

REEF-SANTA CRUZ AS AUSTRONESIAN

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0. INTRODUCTION

The main theme of this paper is that the Reef-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. I will leave presentation of the opposing view - that RSC languages are in substantial part Austronesian but they have been influenced by another linguistic tradition in the Pacific, namely the East Papuan Phylum - to Wurm (this volume), and I will keep to the original theme of my paper, first discussing the geographical position of RSC and other related background material.¹ Then I will present evidence that the RSC basic grammatical morphemes like numerals, pronominal affixes, and tense markers are suggestively similar to Proto-Oceanic reconstructions for these same categories. Also, the categories of grammatical morphemes for RSC match those for Proto-Oceanic quite well. In other words, RSC data so far examined have not revealed systems of morphemes - concord markers or complex tense distinctions - that are very different from those in Oceanic languages. If these typological similarities were reinforced by a set of recurring regular sound correspondences that connected the particular grammatical markers of RSC languages to their putative Proto-Oceanic sources, we could conclude quite simply and finally that RSC languages are Oceanic (i.e. Austronesian). However, recurring regular sound correspondences have not yet been established. Instead, we find that in order to associate particular RSC morphemes with their possible Proto-Oceanic sources several, and at times quite conflicting, sound changes are needed. Such sound changes do not in themselves rule out the conclusion that RSC languages are Oceanic. Rather, it seems possible or even likely that RSC languages

reflect several Oceanic traditions in the same way that Rotuman has direct and indirect inheritance from Proto-Oceanic (see Biggs 1965).

1. REEF-SANTA CRUZ GEOGRAPHY

There are three languages in the RSC group: Reef (or Gnivo) spoken on a few small islands near 10°15'S 166°15'E; Lödäi, a chain of dialects (see Simons 1977) around Santa Cruz Island that is centred near 10°45'S 166°E; and Nagu (or Nanggu) on the south-east corner of Santa Cruz. For greater clarity, Lödäi language samples will be identified by village name.

Their closest neighbours are the Polynesians of Pileni and other islands near Reef. Slightly further are the three languages of Utupua, Amba, Asumboa, and Tanimbile. Just beyond Utupua are the three languages of Vanikoro - Teanu, Vana, and Tetau. The reader can appreciate the isolation of the group by studying the distances to other locations given in Table 1.

2. REEF-SANTA CRUZ PHONOLOGY

The richness of the RSC phonemic inventories can be readily inferred from Table 2 which presents the nearly phonemic spelling conventions designed by John Mealue and Patrick Bakolo. Such phonological complexities are quite well reported for other areas where the only languages found are all classified as Oceanic; for example, Micronesia, Rotuma, and New Caledonia. Indeed, there are several parallels between Lödäi and Canala phonologies (see Grace 1975). For example, Canala has similarly rich vowel inventory:

Oral: i, e, ε, a, †, ə, ʌ, u, o, ɔ

Nasalised: ɪ̃, ɛ̃, ə̃, ʌ̃, ũ, õ, ɔ̃

(Grace 1975:vi).

Also, Lödäi and Canala share the property that most two and three syllable words can be analysed into shorter, typically monosyllabic, morphemes. Since Canala, like the other languages of New Caledonia, is held to be Austronesian, the phonological complexities in themselves do not prevent us from classifying Lödäi and other RSC languages as Austronesian. The phonological complexities do make it quite difficult to unravel the sound changes that lie behind the present RSC languages (see Wurm 1970) as is also the case for Canala (see Grace 1974). There is one generalisation that applies to both Lödäi and Canala: among words that reflect Proto-Oceanic reconstructions of the form $*C_1V_1C_2V_2$ we can expect a morpheme of the form CV with the consonant resembling $*C_1$, and the vowel resembling $*V_1$ possibly also resembling $*V_2$ through assimilation. In other words, the process of "erosion from the right" that Bender (1969)

TABLE 1

Approximate Distances to Other Locations from
Santa Cruz in Order of Distance

Location	Approximate Distance in Km.	General Direction
Reef and Pileni	60	N
Utupua	80	SE
Vanikoro	140	SE
Taumako	160	NE
Torres Is., N.H.	270	S
Banks Is., N.H.	340	S
Tikopia	360	SE
Santa Ana	390	W
Anuta	450	SE
Sikaiana	450	NW
Rennell	620	W
Savo	710	W
Nauru	1140	N
New Caledonia	1140	S
BuIn	1200	NW
Ellice	1230	NE
Rotuma	1260	E
Rossel	1340	W
Fiji	1560	SE
Tarawa	1570	NW
Kusaie	1780	N
Marshalls	2100	N
Ponape	2150	N
Australia	2150	SW
Samoa	2400	SE

TABLE 2

Reef-Santa Cruz Orthographic Conventions
(From John Mealue & Patrick Bakolo)

SANTA CRUZ

Vowels:	a [a]	<u>a</u> [ɔ]	ä [æ], [ɛ]
	e [e]	ë [ʌ]	
	i [i]		
	o [o]	ö [ə], [ö], [ä]	
	u [u]	ü [ɨ], [ü]	

Nasalised

Vowels: ã, ã, ä, ë, ë, ɿ, ö, ö, ü, ü

Consonants:

voiced stops:	b [b]	mb [^m b]	d [ⁿ d]	g [^ŋ g]
voiceless stops:	k [k]	p [p]	t [t]	
nasals	m [m]	n [n]	ny [ny]	ng [ŋ]
liquids	l [l]	r [r]		
fricatives:	s [s]	v [β]		
glides:	w [ɥ]	y [j]		

LÖDÄI

(Some vowel distinctions exemplified)

pa 'first fruit'	pä 'reject'	pä 'bald'
	p <u>a</u> 'red'	Ne p <u>ä</u> 'a place name'
pe 'to plant'	pë 'low tide'	pëi 'kind of pudding'
pi 'to say'		
po 'young (fruit)'	pö 'white'	pö 'reef fish sp.'
pu 'glutton'	pü 'hot'	

REEF

(Same as Santa Cruz, except fewer vowels and y used as diacritic with palatals)

Vowels:	a, <u>a</u> , ä, e, i, o, u
Palatals:	d ^y i [dʒi], [ʝi] nyi [ñi] yi [j]

uses to describe developments in Micronesian languages seems to have been somewhat more withering in the developing of Canala vocabulary and at least part of the RSC vocabulary.

With these observations in mind, I will now proceed to discussions of RSC numerals, pronouns, verb phrase and noun phrase.

3. REEF-SANTA CRUZ NUMERALS

The RSC numerals appear to involve some Austronesian/Oceanic elements, but other elements are not yet associated with any known source. The numerals to be compared are displayed in Table 3. Each numeral will be discussed in turn.

TABLE 3

Reef-Santa Cruz Numerals (Wurm 1976, Fontinelle 1974)
With Proto-Oceanic Forms (Grace 1978)

Language/ Village	1	2	3	4	5
Reef	nyigi	liiu	eve	uve	vili
Neo	es ^ë	ii	tü	pwä	nëlvün
Malo	es ^ë	ii	tü	pwä	nëlvün
Nemboi	tüöte	aii	atü	awä	nöwlün
Nooli	pate	ali	atü	apwe	nolü
Nagu	töti	tüli	tütü	tupwä	mööpwm
POC	*sa	*rua	*tolu	*pati	*lima
Language/ Village	6	7	8	9	10
Reef	polegi	polälu	poleve	palouve	nugolu
Neo	esäm ^ë	ölim ^ë	ötüm ^ë	öpwäm ^ë	nëpnu
Malo	esäm ^ë	ölim ^ë	ötüm ^ë	öpwäm ^ë	nëpnu
Nemboi	pötängimö	itumütü	itumüli	itumöte	nöpnü
Nooli	tlma	tumötü	tumöli	tumöte	napnu
Nagu	temüü	tütüü	tumulii	tumatee	napnü
POC	*onom	*pitu	*walu	*nsiwa	*nsajapulu

3.1. ONE

The Malo /es^ë/ is suspiciously similar to *sa and might be borrowed. However, there are no nearby sources. Compare Pileni /tahi/, Tikopia /tasi/, Asumboa /sika/, and Tanimbile /suo/ 'one' (Cashmore 1972).

3.2. TWO

Now we have the element /li/ common to all RSC. This could derive from *rua through fronting of *u (a surprisingly common if sporadic change in Oceanic languages; see Blust 1970). However, the element /lu/ can also be isolated from the Reef words for 'two' and 'seven'. Between these competing forms, /li/ and /lu/, the latter seems more plausible. In this case, borrowing is a possible explanation. Compare Amba /lu/, Teanu /tilu/ 'two' (Cashmore 1972). We could also combine these explanations and say that /li/ represents a direct inheritance within RSC and /lu/ represents an indirect inheritance or borrowing from outside RSC.

3.3. THREE

The Reef /eve/ contrasts with the Santa Cruz element /tū/ that is a fairly plausible reflex of *tolu. Similar forms without /l/ are available for borrowing. Compare Amba and Asumboa /tou/.

3.4. FOUR

Given that the change /v/ > /pw/ is improbable, the Santa Cruz forms with /pw/ are either direct inheritance from *pati or they resemble it by chance, because the nearest source for borrowing with /pw/ that I have been able to locate is /pwabaak/ 'four' of Koumac, New Caledonia (Grace, field notes). If we accept that /pw/ can be the borrowed form of /v/ or /f/, there are numerous closer sources like Pileni /fa/ and Teanu /teva/ (Cashmore 1972).

3.5. FIVE

In nearly all Austronesian languages, the word for 'five' and the word for 'hand' both resemble the reconstruction *lima 'hand, five'. This generalisation does not fit the languages of RSC, but neither does it fit Vanikoro nor Utupua (see Table 4). Curiously enough, for most of the languages the word for 'five' contains /l/ and the word for 'hand' contains /m/. This vague similarity helps very little. Except for the pair, Reef /vili/ and Tanimbile /kavili/ 'five', the data in Table 4 suggest very little inter-island contact.

3.6. SIX THROUGH NINE

All of RSC languages appear to have compound words to express the numbers 6, 7, 8, and 9. It is possible that the /m/ plus vowel syllable reflects *lima as a base for counting above 5. The syntax and semantics

TABLE 4

Words for 'Five' and 'Hand' in Reef-Santa Cruz,
Utupua, and Vanikoro (from
Wurm 1976, Cashmore 1972)

Language	'Five'	'Hand'
Reef	vili	nyime
Neo	nēlvün	mü
Malo	nēlvün	mü
Nemboi	nöwlvün	nümü
Nagu	mööpwm	nümü
Amba	haŋi	mbia-
Asumboa	sini	nama-
Tanimbile	kavili	namba-
Teanu	tili	ma-
Vana	teli	me-
Tetau	leli	me-
POC	*lima	*lima

of such compounding differs among these languages. If we designate the base element as B, we find numbers of the form:

	6	7	8	9
Reef	B + 1	B + 2	B + 3	B + 4
Neo	1 + B	2 + B	3 + B	4 + B
Malo	1 + B	2 + B	3 + B	4 + B
Nemboi	1 + 5(?)	B - 3	B - 3	B - 1
Nooli	(?)	B - 3	B - 2	B - 1
Nagu	(?)	B - 3	B - 2	B - 1

In other words, Reef, Neo, and Malo are additive systems, while Nemboi, Nooli, and Nagu are subtractive. The pattern for Reef with the larger numeral first is quite common among Oceanic languages. The Neo and Malo pattern with the smaller numeral first is much rarer and apparently missing altogether from New Hebrides (see Tryon 1976). The subtractive system is more unusual still in Oceanic languages, but a similar pattern is found in Buin and other Non-Austronesian languages of the North Solomons - as opposed to the Savo family in which each language seems to have its own idiosyncratic decimal system (see data in Todd 1975). It is difficult to imagine how Malo and Nemboi - quite closely related dialects that are "partially intelligible" (Simons 1977:27-8) - have acquired such different patterns for counting from 6 to 9.

The parts of the various numerals are not all easy to identify. In Reef, the repeated partial is /p_ol/ ~ /p_al/. The syllable with /l/ initial varies through several vowels avoiding /i/ which would enhance its similarity to *lima; but on present evidence such an association remains speculative. Similarly, the Santa Cruz languages all share a syllable containing /m/: /ma/ ~ /m_ö/ ~ /m_ü/ ~ /m_ü/; the first two alternates suggest *lima, which we might expect as the base for counting 6 to 9. Again, this speculative reasoning does not tell us much about the origin of the system. The apparent prefix /t_ö/ ~ /t_ü/ ~ /te/ ~ /t_ü/ ~ /tu/ found in most of the Nagu numerals would suggest a Polynesian source only if the other parts of the numerals suggested the same source. As it stands, this prefix is perhaps better compared to the numeral prefix found in some Banoni and Piva numerals:

Piva	/to-nua/	'2'	
Piva	/to-pisa/	'3'	
Banoni	/to-vatsi/	'4'	(Lincoln 1976)

But this comparison is unenlightening, because the source of the Banoni-Piva marker is not known.

In brief, then, the numerals from 6 to 9 raise more questions than they answer.

3.7. TEN

The numeral for 'ten' brings us back to some sort of decimal system that is more Austronesian in character. Indeed, the partial /p_nu/ quite plausibly derives from *pulu especially since it is likely that the full form of the reconstruction may be analysed as *sa-ŋa-pulu 'one-linker-ten' (Blust 1972). The sound change of *l > n is far from established: besides the loss of *l before *u in the word for 'three', we see *pulu 'hair' possibly reflected as /-pl_ö-/ in Nooli /näpl_ö-nawä/ 'hair', /nawä/ 'head'. But the loss of *u before /l/ is some encouragement that we may eventually be able to sort out the sound changes.

3.8. SUMMARISING COMMENTS ON THE NUMERALS

Seen as a logical system, the RSC languages do not show the strongest possible Austronesian tendency of a full decimal system with separate words for 6 to 9. Apparently the Proto-Austronesian system ancestral to all Oceanic languages was of this type. A five-base compounding system with or without a separate word for '10' is quite common in several areas of Oceanic, even among such phonologically conservative languages as Gitua. Subtractive compounding as found in Santa Cruz

languages is rare among Oceanic languages. With a westerner's bias for increasing complexity and sophistication over evolutionary time, it is difficult to suggest any reason for abandoning a full decimal system of numerals. Notice that suggesting language mixture does not solve this problem. Given an Austronesian language with full decimal system and some other language without, if the two then mix drawing on the resources of both languages, why is the less fully decimal system ever chosen?

Seen as a more or less closed subset of lexical items, the RSC languages show suggestive similarities to the Oceanic words for '2', '3', '4', and '10'. The initial consonant correspondences for three numerals in sequence is more encouraging in light of the fact that by definition, numerals in a language have a fixed order.

Before ending this section, let us briefly consider other possible sources for RSC numerals by comparing them with Buin (a Non-Austronesian language of south Bougainville) and Savosavo (a Non-Austronesian language of Savo Island near Guadalcanal) in Table 5.

TABLE 5

Buin and Savosavo Numerals

	Buin	Savosavo		Buin	Savosavo
1	no-	ela-	6	tugi-	pogoa
2	ki-	endo	7	pai-...-tuo	pogora
3	pai-	igiva	8	ki-...-tuo	kui
4	kori-	agava	9	kampuro	kuava
5	upu-	ara	10	kiipuro	atale

(see Laycock, forthcoming, and Todd 1975)

Notice first that only part of Buin numerals are given; the missing parts vary as to whether one is counting male humans, female humans, objects in general, or several other less frequently designated classes (see Laycock, forthcoming). Notice further that while the Buin system is subtractive,

7 = 'three-...-less'

8 = 'two-...-less'

the order of elements differs from Nagu, Nooli, or Nemboi as does the structure of the word for '9'. Buin '10' may be compound of 'two'- 'five'-/ro/, another difference. The only rather obvious similarity between numerals in Tables 3 and 5 involves the word for '3': Reef /eve/, Buin /pai/, and possibly Savosavo /igiva/. I see no reason yet to prefer such comparisons to those between RSC and Proto-Oceanic.

4. PRONOUNS

Pronouns are much less likely to be affected by borrowing than numerals, which can be borrowed as a set. We are then entitled to stronger conclusions about genetic relationships on the basis of systematic similarities found in the corresponding pronouns of languages. However, because pronouns tend to be short and because they tend to be subject to unusual sound changes (presumably due to their frequent use in speech), it is often difficult to establish systematic correspondences between the pronouns of two related languages. Bearing this in mind, I will proceed to a discussion of the RSC pronouns and their possible Proto-Oceanic antecedents.

In the interest of economy, I will use the following abbreviations to gloss person and number:

	Singular	Dual	Trial	Plural
First (exclusive)	I	Ix2	Ix3	IxP
First (inclusive)		Iy2	Iy3	IyP
Second	II	II2	II3	IIP
Third	III	III2	III3	IIIP

Many languages, including most Oceanic languages, have several functionally different sets of pronouns such as subject affixes, object affixes, possessive pronouns, and independent pronouns. Typically these sets will have formal differences. In order to appreciate the scope of the differentiation of these various sets in RSC, all the sets reported for Malo are displayed in Table 6.

There are obvious formal similarities among the rows of Table 6. The suffixes in the independent pronouns are essentially identical to the normal possessive suffixes. The special possessive suffixes can be derived from the normal possessive suffixes by the regular processes of denasalisation and devoicing of consonants ($\eta > k$, $m > p$, $d > t$, $g > k$). The subject suffixes have a somewhat less systematic relation to the special suffixes but the patterns are quite clear:

for Iy2, IxP, and IyP, there is no change from the special suffixes;

for I and II, the more frequent subject suffixes are related to the normal (or special) suffixes through loss of the consonant

($\begin{smallmatrix} ng\ddot{a} \\ k\ddot{a} \end{smallmatrix} \} > \ddot{a}$, $m\ddot{u} > \ddot{u}$);

for IIP, the subject is longer but is in part identical with the independent form (mu, amu);

for III and IIIP, we can relate the vowels of /le/ and /lö/ respectively to the independent suffixes /de/ and /dö/.

TABLE 6

Lödäi Pronoun Sets
(Data from Wurm 1976)

	I	II	III	Iy2	IxP	IyP	IIP	IIIP
Subject or Object Phrase	ni-ngä	ni-m ni-mü	ni-de	ni-gi	ni-gö	ni-gu	ni-mu	ni-dö
Possessive Normal Suffixes	-ngä	-m -mü	-de	-gi	-gö	-gu	-mu	-dö
Special Suffixes with Particular Nouns	-kä	-p -pü	-te	-ki	-kö	-ku	-pu	-tö
Subject Suffixes on Verbs	-ä -o	-ü -e	∅ -u -ü	} ± -le	-ki	-kö	-ku	-amu -ngü -lö

The residual alternate forms - /-o/ 'I', /-e/ 'II', /-u/ ~ /ü/ 'III', and /ngü/ ~ /ng/ 'IIIP' - are of less predictable form.

As to the differences between the two sets of possessive suffixes, Wurm (1976:657) reports that the devoiced set occurs suffixed to certain nouns which in some cases appear to derive from Proto-Oceanic reconstructions that have final or near final *t or *k. This suggested conditioning is not strongly supported by the examples given because the etymologies for the words in question are not very well established.

Malo	/bö-p/	'intestines-II'	PAN	*bi[!]uka['], *pəyut
Nemboi	/numwö-pwi/	'eye-II'	POC	*mata
Nooli	/m ^w ä-p/	'eye-II'	POC	*mata (Wurm 1976:657)

If and when the claimed conditioning should be established, we would have quite strong evidence that RSC languages derived from Proto-Oceanic. As it now stands, we can merely observe that certain Oceanic languages in the Markham Valley (Morobe Province, Papua New Guinea) have a similar set of alternations; for example,

Silisili	(after vowels)	(after consonants)
I	-ŋg	-k
II	-m	-k
III	-	-ts
IxP	-m	-p
IyP	-ndz	-ts
IIP	-m	-p
IIIP	-	-ts

(Fischer (1963:213-14) quoted in Bradshaw 1977:42)

Table 7 represents a nearly complete list of RSC pronouns with corresponding Proto-Oceanic reconstructions. I will consider each column in turn.

4.1. I FORMS

The attested RSC words for 'I' can be separated into three different canonical patterns: /ŋV/, /nV/, /V/. As we have already seen, Malo /ngä/ alternates with /kä/. The Proto-Oceanic possessive *ŋku provides a reasonable source for this consonant alternation, but the vowel /ä/ is as unlike /u/ as might be possible. Other forms with /ŋ/ do not suggest any obvious explanation for the vowels. Similar forms occur in several quite remote groups of Oceanic. Along the Rai Coast and in West New Britain, we find forms exemplified by Gitua /ŋa-/ 'I subject prefix' with /yau/ 'I independent' (Lincoln 1977). In Micronesia, we find forms exemplified by Marshallese /ŋah/ 'I independent' with /yi-/ 'I subject prefix' (Rehg and Sugita 1975). I have no explanation for the source of /ŋ/ in these forms.

The next canonical pattern is rather less represented. Nemboi and Nagu /-nu/ 'I possessive suffix' and Reef /-na/ 'I subject suffix'. Initial /n/ in the independent form is quite common in Oceanic languages; e.g., Banoni /na/, and much of the New Hebrides (see Tryon 1976:435-9). But for dependent forms like possessive suffix there are few if any such close parallels with RSC forms.

The third canonical pattern consists of a single vowel. Given the variation in Santa Cruz languages (/ä/ ~ /o/, /a/, /i/ ~ /ä/ ~ /u/) and given that most languages in the Pacific have a five-vowel system, it is too easy to find cross-linguistic similarities. For example, Malo /o/ could quite easily derive from Proto-Oceanic *au so for that matter could Nagu /u/.

TABLE 7
Reef-Santa Cruz Pronouns

	I	II	III	Iy ² ¹	IxP	IyP	IIP	IIIP
INDEPENDENT PRONOUNS								
Reef	yu	yu-mu	i-na	yu-dyi	yu-ngo	yu-de	yu-mu	yu-dyi
Malo	ni-ngä	ni-m	ni-de	ni-gi	ni-gö	ni-gu	ni-mu	ni-dö
Nemboi	ni	ni-m	ni-de	ni-gi	ni-gamu	ni-ga	ni-mwi	ni-gö
Nooli	ni-nga	ni-m	ni-de	ni-gi	ni-gö	ni-ga	ni-mu	ni-ne
Nagu	ni	ni-m	ni-de	ni-da	ni-gö	ni-damwe	ni-mwe	ni-ngö
POSSESSIVES²								
Reef	-u	-mu	-Ä ³	-di	-ngo	-de	-mi	-dyi
Malo	-ngä	-m	-de	-gi	-gö	-gu	-mu	-dö
Nemboi	-nu	-m	-de	-gi	-gamu	-ga	-mu	-ne
Nooli		-m	-dye, -nye	-gi	-gö	-ga	-mu	-ne
Nagu	-nu	-m	-de	-da	-ga	-damwe	-mwe	-ngö
SUBJECT SUFFIXES								
Reef	nɔ	mu	gu	di	ngo	de	mi	gui
Malo	ä, o	ü, e	(-u, -ü) (-le)	ki	kö	ku	am	ngü, ng; lö
Nemboi	ngö, a	ngü, e	le	ki, gi	komu, gamu	ka, ga	ngömwi, amwi	ngü
Nooli	a	m, ö, ü	le, ng	ki, i	kö, ö	ka, a	am	le, ngü, ng
Nagu	i, ä, u	a, i	ö	da	ga	damwe	am	ngö, ö
POC								
Independent	*au	*koe	*ja		*kami	*kinta	*kamuyu	*kida, *ida
Possessive	*ŋku	*mu	*ña		*mami	*nta	*muyu	*ndia, *nda

1. Reef has a full set of duals (see discussion).
2. Santa Cruz devoiced denasalised alternate suffixes are omitted.
3. Reef III suffix is not actually /ä/ but rather the inflected stem ends in /ä/.

4.2. II FORMS

For the second person, the RSC languages show less variation; most of the markers are /mu/ or /m/ which closely resemble Proto-Oceanic *mu 'II possessive'. The residual forms - /ü/ ~ /e/ ~ /ö/, /ngu/ ~ /e/, /ö/ ~ /ü/, and /a/ ~ /i/ are too short to discuss here.

4.3. III FORMS

For the third person singular, we find /de/ predominates over some plausibly related forms: /dye/ ~ /nye/, /le/ and /na/. As we have seen for Malo, other person markers may be related through a general process of denasalisation; therefore, it seems quite possible to derive all of these from Proto-Oceanic possessive, *ña. Among the residue /gu/, /u/ ~ /ü/, /ŋ/, /ö/ and /Ä/, only the last bears any resemblance to *ia or *ña.

4.4. DUALS AND Iy2 FORMS

Proto-Oceanic probably did not have unanalysed duals. That is, it probably had dual pronouns compounded of the plural pronouns followed by the numeral *rua. This system is found in Reef though a bit skewed. If we examine the Reef forms

/yu-ngo-le/	'Ix2'
/yu-mi -le/	'II2'
/yu-dyi-le/	'III2'
/yu-de -le/	'Iy3' (sic, Wurm 1976:656)

we find what appears to be a dual suffix /le/ (another possible reflex of *rua), but not all of the forms so marked are dual. This kind of skewing occurs in all of the RSC languages. On Santa Cruz, we find an extra form expressing 'Iy2' with no other duals. In Reef, we find a full set of duals with an extra form expressing 'Iy3'. This skewed system is atypical of Oceanic languages, but is quite common among the Austronesian languages in the Philippines. We could follow the usage of Reid (1971) and refer to I, II, III, and Iy2 as minimal number and others as non-minimal.

Looking at just the Iy2 forms, we find two distinctive sets of markers: those involving /d/, and those involving /g/ ~ /k/. Comparing these sets with the reconstructions for Proto-Oceanic 'IyP', we could easily relate the Santa Cruz forms as follows:

*kinta 'IyP independent' > /gi/, /ki/ 'Iy2' (with loss of second syllable)

*nta 'IyP possessive' > Nagu /da/ 'Iy2'

The Reef form /dy|/ would involve an unexplained change in vowel. The plausibility of these derivations should be judged in the context of similar changes in the plurals, taken up in the following sections.

4.5. IxP FORMS

In the first column of plurals in Table 7, we find three distinctive sets: Reef has distinctive /ngo/; Nemboi has distinctive extra syllable (/ngamu/ ~ /kamu/; and the rest have /gö/ or /ga/. The longest form matches the consonants of the corresponding Proto-Oceanic reconstruction, but not the vowels:

*kami 'IxP independent' /gamu/ ~ /kamu/.

The shortest forms bear less resemblance to the reconstruction. Indeed, it is difficult to see how Reef /ngo/ could be derived from *kami (or *mami).

4.6. IyP FORMS

With the inclusive plural, we again find two sets differentiated by /d/ in Reef and Nagu, and /g/ /k/ in Lödäi. The Reef plural /de/ looks a bit more like *nta than does the Reef dual.

The first syllable of the Nagu /dam^we/ looks like a reflex of *nta, but the second syllable seems to be out of place; i.e. the second syllable matches Proto-Oceanic 'IIP' (see section 4.9.).

The Lödäi plurals are less like *kinta than the duals are. In particular, there is no explanation for the back vowels of /gu/, /ga/, /ku/ or /ka/.

4.7. IIP FORMS

In this column we consistently find the consonant /m/. The variation in the following vowel is just the sort that is found across Oceanic languages. To account for these vowel variations, Pawley (personal communication, summer 1977) has suggested reconstructing the sequence *uyu. And Blust (1977:11) has shown that *kamuyu could derive from a combination of earlier IIP forms *i-kamu + *iSu. I suggest, therefore, that the RSC forms derive from

POC *muyu 'IIP possessive' > /m|/, /mu/, /m^wi/, /m^we/

or

POC *kamuyu 'IIP independent' > /am/, /am^w|/

with compression or reduction from the right. The loss of initial *k from the longer form casts some doubt on the otherwise likely derivations. The Nemboi alternate /ngömwí/ does not clarify the loss of *k, but rather raises questions about the source of /ng/.

4.8. IIIP FORMS

In the last column, we find considerable consonantal variation. The forms /dyi/, /dö/ bear a resemblance to the reconstructions of *ida, *ndia, *nda. However, when we look further to /lö/, /le/, and /ne/, we find that we are unable to relate all of these to a Proto form through the quite general process of denasalisation that rather neatly tied a similar set of singular forms to a Proto-Oceanic source. The lack of generality here weakens the force of those earlier arguments.

The other RSC forms involving velar consonants /gö/, /ngö/, /gui/, /ngü/, /ng/ are without any such obvious Proto-Oceanic source.

4.9. OBSERVATIONS ON THE PRONOUN FORMS

Most of individual RSC pronoun markers resemble possible Proto-Oceanic sources. I will now attempt some more general observations.

In just about every case, the suggested derivations were much more plausible for consonants than for vowels, as is all too often the case with any comparative study.

A more positive generalisation can be made about the canonical forms. In most cases, the Proto-Oceanic source is longer than the RSC form compared with it, and more significantly, the part of the Proto-Oceanic form that appears to be lost is lost from the right-hand end. Much the same generalisation has been made about the history of Micronesian languages - the so-called "erosion from the right" (Bender 1969).

A more valuable generalisation can be made about the second person forms. This generalisation concerns three groups of languages: (1) the RSC languages; (2) reconstructed languages Proto-Austronesian (PAN) and Proto-Malayo-Polynesian (PMP), the putative ancestors of all Austronesian languages and those Austronesian languages outside of Formosa, respectively; and (3) various languages of the East Papuan Phylum languages. The claimed generalisation is that the distribution of the phoneme /m/ in the various pronoun sets of RSC languages is like the distribution of *m in the pronoun sets of Proto-Malayo-Polynesian and that the distribution of /m/ in the pronoun sets of the East Papuan Phylum languages differs significantly from distribution in either of the other groups. The importance of this claim justifies a detailed examination of relevant data.

4.9.1. /m/ in Proto-Austronesian and Proto-Malayo-Polynesian

Blust (1977) draws the distinction between Proto-Austronesian (PAN) ancestral to all Austronesian languages and Proto-Malayo-Polynesian (PMP) ancestral to all the non-Formosan Austronesian languages. Of particular relevance here is the observation that in the PAN pronouns, nominative and genitive sets, we find *m only in the following plural forms:

nominative	*i-kami 'I _x P', *i-kamu 'IIP'
genitive	*i-mi ~ *ni-mi 'I _x P', *i-mu ~ *ni-mu 'IIP'

and the further observation that through the putative Second Austronesian Politeness shift, the PAN IIP genitive pronoun was also used with singular referent. Thus, in PMP, which is ancestral to all Oceanic languages, *m occurred only in markers for 'II', 'I_xP', and 'IIP'.

4.9.2. /m/ in Reef-Santa Cruz Pronouns

If RSC languages are direct continuations of Proto-Oceanic, which is a direct continuation of Proto-Malayo-Polynesian, the occurrence of /m/ in markers for 'II', 'I_xP', and 'IIP' would be a simple consequence of that heritage.

Under this hypothesis, /m/ in markers other than 'II', 'I_xP' and 'IIP' would have to be explained as subsequent changes. When we look for /m/ in Table 7, we find it mostly in the places expected under this hypothesis in forms for 'II', 'I_xP', and 'IIP'. The only exception is the Nagu marker, /damwe/ 'I_yP'. When we compare this form with Nagu /da/ 'I_y2' and Nagu /mwe/ 'IIP', we can explain the exceptional 'I_yP' as being a compound of /da/ 'I_y2' and /mwe/ 'IIP'. Given this analysis, we observe that /m/ occurs in only those places expected under the hypothesis that RSC languages derive directly from PMP. This observation is particularly significant for two quite different reasons. First, PAN *m is a particularly stable sound; that is, while other consonants and the vowels can undergo changes that make the reflexes difficult to identify, *m is usually reflected as /m/ or /mw/. Thus, finding /m/ in just the expected places among RSC pronouns indicates that difficulties with relating other pronouns to Proto-Oceanic sources may merely be the result of a series of complex sound changes. Second, the pattern shared by RSC languages and the Oceanic languages is not found in our sample of East Papuan languages as we shall see in the next section.

4.9.3. /m/ in East Papuan Phylum Pronouns

Although we do not have a complete sample of the East Papuan Phylum (EPP) languages in Table 8, there are enough languages to show that /m/ appears in a more random fashion among the pronoun sets of the group.

In the singular, the only instances are Nasioi and Buin 'I' markers. We could say that (in contrast to RSC languages) EPP languages show no trace of the Second Austronesian Politeness shift.

Among the dual forms, we find /m/ sprinkled through non-third person forms. The Buin and Nasioi forms in column 'Ix2' actually mark first-person object for all numbers. Buin and Nasioi lack inclusive/exclusive distinction. So these could just as inaccurately appear in 'Iy2' column. Savosavo and Lavukaleve 'Iy2' markers involve /m/. Only Lavukaleve has an /m/ in 'II2' markers.

Trial pronouns appear only in the Baniata sample, but among these /m/ is very common: 'Iy3M', 'Iy3F', 'II3M', 'II3F', 'III3M', 'III3F'.

Among the plural forms, we do not find /m/ in IxP markers (recall that Buin and Nasioi forms mark a different category). In the rest of Table 8, /m/ is fairly common: 'IyP', 'IIP', 'IIIP' for all of Solomons Family and 'IIIPF' in Buin.

Even this brief discussion is adequate to show that we do not find the characteristic Oceanic/RSC restrictions on the occurrence of /m/ in pronoun markers in EPP languages.

4.10. GENDER

It is obvious from forms in Table 8 that grammatical categories, masculine, feminine, and neuter, are quite prominent in the EPP languages. If these categories were also found in RSC languages, they would suggest connection between RSC and EPP. But since gender is not marked in RSC pronouns, about all we can say is that either RSC lost such marking or, perhaps more likely, RSC languages never did mark gender.

4.11. SUMMARISING COMMENT ON PRONOUNS

Although there are problems with individual etymologies proposed for particular forms, the generalisation about the distribution of /m/ among all sets of all pronouns in the RSC languages is most encouraging. It is the kind of generalisation that is well known from the field of cryptography involving observations about the whole text rather than short, uninterpretable words, and may prove a useful tool in deciphering the prehistory of RSC languages.

TABLE 8

Pronoun Sets in Some East Papuan Phylum Languages
(From Todd 1975; Laycock, forthcoming; Hurd and Hurd 1970)

SINGULAR					
	I	II	IIIM ¹	IIIF ¹	IIIN ¹
INDEPENDENT					
Savosavo	añi	no	lo	ko	-
Bilua	aŋa	ŋo	vo	ko	-
Baniata	eel	noe	zo	vo	na,ŋo
Lavukaleve	ŋal	inu	hoina	hoia	hoga
Buin	nne	ro	ako	eko	-
Nasioi	nin	daʔ	tee	ani,teni	aun,tee
SUBJECT PREFIX					
Savosavo	ñe-	no-	lo-	go-	-
Baniata	a-	ŋo-	o-	ko-	-
Lavukaleve	a-	ŋo-	o-	o-	-
SUBJECT SUFFIX					
Buin	-o	-e	-u	-	-
Nasioi	-am,-om,-um	-e(-u,-i)	-u,-o	-	-
OBJECT SUFFIX					
Savosavo	-ñi	-ni	-li	-gi	-
Bilua	-l	-ŋ	-v	-k	-
Baniata	-na	-na	-ra	-va	-a
Buin	-m	-r	-p	-	-
Nasioi	-m	-d	-b,-p	-	-
OBJECT PREFIX					
Lavukaleve	ŋa-	ŋo-	a-	o-	e-

1. M = Masculine, F = Feminine, N = Neuter. There are two neuter classes in Baniata and one or less in other languages.

TABLE 8 (Cont.)

Pronoun Sets in Some East Papuan Phylum Languages

DUAL					
	Ix2	Iy2	II2	III2	III2F ¹
INDEPENDENT					
Savosavo	age	mai	pe	to	-
Bilua	enge	aniŋge	ŋge	niŋga	-
Baniata ³	eere-be ²	be-be	bere-be	zere	robe
Lavukaleve	el	mel	imil	hoinal	hoiaol
Buin	re	-	rai	aroko	itoko
Nasioi	nee?	-	dee?	-	-
SUBJECT PREFIX					
Savosavo	ge-	me-	pe-	te-	-
Baniata	ŋge-	ŋge-	ŋge-	ŋgo-	-
Lavukaleve	-	me-	-	-	-
SUBJECT SUFFIX					
Buin	-o-ge	-e-re	-e-re	-u-re	-
Nasioi	-	-	-	-	-
OBJECT SUFFIX					
Savosavo	-giñi	-miñi	-pi	-ti	-
Bilua	-ŋgel	-ŋgel	-ŋgel	-k	-
Baniata	-na	-na	-na	-ra,-a	-
Buin	-m	-	-r	-p	-
Nasioi	-m	-	-d	-b	-
OBJECT PREFIX					
Lavukaleve	le-	me-	mele-	la-,lo-,le-	-

2. /-be/ indicates Feminine referent.

3. Baniata has a full set of trial pronouns:

/eebenɔ/	'Ix3M'	/eebenu/	'Ix3F'		
/menɔ/	'Iy3M'	/menu/	'Iy3F'		
/mebenɔ/	'II3M'	/mebenu/	'II3F'		
/nɔmɔ/	'III3M'	/numɔ/	'III3F'	/nafi/	'III3N'

TABLE 8 (Cont.)

Pronoun Sets in Some East Papuan Phylum Languages

	PLURAL				
	IxP	IyP	IIP	IIIP	IIIPF
INDEPENDENT					
Savosavo	ave	mai	me	ze	-
Bilua	eŋe	animai	me	se	-
Baniata	eebo	memo	mebo	mo	mo ⁴
Lavukaleve	e	me	imi	hoiva	-
Buin	re	-	rai	igoko	emlko
Nasioi	nii?	-	dii?	ain	tein
SUBJECT PREFIX					
Savosavo	ve-	me-	me-	ze-	-
Baniata	ŋe-	me-	me-	ke-	-
Lavukaleve	e-	me-	me-	ma-	-
SUBJECT SUFFIX					
Buin	-o-gi	-	-e-ŋ	-a-ŋ	-
Nasioi	-	-	-	-	-
OBJECT SUFFIX					
Savosavo	-viñl	-miñi	-mi	-mi	-
Bilua	-ŋgel	-mel	-mel	-m	-
Baniata	-na	-na	-na	-ma	-a
Buin	-m	-r	-p	-	-
Nasioi	-m	-d	-b	-	-
OBJECT PREFIX					
Lavukaleve	e-	me-	me-	vo-	-

4. Baniata /no/ 'IIIPN'.

5. THE VERB PHRASE

In this section, I will present data from Lödäi and Reef to show that the most obvious features of Verb Phrases in these languages roughly match the outline of the Proto-Oceanic Verb Phrase presented in Table 9. Since my analysis of RSC grammar is far from complete, I will restrict discussion to presentation of just the most salient features alongside corresponding Proto-Oceanic forms.

5.1. CONJUNCTIONS

The co-ordinating conjunction /ä/ appears in short texts by Work (Fontinelle 1974:295-6) and by Ini Lapli (1977:34-6):

/olvë nã-mole kã noblo nã-mũ ä nã-ömlü lue/
woman-must-see-that-men-must-eat-and-must-drink-water
'Women must see that men eat and drink'

We might associate this /ä/ with POC *(η)ka except that the conjunction /kä/ 'that, which, who', e.g.

/doa-kä-topwë/
person-which-small
'children'

seems an even better comparison.

5.2. SUBJECT PRONOUNS

In Reef, we find that the expected subject prefixes turn up at least with some verbs:

/yu womä/	'I came'
/yumu mi-womä/	'II came'
/ina _u i-womä/	'III came'
/ingo me-womä/	'IxP came'
/yude de-womä/	'IyP came'
/yumi mi-womä/	'IIP came'
/dyi lu-pwomä/	'IIIP came'

(Data from discussion with Patrick Bakolo, February 1978)

Notice that /m/ occurs associated with the persons expected in an Oceanic language.

Wurm (1976:661 and elsewhere) reports that Reef also has subject suffixes as do all of Santa Cruz. Subject suffixes are quite atypical of Oceanic languages. Therefore, it is worth digressing a bit to examine the interesting argument that these suffixes reveal association of RSC languages with Buin. For convenience, relevant forms are presented in Table 10.

TABLE 9

Tentative Reconstruction of the Elements of Proto-Oceanic Verb Phrase after Pawley
(class notes, summer 1977)

VP = V1 : V2 : V3 : V4 : VERB : V5 : V6 : V7 : V8

V1: Conjunctions

**(m)pe*, *(m)pa* 'uncertain'
 **(ŋ)ka* 'and' [co-ordinating]
 **ma* 'and, with'
 **ni* [subordinating]

V2: Subject Pronouns

V3: Tense

**na* 'future'
 **ma* 'subjunctive'
 **i* 'non-past' (perhaps only PEO)
 * \emptyset [unmarked] 'past'

V4: Preverbal Qualifiers

**koi* 'again'
 **(n)tau* 'habitual'
 **tika(i)* 'not'
 **taqe* 'not'

V5: Object Pronouns

V6: Directionals

**mai* 'toward speaker'
 **(w)atu* 'toward a goal (elsewhere)'
 **(n)sake* 'upward'
 **(n)sipo* 'downward'
 **tani* 'away (from a source)'

V7: Postverbal Qualifiers (These are much less certain.)

**lo(ŋ)ku* 'again'
 **(n)soko* 'all, complete'
 **ke(n)sa* 'alone'
 **mpeka* 'perhaps'

V8: Aspectual (derived from verbs of sitting, standing, etc.)

**toko*
 **tiko*
 **nopo*
 **tau*
 **tuqu*

TABLE 10
Reef-Santa Cruz and Buin Subject Suffixes

	Reef	Malo	Nemboi	Nooli	Nagu	Buin
I	- <u>na</u>	- <u>ä</u> -o	-ŋə -a	-a	-i - <u>ä</u> -u	-o
II	-mu	- <u>ü</u> -e	-ng ^u -e	-m - <u>ö</u> - <u>ü</u>	-a -i	-e -i
III	-gu	θ } -u } -ü } t-le	-le	-le -ŋ	- <u>ö</u>	-u
Iy2	-dyi	-ki	-ki -gi	-ki -i	-da	-o-ge
IxP	-ngo	-kö	-kamu -g <u>amu</u>	-kö - <u>ö</u>	-g <u>a</u>	-o-gi
IyP	-de	-ku	-k <u>a</u> -g <u>a</u>	-k <u>a</u> - <u>a</u>	-damwe	-o-gi
IIP	-mi	-am	-ng ^ö mwi -amwi	-am	-am	-e-ŋ
IIIP	-gui	(në-)-ng ^ü -ng -l ^ö	la- -ng ^ü	la- -ng ^ü la- -le	la- ng ^ö la- -ng	-a-ŋ

(Data from Wurm 1976:661, 665)

If we look first at the non-singular forms in Table 10, we can see that RSC and Buin seem to mark different categories with Buin using separate markers for person and number. Elsewhere in Table 10, there are separate number markers only for IIIP and these are verbal prefixes. Wurm (1976: 661) indicates that with intransitive verbs Reef and occasionally Nemboi and Nooli use verbal prefixes. The verbal suffixes occur with transitive verbs. As I understand the Buin verbal system (Laycock, personal communication; see Laycock, forthcoming) the markers in Table 10 occur with what would be called active voice, with middle voice, that translates a wide range of English constructions including reflexives and passives; person of subject is marked by /m/ 'I', /r/ 'II', and /p/ 'III'. With just this much information, it appears that Buin suffixes are not comparable to RSC suffixes. But that is not the total story. Under certain conditions having to do with focus of the verb, the normal Malo singular suffixes are not chosen, rather person is marked by /o/ 'I', /e/ 'II', /u/ 'III'. It is important to know what the exact conditions for these

Malo suffixes are, because they coincide almost exactly with the Buin active voice singular markers. If the conditions in Malo correspond to Buin active voice, there seems to be a reasonable case here for Buin influence in RSC. If the conditioning factors do not correspond, we might as well conclude that the similarities are a surprising coincidence. Unfortunately, I do not have any further information on the conditioning in Malo; and I leave this interesting question open.

5.3. TENSE

The only tense marker I have observed in RSC languages is /na/ 'future, irrealis', which corresponds exactly to Proto-Oceanic *na. Neo /na/ is glossed as 'envisagé'. The form /nä/ appearing in the example cited above (see 5.1.), glossed by Ini Lapli as 'must', is probably this same morpheme with non-distinctive nasalisation. Data from Malo suggest this:

/ningä na-vë-ä/ 'I must go' (as in reply to 'You can't go').

When the postverbal aspect marker /pe/ is added, the tone is softened:

/ningä na-vë-pe-ä/ 'I will go' (soft tone as 'I'll be going').

Given the match in form and meaning, it seems safe to propose /na/ 'future, irrealis' as a reflex of Proto-Oceanic *na.

5.4. PREVERBAL QUALIFIERS

About the only RSC morphemes I found that fit the category of preverbal qualifiers are the negation markers which turn out to be discontinuous; i.e. they occur with matching postverbal qualifiers. I assume that the preverbal part and the postverbal portion may be compared to reconstructed markers separately.

Reef	/ba.../	[subject suffixes] [object suffix] /-gu/
Malo	/tö...w/	[subject suffix]
Nemboi	/te.../	[subject suffix] /-lü/
Nooli	/te...lu/	[subject suffix]
Nagu	/tö...pw/	[subject suffix] (Wurm 1976:660)

The syntactic differences across the RSC languages suggest that the preverbal parts and the postverbal parts do, as I have assumed, have different histories; i.e. the various markers do not appear to derive from a single Proto-RSC discontinuous morpheme.

The preverbal markers /to.../, /te.../, and /te.../ appear to derive from a single source possibly ultimately Proto-Oceanic *taqe. The postverbal markers appear to have at least two separate sources, none of which can be identified yet.

5.5. PRONOUN OBJECTS

I have little data on this category in RSC. Fontinelle reports /-l-/ 'III' as in:

- /m_a-l-ä/ 'je vois quelque chose' (see-III-I)
 /m_a-l-ü/ 'vous voyez, regardez quelque chose' (see-III-II)
 /m_a-le/ < //ma-l-le// 'il le regarde' (see-III-III)
 [l represents retroflex lateral] (1974:291)

The forms are not immediately suggestive of *ia, *nia, *a, or *ña. Object suffixes are reported for Reef, but I do not have adequate data to discuss them here.

5.6. DIRECTIONALS

Matu data reveal several possible cognates within this group. The difference between /vë/ 'go' and /vëm/ 'come' suggests a well-known Oceanic directional suffix *mai (cf. Gitua /la/ 'go' and /lam/ 'come'), as does the Reef /womä/ 'come'.

There are a number of other directionals including:

- /mikl_ü-o/ 'slip-downward'
 /mikl_ü-l_ë/ 'slip-to'
 /mikl_ü-t_ö/ 'slip-into'
 /mikl_ü-p_ä/ 'slip-outward'
 /mikl_ü-ngale/ 'slip-around'

(Data from John Mealue, February 1977)

The first two are at least reminiscent of Proto-Oceanic *nsipo 'down' and *nsake 'up', in spite of the different reflexes of *ns.

5.7. POSTVERBAL QUALIFIERS AND ASPECTUALS

I have nothing to offer here except the aspectual /pe/ glossed as 'completed' in my data, and as 'révolu' by Fontinelle. The correct gloss for /pe/ is a bit elusive. Whatever the gloss, I am aware of no persuasive etymology for /pe/.

5.8. VERBAL PREFIXES

There are a number of widely used prefixes in Oceanic languages that modify the verb syntactically and semantically. The most common are:

- *paka- 'cause'
 (*pa- 'cause' for some areas)
 (*ka- 'cause' for some other areas, notably Micronesia)

- *ma- 'stativiser'
 *ta- 'spontaneous result'
 *paRi- 'multiple (including reciprocal) action'

The first of these seems to be reflected in Matu as /a/:

- /a-pwäkilva/ 'cause-shock' = 'surprise'
 /a-bë-ä ni-de/ 'cause-die-I-II' = 'I kill him' (/bë-ä/ 'I die')

The prefix /a/ 'causative' could derive quite simply from Proto-Oceanic *paka either via *pa or *ka. Alternatively, /a/ 'causative' could evolve quite independently for [a] is a very common vowel in nearly all languages, and a morpheme of this shape is hardly distinctive.

I have not found any likely reflexes of other Proto-Oceanic prefixes.

5.9. VERBAL SUFFIXES

One of the most suggestive bits of evidence linking RSC to Proto-Oceanic is the nominalising suffix /-ngö/ that closely resembles the Proto-Oceanic *-aŋa 'nominalising suffix':

- /nö-bë-ngö/ 'killing' (/bë-ä/ 'I die')
 /në-ota-ngö/ 'fighting'
 /nö-aolve-ngö/ 'to look after'
 /nö-asu-ngö/ 'to cook'
 /nö-amiläpüti-ngö nöla/ 'to keep the place clean'
 /nö-wë-ngö/ 'to work'
 /nö-müë-ngö/ 'for fishing'
 /në-mü-ngö/ 'eating'

(Data from Ini Lapli 1977, and discussion with Ini Lapli, March 1977)

The /nö ~ në/ is an article which quite plausibly derives from Proto-Oceanic *na 'article'. It is most interesting that this time we have parallel changes:

- *-aŋa > -ngö, -ngö
 * na > nö, në

which reinforce the claims that both derive from Proto-Oceanic.

5.10. Verb Phrase As a Whole

To summarise, a few quite plausible etymologies have been found:

- | | | | |
|-------|-----------------------|--------|-----------------------------|
| /kä/ | 'which' | *(ŋ)ka | 'co-ordinating conjunction' |
| /na/ | 'future' | *na | 'future' |
| /m/ | 'toward speaker' | *mai | 'toward speaker' |
| /ngö/ | 'nominalising suffix' | *aŋa | 'nominalising suffix' |

In addition, a few more dubious associations have been made:

/tö...u/	'not'	*taqe	'not'
/-o-/	'downward'	*(n)sipo	'downward'
/-lë/	'upward'	*(n)sake	'upward'

Until more detailed sound laws are established, these comparisons remain largely speculative. On the other hand, the fact that the syntax within the RSC verb phrase more or less parallels that proposed for Proto-Oceanic encourages us to research the sound laws further. Such an endeavour is beyond the scope of this paper; instead, I will continue with grammatical comparisons within the noun phrase.

6. THE NOUN PHRASE

The normal ordering of elements within the simpler Proto-Oceanic noun phrase is: [article] : [noun] : [modifier]. Within the more complex phrases with possessive modifiers, the order may be: [article] : [possessive marker]+[possessive pronoun] : [noun], or with more intimate possession, [article] : [noun]+[possessive pronoun].

With a single modification of the sequence within the possessive phrase, all of these orders occur in the RSC languages.

6.1. ARTICLES

Actually, this section has already begun. We have already seen that RSC languages appear to reflect Proto-Oceanic *na 'common article' as /nō/ with nominalisations. The Proto-Oceanic *i 'personal or proper article' is often reflected in independent pronouns. As we have already seen, such pronouns in RSC seem to derive from possessive pronouns with no trace of *i unless the first syllable of Reef phrasal pronouns possibly relates to this form: Reef /yu/ 'I', etc.

The name of the language Lödäi means something like '*those of the salt water*', i.e. the salt-water people. This prefix /lō-/ is not readily related to Proto-Oceanic article, but a very close parallel is found in the personal plural marker /na-/:

Banoni	/na-taghisil/	'salt-water people'
	/taghisil/	'salt water, sea'
Malo	/lō-däil/	'salt-water people'
	/däil/	'salt water, coast'

It seems quite possible that Malo /däil/ may reflect Proto-Oceanic *tasik 'sea' as does the Banoni /taghisil/ (see Lincoln 1976). A further parallel is that Banoni /na/ is used in an alternate name for the Piva language, /Na-ghareghe/, literally '*those of the uplands*'.

There are other morphemes that resemble *na but seem to have the classificatory function of associating the following noun with a particular semantic field:

/na-/ 'plant, tree'
 /na-ngü/ 'cordyline'
 /ngü/ 'oven'

The classifying element is not always of the form /nV/:

/ma/ 'heat'
 /ma-nö/ 'firewood'
 /ma-kä/ 'sting, bite'
 /ni-ma/ 'stinging coral', 'stinging leaf'
 /ni-pna/ 'arrow' (Fontinelle 1974:293-4)

Notice particularly that the second element /ni-ma/ 'stinging leaf' may in fact be the /ma/ 'heat' of the preceding examples. Further, evidence from Malo supports interpretation of these "classifiers" as noun compounds. In Malo, /na/ occurs in several fish names:

/na-mboi/ 'long tom'
 /na-ndötä/ 'flounder'
 /na-dövö/ 'sail fish' (Data from John Mealue, February 1977)

These can be analysed as 'fish-long', 'fish-sand', and 'fish-umbrella', respectively. (/dövö/ is a kind of palm whose leaves are used as umbrella.) This compounding pattern appears to be still productive:

/na-nünü-wäs/ 'deep-sea flute-mouth'
 (Data from John Mealue, February 1977)

The name means 'West's fish' because the variety was a great favourite of the missionary, George Henry West.

Given the interpretation of the "classifiers" as full nouns in compounds, I am not ready to associate any of them with Proto-Oceanic *na.

There is another article-like element that has been recognised (Ray 1926) as the Polynesian article /te/ that appears within putative loans from Polynesian languages:

Neo		PPN
/tö-mötu/	'island'	*motu
/tö-kütu/	'louse'	*kutu
/tö-kláva/	ropes of a canoe'	*kaalawa

(Fontinelle 1974)

There are a few complications. First, the vowel of the Polynesian article is usually distorted from /te/, apparently harmonising with the

6.2.2. Reef-Santa Cruz Possessive Marking

All RSC languages distinguish Type-A possession with the typical associated meaning classes: "nouns denoting most relationships and many parts of the body, as well as a few other things (e.g. *name*)" (Wurm 1972:91).

The RSC elaborations of Type-B possessive markers resemble systems in New Hebrides and Micronesia. Examples from Reef and Malo reveal the characteristically Oceanic feature that marking the distinctions within Type-B is context-sensitive; i.e. the same noun may occur with several different markers:

Reef	/nyiivä no-u/	'my stone' [general possession]
	/nyiivä na/	'his cooking stone' [food possession]
Malo	/ëplë sa-ngä/	'my stone (in my hand)' [holding possession]
	/ëplë kö-ngä/	'my stone (for use as a tool)' [utensil]

(Wurm 1972)

Certainly, the RSC system of possessive marking is Oceanic. If one could further demonstrate that this inheritance is direct, there would remain no doubt that RSC are Oceanic.

6.2.3. Reef-Santa Cruz Possessive Markers

Most of the details of RSC possession are reported in Wurm (1972, 1976, and elsewhere). Therefore, I will get right to the point. Although the overall system is undeniably Oceanic, the markers themselves and the categories they mark seem to reflect quite extensive local developments, as can be seen by briefly looking at just the more important markers for Reef (R) and Malo (M) (from Wurm 1976:657).

6.2.3.1. General Possession: R /no/, M /nä/

Both of these are similar to Proto-Oceanic *na.

6.2.3.2. Food: R /na/, M /na/

There is no resemblance to Proto-Oceanic *ka, but the marker /na/ 'food' is reported for some Fijian communities (Paul Geraghty, personal communication).

6.2.3.3. Drink: R /numwä/, M /pü/

Neither is much like *ma, but Lenakel /nəmw/ and Mota /mwa/ (Tryon 1973) could be cognate with the Reef marker.

6.2.3.4. *Betel*: R /da/, M /ma/

The Reef form reminds us immediately of Proto-Oceanic *damu 'chew areca; lime spatula', but the category itself seems to be a local RSC elaboration. (New Hebrideans use kava rather than betel.)

6.2.3.5. *Utensils*: R /nogo/, M /kö/

Again, this category seems to be a local elaboration. The Malo form suggests development from *ka 'edible' with semantic shift.

6.2.3.6. *Location*: R /to/, M /nyë/

This category including such things as house and island apparently lacks external parallels; indeed, even these markers are probably not cognate.

6.2.3.7. *Dependent Content*: R /--/, M /ngö/, and *Independent Content*: R /--/, M /ö/

These interesting classes appear to be even more localised developments. The contrast can be seen in the following:

/na töpou ngö mwa/ 'post of house' [post as part of the house]
 /na töpou ö mwa/ 'post of house' [a house post not yet incorporated into the house]

(Wurm 1972:102)

6.2.3.8. *Fire*: R /--/, M /mnö/

This category is found in N. Ambrym but with quite a different marker, /po/ (Tryon 1976).

6.2.3.9. *Other Categories*

For completeness, I will mention some other idiosyncratic categories described by Wurm (1972:97-8, 100, 102):

Reef: Flower and fruit, toe, wound, and skin and bone.
 Malo: Held objects, and parts of lower leg.

6.2.4. *Summary of Possessive Marking*

The syntactic and semantic details of the RSC system of possessive marking match those of Proto-Oceanic very closely. The only syntactic difference is quite minor. RSC languages conform to the generalisation of Noun-Modifier order even in possessive constructions. This order is not typical of Oceanic languages, but it does occur in several different areas: Manam on the north coast of New Guinea, Lenakel in South

New Hebrides, and more significantly in nearby Vanikoro and Utupua. The languages of these nearby islands deserve close scrutiny. When data on these languages become available, I intend to examine the possessive marking as a possible source for RSC system.

Because we can be quite sure that the RSC system is from some Oceanic source, the very complexity and idiosyncrasies of the individual markers suggest that the system is directly inherited. At the very least, the complexities greatly reduce the possibility that the system was borrowed from a conservative language like Fijian.

7. CONCLUDING REMARKS

In this paper I have been putting forward the proposal that RSC languages could be Austronesian - specifically Oceanic - languages. In support of that proposal, I have offered comparisons of a modest portion of the RSC grammatical morphemes with functionally and semantically similar morphemes reconstructed for Proto-Oceanic. At present, many of these comparisons appear to be merely speculative, because the sound changes required for one comparison may be exactly opposed to the sound changes required for the next comparison. In spite of the contradictory nature of phonological evidence, I feel that the most of the comparisons will turn out to be valid because of the near lack of functional/semantic incompatibility of the comparisons. In other words, there seems to be nearly a one-to-one match between the sample of RSC morphemes and the sample of Proto-Oceanic morphemes. Stated in yet another way, I did not find very many RSC morphemes that simply could not be accounted for with some phonologically quite liberal comparisons with Proto-Oceanic. I did not discover whole classes of morphemes that bore no resemblance to equivalent classes in Oceanic languages. In short, I think there is enough evidence here to entertain the hypothesis that RSC languages are Oceanic languages. Under such hypothesis, one might attempt to account for the contradictory phonological correspondences as being evidence for several traditions of indirect inheritance in addition to a tradition of direct inheritance. The paradigm case for distinguishing such traditions in the Pacific is Biggs's (1965) study of Rotuma.

It seems quite clear that at least one Polynesian language has influenced the RSC languages. It is less clear, but probable, that Utupua and Vanikoro have also influenced the RSC languages. It is entirely possible that Micronesian sailors could have come there accidentally or even intentionally. In other words, there is no reason to doubt that several Oceanic traditions could have influenced RSC

languages, producing irregularities and conflicting tendencies in the sound changes relating RSC languages to Proto-Oceanic. So far, I fail to see the need for invoking an additional Non-Austronesian tradition.

I do not feel that I have proved that RSC languages are Oceanic or Austronesian. I have only established that they could be Oceanic, because I do not know how it is possible to prove such a conclusion. In other words, what test do we have to separate those similarities of linguistic form and structure due to genetic relation (i.e. direct descent from a single speech community) from those similarities due to chance?

Actually, we can expand the list of possible sources of linguistic similarities: (1) genetic relation, (2) the random nature of certain linguistic variables, (3) borrowing between speech communities, (4) universals of human language. How can we decide among these? I don't know. All I have tried to do was to present enough similarities between RSC and Proto-Oceanic to minimise the attractiveness of chance as an explanation.

7.1. FUTURE RESEARCH

After the close of SICAL, I went to the Solomon Islands with the Prehistory of the Southeastern Solomons Project [NSF Grant BNS 76-17672] directed by R. Green and D. Yen, and with additional support from the Australian National University. This trip allowed me to gain some firsthand knowledge of RSC languages. But the main purpose was to investigate the languages of Vanikoro in hopes that my data from Vanikoro together with data from Utupua collected by D.T. Tryon and data from RSC gathered by S.A. Wurm would form a sufficiently broad base to unravel the linguistic prehistory of the whole Santa Cruz group and in the process answer the questions raised in this paper.

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Though we have never met, I wish to thank J. de la Fontinelle for her interesting description of Neo and her bold inspiration: "...
le rattachement de ces dialects au groupe des langues mélanésiennes."

N O T E

1. Greenberg (1971) presents a third alternative classification for the RSC languages as Indo-Pacific languages along with Australian and other Non-Austronesian languages of the S.W. Pacific, even though he finds the RSC languages somewhat exceptional (842ff.). Eventually, these three alternatives should be compared, but such an undertaking is beyond the scope of this paper.

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