:3A-UA=PH
'they (two) brought him back down'

The use of directionals is ubiquitous in Oceanic languages, and the Äiwoo directionals conform not only in function but in two instances in form to their counterparts in other Oceanic languages. The POC directionals (Ross 2003b:269–82) and their Äiwoo counterparts are listed in (67), where the cognacy of the first two is transparent.

(67)

POC	ÄIWOO	
*mai, *ma	-mä	'towards speaker'
*ua, *watu	-wâ	'towards addressee'
*la	-kä/-kâ	'go (from speaker)'

3.3.1.3 Oblique proforms. The Äiwoo oblique proform *=Cä* is functionally identical to oblique proforms in numerous Oceanic languages, many of them reflecting the POC oblique proform *[i]ai (Chapin 1974, Pawley 1972:77, Ross 1988:348), except for the fact that it causes an otherwise intransitive verb to be morphologically transitive:

TABLE 10. INALIENABLE NOUNS FORMED WITH *GI-* AND *SI-* †

gi-no	'son'	…	…	peliva-no	'children'
…	…	si-pe	'daughter'	…	…
gi-te	'[man's] brother'	si-te	'[woman's] sister'	pelivali-te	'same-sex siblings'
gi-bo	'grandson'	si-bo	'granddaughter'	pelivali-bo	'grandchildren'
gi-äŋä	'mother's brother'	—	—	pelivali-äŋä	'mother's brothers'
gi-nwe	'woman's brother'	si-we	'man's sister'	…	…
gi-äle	'husband'	si-väle	'wife'	…	…

† The top four terms in table 10 are from Næss's data; the others from Wurm, Bwakolo, and Moiyâ (1985).

(68) a. Ko-kä=nä ku-tu-mu mo ki-tei-mu=**wä**.
say-DIR=OBL IPF-take-A:2M and IPF-fish-A:2M=OBL
'He said, "Take it [a fishing net] and fish with it'

b. I-bakisi-kä mo numobâ i-veie ku-wokâu=**nä**, uubo-kä.
PF-run-DIR and hole PF-dig IPF-bathe=CL forget-DIR
'He ran, but he forgot about the hole he had dug to bathe in.'

c. nuwopa mi-ku-mo John=**kä**
house MI-IPF-live John=OBL
'the house in which John lives'

The C (consonant) of the form =C*ä* is determined by a complex set of rules, and its behavior, at least diachronically, resembles that of the so-called "thematic consonant" in Oceanic transitive verbs, where the C of -C*i* 'transitive suffix' often reflects the otherwise lost stem-final consonant of the verb (Arms 1974, Evans 2003:103–4, 205–30). It is reasonable to infer that =C*ä* reflects POc *[i]ai, although no thematic consonant occurs in reflexes elsewhere.

3.3.1.4 Derivational morphology. Two derivational morphemes occur in the formation of Äiwoo verb stems, the causative prefix *wâ-* and the applicative suffix *-ive*.

Causative prefix. The Äiwoo causative prefix *wâ-* evidently reflects POc *pa- 'causative'. It is applied to formally intransitive verbs (including some semitransitives), and produces a transitive or semitransitive verb when it is unsuffixed:[37]

(69) Lâ ku-lu-**pwâ**-nubo-le=to sii kâ mo lâ ku-lu-pwa-le=nâ.
DEIC IPF-S:3A-CAUS-die-UA=PH fish DEIC CJ DEIC IPF-S:3A-go-UA=DEIC
'They (two) killed fish as they went along.'

In order to derive a transitive causative verb, the transitive suffix *-wā/-eā* must also be added.

(70) Sii wâ-nubo-**wâ**-i-le dâu.
fish CAUS-die-TR-A:3A-UA many
'They (two) killed a lot of fish.'

Although it seems as improbable a reflex as some of the transitive forms in table 5, *-wâ/-eâ* probably reflects POc transitive *-i, a reflex of which would occur in this context in other Oceanic languages.

There is a phonological oddity about the causative prefix *wâ-*. The regular reflex of POc *pa- in all Temotu languages would be *va-*, but it has this form only in Asuboa and Tanibili. In Äiwoo, Nebao, Buma, and Vano it is reflected as *wa-*, and it is possible that its form in PTM was (idiosyncratically) *wa-, but further work on the synchronic phonology of the languages is needed before we can be certain.[38]

Applicative suffix. The applicative suffix *-ive* is applied to formally intransitive verbs (including some semitransitives), and normally produces a transitive verb:

37. After *-lu* S:3A, *w-* regularly becomes *pw-*.

38. Unfortunately we lack the crucial independent evidence for the reflexes of POc *w- in Natügu, Asuboa, and Tanibili that would allow us to determine this. A complication is that Buma and Vano *a-bo* 'kill' contain a reflex of causative *pa- that apparently differs in form from frequentative *wa-* in these languages.

(71) lopâ 'talk' lopâ-ive 'tell'
mänjä 'laugh' mänjä-ive 'laugh at, make fun of'

The example in (72) is typical of transitive verbs formed with reflexes of the POc applicative suffix *-aki in many Oceanic languages, but *-ive* does not appear to reflect POc *-aki.

(72) Doo=lâ ki-mängä-ive-mu=wâ?
what=DEIC IPF-laugh-APPL-A:2M=DEIC
'What are you laughing at?'

3.3.2 Nuclear serialization. It is very common in Äiwoo to find combinations of two or more lexical stems in a single inflected verb form. Such constructions can be analyzed as nuclear-layer serializations, which are common in Oceanic languages (Crowley 2002:89–106, 138–44). Core-layer serialization was certainly present in POc (Ross 2004a), and it is quite possible that nuclear-layer serialization was, too, but Crowley (2002:108–16) is at pains to point out that nuclear-layer serialization can develop out of several different construction-types, including core-layer serialization, so it is possible that nuclear-layer serialization has arisen independently in various Oceanic languages, among them Äiwoo.

Äiwoo has two varieties of nuclear-layer serialization:

- In the first type, the initial lexical element can be construed as the head of the construction, while the other element(s) function as modifiers of this head.
- The second type has two lexical stems each referring to different aspects of a single complex event, for instance, with the second stem describing the effects of the action denoted by the first.

Similar types of nuclear-layer serialization are found, for example, in Mwotlap of the Banks Islands in northern Vanuatu (François 2004). We exemplify these types very briefly below, but there is nothing to be said about them diachronically beyond the fact that they represent constructions that may have been inherited from POc or may have arisen independently.

3.3.2.1 Head–modifier nuclear-layer serialization. Transitive examples were given in (45) above. An intransitive example is given below in which the second verb is an intransitive denoting a property:

(73) Mi-pu-une-maa.
S:2M-go-be.true-DIR
'You must really come.'

Also in the head–modifier category are serializations in which the second element is a directional verb: *ee* 'up', *(w)oli* 'down', *to* 'in', and *lâ* 'out'. These are verbs which can be used on their own, not directionals like those described in 3.3.1.2 (see also Frostad 2006).

(74) Ku-tu-woli-usi-kä-i-le=to.
IPF-carry-go.down-again-DIR-S:3A-UA=PH
'They (two) brought him back down.'

3.3.2.2 Cause–effect nuclear-layer serialization. The "cause–effect" label encapsulates the fact that the first verb provides the cause or means that leads to the event

denoted by the second verb, an extremely common form of serialization in Oceanic languages. In (75b) cause–effect serialization is combined with head–modifier serialization (see above).

(75) a. Mi-nâ-wo-go nenu.
A:2M-IRR-hammer-crack.open coconut
'Go and break open some coconuts.'

b. I-tâ-lu-woli-kä-i.
PF-cut-snap.flexible.object-go.down-DIR-A:3A
'They cut it (the vine) down.'

Næss (2007a) shows in some detail that neither element of a cause–effect serialization necessarily exists as an independent verb. This is the effect of lexicalization through high token frequency. Again, parallel processes have occurred elsewhere in Oceanic languages. The "classificatory prefixes" denoting the means of an action in some Western Oceanic languages represent such lexicalization, and indeed grammaticization, of the first of the two serialized verbs, the cause, while the resultative morphemes found in Huon Gulf languages result from a grammaticization of the second, effect, verb (Bradshaw 1982, Ezard 1978, Crowley 2002:176–77, Margetts 1999, 2005).

4. CONCLUSION. In section 2 we showed (i) that Temotu is a distinct Oceanic subgroup; (ii) that it is probably a primary subgroup of Oceanic; (iii) that it seems to split internally into RSC and UV subgroups; and (iv) that within the latter there is an Utupua subgroup but perhaps no Vanikoro subgroup.

In section 3 we have shown that Äiwoo pronominals, the transitive marker, possessive classifiers, directionals, the causative prefix, and perhaps some nominalizing prefixes, the irrealis marker, and the oblique proform have Oceanic origins. We have examined the features of Äiwoo grammar that have been claimed as evidence that it is a Papuan language and have shown that they either represent constructions that can be reasonably reconstructed for POc (clause types and their verb phrases, possessive classes) or constructions that quite closely resemble corresponding constructions that have evolved in other Oceanic languages (nominalizing prefixes and nuclear serialization). We are left with no need to posit a Papuan element in Äiwoo.

How then did it come about that Stephen Wurm thought the RSC languages were Papuan? In small measure because the reconstruction of POc had in the 1970s not progressed to where it is today. In larger measure because the typological features he found in the RSC languages had yet to be documented in other Oceanic languages—and because the RSC languages had undergone phonological changes that rendered some cognates unrecognizable and led eventually to the replacement of others. To apply the term used by Grace (1990, 1992) and Pawley (2006), the RSC languages had become "aberrant" Oceanic languages of somewhat the same order as those of southern Vanuatu and southern New Caledonia.

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