

7 *Linguistic subgrouping in Vanuatu and New Caledonia*

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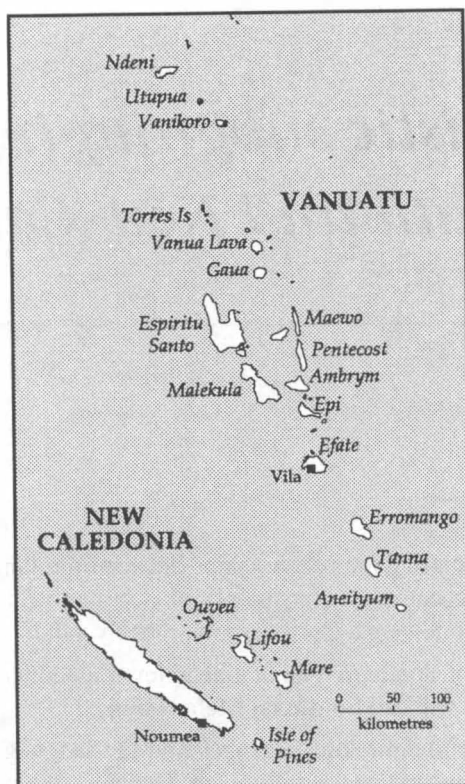
This paper attempts to clarify the relationships between the languages of Vanuatu and New Caledonia.¹ I will present evidence, mainly of a phonological and morphosyntactic nature, to suggest that the following hypotheses are probably valid:

- (a) that the languages of Southern Vanuatu and New Caledonia form a single subgroup of Oceanic, which I will call **Southern Melanesian**;
- (b) that these Southern Melanesian languages and the languages of north and central Vanuatu form a higher-level subgroup of Oceanic, which I will call **Southern Oceanic**; and
- (c) that within Southern Oceanic the Southern Melanesian languages are most closely related to the languages of Central Vanuatu, as members of a **Nuclear Southern Oceanic** grouping and, specifically, that their closest relative is the South Efate language.

1 Previous subgrouping hypotheses

Speakers of the languages with which I am concerned here occupy the Vanuatu archipelago, the Loyalty Islands, and the mainland of New Caledonia (see Map below). In this section, I will discuss the most recent subgrouping hypotheses relating to these languages.

¹ I am grateful to Ross Clark, Terry Crowley, Paul Geraghty, Françoise Ozanne-Rivierre, Bill Palmer, Andrew Pawley, Malcolm Ross and Darrell Tryon for helpful comments on various earlier versions of this paper.



Map: Vanuatu and New Caledonia

1.1 The North-Central Vanuatu (NCV) family

Building on earlier work, especially that of Pawley (1972) and Tryon (1976), Clark (1985b) sets out a number of morphosyntactic innovations shared by the ninety or so members of this family:²

- (1) a. POc **-mu* 2SG possessive suffix was replaced by PNCV **-mwa*.
- b. POc **koe* 2SG independent pronoun was replaced by PNCV **ni(kg)o*.
- c. POc **(kg)u* 1SG subject pronoun was replaced by PNCV **na*.
- d. POc **i* locative preposition replaced by PNCV **a*.
- e. POc **lalo* 'inside' became PNCV **lolo*.
- f. POc **i lalo* > PNCV **(a)lo* locative preposition (via **a lolo* – cf. (1)d and (1)e above).
- g. Development of a biposed negative, preverbal **(st)a(vb)V* plus postverbal **tea*.

There appear to be no phonological innovations uniquely shared by the NCV family, though there are a number of apparent lexical innovations (Clark 1985b:209-210, n.d.).

² POc orthography follows Ross (1988), and Clark's PNCV orthography has been changed to conform with this: e.g., his **q* is written here as **g*, his **g* as **ŋ*, his **ʔ* as **q*, etc. Data on NCV languages have been drawn from a variety of sources, including particularly Clark (1985a, 1985b); Crowley (1985, 1992); Early (1994); Tryon (1976).

North-Central Vanuatu, according to Clark, has two first-order subgroups:

- (a) a Northern Vanuatu (NV) subgroup, comprising the languages of the Banks and Torres Is., Santo, Ambae, Maewo and the Raga language of north Pentecost; and
- (b) a Central Vanuatu (CV) subgroup, comprising the remaining languages of Pentecost along with the languages of Malakula, Ambrym, Paama, Epi, the Shepherd Islands and Efate.

The NV languages are quite conservative, and “much of their similarity appears to be due to common retention rather than innovation” (Clark 1985b:211). Nevertheless, Clark notes the following morphosyntactic innovations:

- (2)a. Development of a possessive marker **bula-* marking animal or household property.
- b. Apparently unique development of **tamwa* ‘how?’ and **tari* ‘many, large number’.

There are also a small number of lexical innovations.

The Central Vanuatu subgroup appears to be defined by the following innovations:

- (3)a. Verb-initial consonant mutation, with nasal grade correlating roughly with “realis” and oral grade with “irrealis” (though see Crowley 1991 for further discussion on this).
- b. POC **inau* 1SG independent pronoun became PCV **(kg)inau*.
- c. PNCV **ni(kg)o* 2SG independent pronoun (see (1)b above) was replaced by PCV **(kg)aigo*.³
- d. Development of a copula verb PCV **vei*.
- e. Marking of plural nouns by postposing the 3PL independent pronoun.

There is also a number of lexical innovations.

There have been suggestions that the NCV languages are most closely related to the Central Pacific (CP) family (Fijian, Rotuman and Polynesian) as part or all of an Eastern Oceanic (EO) subgroup of Oceanic (e.g. Pawley 1972; Geraghty 1990). The issue has been clouded by debates on the relationship between these languages and those of (a) the South-East Solomons and (b) Micronesia. These issues need not concern us for the moment.

1.2 The Southern Vanuatu (SV) family

The Southern Vanuatu family,⁴ while informally recognised for some time, was formally established by Lynch (1978b), on the basis of a number of shared phonological and morphological innovations, including:

³ Proto NCV **ni(kg)o* was reconstructed on the basis of reflexes in both NV languages and some CV languages (Nakanamanga, for example). The form **(kg)aigo*, however, is reflected only in CV languages, suggesting that the two may have been competing forms in Proto CV.

⁴ Data on Southern Vanuatu languages are drawn mainly from Crowley (1998); Lindstrom (1986); Lindstrom and Lynch (1994); Lynch (1978a, 1978b, 1982a, 1982b), and Lynch and Capell (1983).

- (4)a. Loss of pretonic POc vowels, followed by loss of word-final single vowels.
- b. POc **o* is reflected as a non-back, non-round vowel (usually *e* or *ə*).
- c. The POc conjunction **ma* 'and' became a verbal prefix in an echo-subject construction.
- d. Accretion of an initial vowel onto most verbs.

Lynch (1978b) also outlined a number of lexical innovations.

The SV family as established in Lynch (1978b) has three branches: the languages of Erromango, those of Tanna, and the language of Aneityum. The details of this need not concern us here.

1.3 The New Caledonian (NC) family

The languages of New Caledonia and the Loyalty Islands form a single group within Oceanic. I follow Ozanne-Rivierre (1992) in using the term New Caledonian to refer to this family.⁵ Geraghty (1989a) presents a number of innovations, all phonological or lexical, apparently shared by all NC languages. Of particular interest are the following phonological developments:

- (5)a. Loss of **R*.
- b. Merger of **l* and **n*.
- c. Merger of intervocalic **k* and **q*.
- d. Deletion of final vowels.

Within the NC family, there appears to be general agreement that the Loyalty Islands languages form one subgroup, while two other subgroups – Northern and Southern – are found on the New Caledonian mainland. Geraghty (1989a:144) says that subgrouping theories relating to these languages

have been remarkable for the complete lack of any kind of supporting evidence, and for the uniformity with respect to subgroup boundaries. The only disagreement has been as to relationship among the subgroups.

1.4 Interrelationships

The SV languages lie geographically between the NCV and the NC subgroups of Oceanic, and it would be logical to look for connections in either direction.

Grace's (1955) preliminary classification of Oceanic included the NCV and SV languages in a single grouping of Oceanic (along with Central Pacific and Nuclear Micronesian); New Caledonian mainland languages were assigned to another group, and Loyalty Islands languages to a third.

In looking at the external relationships of NCV languages, Clark (1985b:221) says that:

⁵ This is preferable to the more accurate, but also more cumbersome, term *New Caledonia-Loyalty Islands*. Geraghty (1989a) calls this family *Southern Oceanic*, but I feel that this term is better used to refer to a wider grouping – and specifically to the grouping of Vanuatu and New Caledonian languages which I propose below.

Data sources on New Caledonian languages include Grace (1975); Haudricourt (1963); Haudricourt and Ozanne-Rivierre (1982); Lichtenberk (1978); Moysse-Faurie (1983); Ozanne-Rivierre (1976, 1984, 1992, 1995), and Rivierre (1980, 1991).

there are significant shared lexical innovations between NCV and South Vanuatu. In fact, it is hard to find a clear instance of SV preserving an original feature lost by NCV. We must seriously consider the possibility of a larger Vanuatu subgroup, which splits into NCV and SV; or perhaps even a more intimate relation, considering that SV seems to uniquely share a few innovations with sub-sets of NCV languages.

Geraghty (1989a:147), in examining the innovations of the New Caledonian family, comments that this family

is more closely related to Vanuatu, and especially Southern Vanuatu, than to any other language family.

This paper will be concerned with these wider links.

2 The Southern Melanesian hypothesis

The Southern Melanesian hypothesis states that the Southern Vanuatu and New Caledonian families have a single and unique common ancestor, Proto Southern Melanesian (PSM). In this section, I will adduce morphosyntactic and phonological evidence which tends to support this hypothesis.

The phonological histories of these languages are quite complex, and are still not well understood. However, a great deal of work has recently been done on the phonological history of the NC languages (see, *inter alia*, Ozanne-Rivierre 1992, 1995; Ozanne-Rivierre & Rivierre 1989; Rivierre 1991, 1993, 1994b). This work now needs to be coordinated with lexical reconstruction and, at the same time, we need to have a far better understanding of the phonological history of the SV languages than that outlined in Lynch (1978b). This work is in progress, and will hopefully lead to a better understanding of the phonological history of putative Proto Southern Melanesian. For the moment, however, statements of phonological innovations must be somewhat tentative.

2.1 PSM **ma* 'same-subject marker'

The Proto Oceanic coordinating conjunction **ma* 'and' was apparently reinterpreted in putative PSM as a preverbal marker indicating that the subject of the clause it occurs in is the same as the subject of the preceding clause.

Southern Vanuatu

One of the morphosyntactic innovations on which the Southern Vanuatu subgroup was originally based – (4)c above – was the development of the Proto Oceanic coordinating conjunction **ma* 'and' as a same-subject prefix *m-*. This marks a clause as having the same subject as that of a previous clause, and occurs in the same rank as the other subject-indexing prefixes in those languages which have such prefixes (i.e. those of Erromango and Tanna). In the examples in (6), the subjects of the conjoined clauses are different, and each is indexed with the appropriate person-number preverbal marker:⁶

⁶ In the Southern Vanuatu languages, orthographic *g* represents /ŋ/ and *c* represents /ɣ/. Anejoŋ *p̄* and *m̄* represent /pʷ/ and /mʷ/. Abbreviations in examples which may require some explanation include:

AOR	aorist	S	subject
DETR	detransitiviser	SG	singular
EXC	exclusive	SS	same-subject
INC	inclusive	TR	transitive

(6) **Sye**

Tion yi-tai Pil im y-alou
 John 3SG.PAST-hit Bill and 3SG.PAST-run.away

Lenakel

Tion r-əm-ho Pil (kani) r-əm-akəmw.
 John 3SG-PAST-hit Bill (and) 3SG-PAST-run.away

Anejoĩm

Et awod Pil a Jon aĩm lep et aha aen.
 3SG.AOR hit Bill S John and then 3SG.AOR run.away he
 'John hit Bill and he (Bill) ran away.'

In (7), however, the subjects of the conjoined clauses are the same, and the same-subject prefix is used instead:

(7) **Sye**

Tion yi-tai Pil m-alou
 John 3SG.PAST-hit Bill SS-run:away

Lenakel

Tion r-əm-ho Pil (kani) m-əm-akəmw.
 John 3SG-PAST-hit Bill (and) SS-PAST-run.away

Anejoĩm

Et awod Pil a Jon lep m-aha aen.
 3SG.AOR hit Bill S John then SS-run:away he
 'John hit Bill and he (John) ran away.'

New Caledonian

The same development appears to have taken place in at least some New Caledonian languages. Drehu, a member of the Loyalty Islands subgroup, has two coordinating conjunctions roughly translated as 'and'. One is *nge*, which seems to have the most general use:

(8) **Drehu**

Angaatr palahi a hnyima nge angeic la a treij.
 they always PRES laugh and he this PRES cry
 'They are still laughing and he is crying.'

The other conjunction is *me*, which

coordonne en général des lexèmes ou des syntagmes nominaux. Il peut aussi coordonner des prédicats, à condition que le sujet ou l'agent soit le même pour les deux prédicats. (Moyse-Faurie 1983:184; my emphasis)

For example:

(9) **Drehu**

Angaatr a i-aba me i-hnyima.
 they PRES DETR-embrace and.SS DETR-laugh
 'They embraced each other and laughed together.'

Hnei angeic hna oleen me kapa la itre atr.
 AG he PAST thank.TR and.SS receive.TR ART PL man
 'He thanked and received the men.'

Ajië, which belongs to the North New Caledonian subgroup, has a coordinating conjunction *ma* 'and' which

is used both in clausal and NP coordination as well as in other types (e.g. directionals). It does not seem to be omissible in a string of conjoined elements. **Note that *ma* can conjoin clauses with coreferential subjects only and that clauses introduced by *ma* typically have no subjective pronouns.** (Lichtenberk 1978:113; my emphasis).

For example:

- (10) **Ajië**
Na pwa' ma kuru rrö-a.
 3SG arrive and.SS sleep in-there
 'He arrived and slept there.'

Summary

This development of POC **ma* as a verbal prefix or preverbal particle marking same-subject conjunction (with deletion of the subject-referencing marker) is, as far as I know, found nowhere else within Oceanic. It suggests that the Southern Vanuatu and New Caledonian languages may form a single subgroup of Oceanic, and that this innovation occurred in Proto Southern Melanesian. Some New Caledonian languages do not reflect **ma* with this function; the assumption here is that they have made subsequent morphosyntactic changes.

2.2 Development of the plural pronouns

The Proto Oceanic independent or disjunctive first and second person plural pronouns seem to have been as follows (Ross 1988 *inter alia*):

- (11) **POc**
**kita* 1INC.PL
**ka[ma]mi* 1EXC.PL
**kam(i)u* 2PL

Southern Vanuatu

Proto Southern Vanuatu (PSV) made one innovation in this pronoun system, and two others were working their way through the system when PSV began to break up. The innovation shared by all SV languages is a change from **t* to **d* and metathesis of the vowels of the first inclusive form, POC **kita* becoming something like **kadi*.⁷

⁷ Tanna *t* and Anejoñ *j* are the regular reflexes of POC **d* (the regular reflex of non-initial **t* being, e.g., Lenakel *r*, Anejoñ *t*). **d* undergoes palatalisation before **i* in the languages of Erromango (Sye *h* deriving from an earlier *s*).

- (12) **Sye** *koh*, **Ura** *qis*
North Tanna, **Whitesands** *kit-*, **Lenakel** *kat-*, **S.W. Tanna** *kat-*,
Kwamera *kət-*
Anejoñ *a/kaj-*.

The forms **kami* 1EXC.PL and **kamiu* 2PL are retained in Erromango and in western and southern Tanna; for example:

- | | | | | |
|------|-------------|----------------|----------------|---------|
| (13) | Sye | Lenakel | Kwamera | |
| | <i>kam</i> | <i>kam-</i> | <i>kəm-</i> | 1EXC.PL |
| | <i>kimi</i> | <i>kami-</i> | <i>kəmi-</i> | 2PL |

However, in north-eastern Tanna (North Tanna and Whitesands) and in Anejoñ, the **k* in these forms was replaced by the reflex of **d* (with the two Tanna languages accreting initial *i*, also found in singular pronouns, and with Anejoñ subsequently losing the **m* in the second person form):

- | | | | | |
|------|--------------------|-------------------|---------------|---------|
| (14) | North Tanna | Whitesands | Anejoñ | |
| | <i>i/tm-</i> | <i>i/təm-</i> | <i>a/jam-</i> | 1EXC.PL |
| | <i>i/təm-</i> | <i>i/təmw-</i> | <i>a/jou-</i> | 2PL |

It is instructive here to compare the Anejoñ object and independent pronouns (orthographic *c* = /ɣ/):

- | | | | |
|------|---------------|--------------------|---------------|
| (15) | Anejoñ | Independent | Object |
| | 1INC.PL | <i>a/kaj-</i> | <i>caj-</i> |
| | 1EXC.PL | <i>a/jam-</i> | <i>cam-</i> |
| | 2PL | <i>a/jou-</i> | <i>cou-</i> |

The object pronouns show lenition of /k/ to /ɣ/. This occurs in all persons, indicating direct inheritance from the POC **k*-initial forms. The independent pronouns, however, have undergone the innovation.

Thus the Proto Southern Vanuatu first and second person non-singular independent pronouns were probably as follows (with the arrow meaning 'in the process of changing to'):

- | | | | | |
|------|-------------------------------|---|--------------|---------|
| (16) | Proto Southern Vanuatu | | | |
| | <i>*kadi</i> | | | 1INC.PL |
| | <i>*kami</i> | > | <i>*dami</i> | 1EXC.PL |
| | <i>*kamiu</i> | > | <i>*damu</i> | 2PL |

New Caledonia

There is evidence that the same development took place in at least some New Caledonian languages. In the languages of the Hienghène area (Haudricourt & Ozanne-Rivierre 1982:246), for example, the pronouns corresponding to those discussed above are:

- | | | | | | |
|------|-------------|-------------|-------------|-------------|---------|
| (17) | Pije | Fwâi | Nemi | Jawe | |
| | <i>nai</i> | <i>nei</i> | <i>nei</i> | <i>deye</i> | 1INC.PL |
| | <i>nabe</i> | <i>nemi</i> | <i>nemi</i> | <i>deve</i> | 1EXC.PL |
| | <i>dawe</i> | <i>dawe</i> | <i>daa</i> | <i>jaa</i> | 2PL |

Thus the original forms might have been something like:

(18)	Pre-Pije-Fwâi-Nemi	Pre-Jawe	
	* <i>(ln)ai</i>	* <i>(dr,c)atV</i>	1INC.PL
	* <i>(ln)a(bm)V</i>	* <i>(dr,c)apV</i>	1EXC.PL
	* <i>dawV</i>	* <i>daa</i>	2PL

Notable in this set of data are the following facts:

- (i) the first vowel in the inclusive form is *a*, not *i*, suggesting the same metathesis as in PSV; and
- (ii) the second person form has a reflex of **d* in initial position.

This suggests that the metathesis in the inclusive form and the replacement of **k* by **d* in at least one of the other two forms was probably also occurring in a language ancestral to those of the Hienghène area. (The change from initial **k* to **n* or **l* in Pije, Fwâi and Nemi, however, does not bear any resemblance to SV forms.)

I have attempted, without much success, to examine whether the pronouns in Kumak, Ajië, Xârâcùù, Cèmuhî, Iaaï and Drehu either participate in this innovation or continue the Proto Oceanic **k*-initial forms. It looks as if Cèmuhî *wö/game* 1EXC.PL and *wö/gawé* 2PL do continue the original POC pronouns, though *wö/ganye* 1INC.PL seems more problematical. However, in none of the other languages I have looked at does there appear (to me, at least) to be evidence for either retention of initial **k* or replacement of **k* with **d*. The only suggestive set of data is the different initial consonant in Kumak *hââk* 1INC.PL as opposed to *yavaak* 1EXC.PL and *yawaak* 2PL.

The development of the pronouns in the NC languages must await further investigation. However, the evidence I presented earlier in this section is suggestive of a possible shared innovation which was working its way through the putative Southern Melanesian subgroup at the time it began to diversify.

Discussion

Walsh (1982) has pointed out that an apparently similar development has occurred in some NCV languages. While **k* is retained in the first inclusive form, the following innovations have taken place in the first exclusive and second person forms:

- (i) In the Torres, Banks, Maewo, Pentecost, parts of Ambrym and Paama, **k* has been replaced by **g*.⁸
- (ii) In West Santo, **k* has been either lost or replaced by a nasal (usually *n*).

Neither of these directly parallels the **k* > **d* shift in some SV and NC languages. However, in all three cases, there is a shift from an oral phoneme to a nasal or nasalised one. Clark (1985b:219) feels that this phenomenon "could as well be a retention from PNCV". If this is so, then it is a weak argument against the Southern Melanesian hypothesis (but also a weak argument supporting the Southern Oceanic hypothesis, to be discussed in §4 below).

⁸ Malcolm Ross informs me (pers. comm.) that some languages in Papua New Guinea reflect **g* rather than **k* in these forms, suggesting that the innovation may go back to a much earlier stage of Oceanic.

2.3 Irregular phonological developments

Languages of the putative Southern Melanesian subgroup apparently share the following irregular phonological developments exclusive of any other Oceanic languages (cf. Geraghty 1989a):

- (19)a. POc **pisiko* 'flesh' changes irregularly to **pisako* in both SV and NC languages (e.g. Lenakel *nu/vhak-*, Kumak *perak*).⁹
- b. POc **paRaRa* 'handle' is replaced by **umwa* (e.g. Lenakel *n/imwa-*, Kumak *mwa/t*) (Geraghty 1989a:150).
- c. Geraghty (1989a:153) suggests that the metathesis of POc **puŋa-* 'flower' > **paŋu-* is an innovation of Proto New Caledonian. However, this innovation also occurs in Southern Vanuatu: Sye *no/vgu/n* 'fruit', Ura *ne/vgu/n*, North Tanna *n/agu-* show this clearly, while Whitesands and Lenakel *no/ug-* are ambiguous (since *u* derives both from **u* and, in some environments, from **p*).

2.4 Summary

The evidence supporting the existence of a Southern Melanesian subgroup is at present not large in terms of quantity. However, the development of **ma* as a same-subject marker, and the irregular developments in the non-singular pronouns, are qualitatively fairly strong pieces of evidence, and suggest that the Southern Melanesian hypothesis is worthy of closer and more detailed investigation.

3 The link with South Efate

Efate presents a quite complex dialect situation (Clark 1985a). The language I refer to here as South Efate includes the Pango-Erakor-Eratap dialect-complex (Clark's "South Efate") as well as the dialects of Epau and Eton. The other Efate language is Nakanamanga, sometimes known as "North Efate", which includes all other Efate dialects (apart possibly from the Lelepa dialect which appears to be transitional between South Efate and Nakanamanga), as well as dialects spoken on (parts of) various islands immediately to the north (Tongoa, Emae, Nguna, Moso, Ñele and Emau).

There are two compelling pieces of phonological evidence which link part or all of the Southern Melanesian family specifically to the South Efate language, its geographically closest neighbour to the north. These apparent innovations are **not** found in Nakanamanga, South Efate's closest relative within the Central Vanuatu subgroup.¹⁰

3.1 Dissimilation of **a*

The first piece of phonological evidence I will look at concerns the dissimilation of **a* in **aCa* sequences.

⁹ However, Françoise Ozanne-Rivierre informs me that Iaa'i *vii-* "flesh" derives regularly from **pisiko*.

¹⁰ I am indebted to Ross Clark for steering me away from certain invalid over-generalisations concerning the links between the SM and CV languages.

South Efate

Clark (1985a:19) describes a process of vowel dissimilation in South Efate whereby original **aCa* sequences dissimilated to *eCa*. The following data illustrate this:

(20)	Proto Efate	Nakanamanga	South Efate
	<i>*miala</i> 'red'	<i>miala</i>	<i>miel</i>
	<i>*tavakau</i> 'rough mat'	<i>tokovau</i>	<i>tefkou</i>
	<i>*na-sama</i> 'outrigger'	<i>na-sama</i>	<i>n-sem</i>
	<i>*sara</i> 'flow'	<i>sara</i>	<i>ser</i>

Southern Vanuatu

A very similar development has taken place in Southern Melanesian languages, though perhaps not quite as comprehensively as in South Efate. The exact details of the nature of this rule, and its relationship to other rules discussed below, still need to be worked out. The situation is complicated somewhat by the development of a sixth vowel /ə/ in the Tanna languages, and by various assimilatory rules (e.g. **aCi* > *eCi*, **aCu* > *oCu*). However, the following Kwamera examples are illustrative of this process:

(21)	Proto Oceanic	Kwamera
	<i>*marama</i> '(moon) shine'	<i>mer</i>
	<i>*mataq</i> 'raw'	<i>a/mera</i>
	<i>*tama</i> 'father'	<i>remu-</i>
	<i>*baga</i> 'banyan'	<i>nə/pek</i>
	<i>*draRaq</i> 'blood'	<i>nə/te-</i>
	<i>*mata</i> 'eye'	<i>neni/me-</i>
	<i>*paRaq</i> 'sprouting coconut'	<i>nu/vera</i>
	<i>*paŋan</i> 'eat (intr.)'	<i>a/vegən</i>

There are, however, cases where the dissimilation has not occurred:

(22)	Proto Oceanic	Kwamera
	<i>*taRaq</i> 'cut'	<i>ara-i</i>
	<i>*[ka]ŋaRi</i> 'almond'	<i>n/age</i>
	<i>*masawa</i> 'open space'	<i>kwa-n/mahan</i>

I am unable to explain at this stage why dissimilation occurred in some cases in Kwamera, like (21), but not in others, like (22). It may have something to do with neighbouring consonants, or there may be some other factor involved. (I am also not clear whether or not the dissimilation rule applies without exception in South Efate: this will require further investigation.)

New Caledonia

The situation in New Caledonian languages is less clear: I have been unable to locate any detailed treatment of POc vowels in NC languages as a whole, and have had to rely on superficial observation. That observation presents a confusing picture. Consider the following:

(23) **Proto Oceanic**

<i>*jalan</i> ‘road’	Drehu <i>ðɛ-, go/ðeñ</i> ; Nengone <i>len</i> but Kumak <i>ndaan</i> , Pwapwâ <i>ndan</i>
<i>*rani</i> ‘daytime’	Yuanga <i>teen</i> but Kumak <i>taan</i>
<i>*mata</i> ‘eye’	Ajië <i>-mɛ-</i> , Iaai <i>-mɛka</i> but Nemi <i>maa-</i>
<i>*papa</i> ‘carry’	Kumak <i>phe</i> , Nemi <i>fe</i> , Cèmuhî <i>pé</i> but Nyelâyû <i>pha</i> , Paicî <i>pá</i>

We cannot discount the hypothesis that dissimilation of **a* also took place in Proto NC. However, further investigation is needed to establish the development of **aCa* sequences in PNC.

Discussion

Terry Crowley (pers. comm.) reminds me that the same kind of dissimilation occurs in the southern dialect of Paamese, though not the northern dialect; and of course similar statements can be made about other Oceanic languages – for example, some of the Micronesian languages. However, the fact that this dissimilation pattern occurs in these geographically contiguous languages, **and** that it ties in very closely with the vowel loss rules to be discussed below, suggests that it may be a significant shared development; on the other hand, it may be an areal phenomenon.

3.2 Vowel loss

South Efate and the Southern Melanesian languages lose vowels in various word-final and word-medial environments. I discuss word-final vowel loss first, since it is a more obvious process. In §3.2.2 I will describe the theories that have been put forward to explain word-medial vowel loss in the various languages under discussion, but will offer a reinterpretation in §3.2.3 which shows very clear links between these processes.

3.2.1 Word-final vowel loss

Both South Efate and Southern Vanuatu languages lose a word-final vowel in absolute final position in certain contexts.

South Efate

In South Efate, “final short vowels are lost unless immediately preceded by a lower vowel (i.e. part of a rising diphthong)” (Clark 1985a:19). Thus word-final vowels are lost in the forms in (24)a below, but not those in (24)b. This vowel loss does not take place, however, in Nakanamanga, as the data in (24) show.

(24)	Proto Efate	South Efate	Nakanamanga
a.	<i>*nayaru</i> 'casuarina'	<i>naar</i>	<i>nearu</i>
	<i>*mauri</i> 'live'	<i>mour</i>	<i>mauri</i>
	<i>*na-ika</i> 'fish'	<i>ne-ik</i>	<i>na-ika</i>
	<i>*nrua</i> 'two'	<i>nru</i>	<i>duua</i>
b.	<i>*natae</i> 'excrement'	<i>ntae</i>	<i>natae</i>
	<i>*na-tau</i> 'year'	<i>n-tou</i>	<i>na-tau</i>
	<i>*(u)mai</i> 'come'	<i>mei</i>	<i>umai</i>

Southern Vanuatu

A basically identical statement can be made for Southern Vanuatu languages (once again represented here by Kwamera). Single short vowels are lost, as are vowels in falling diphthongs, as in (25).

(25)	Proto Oceanic	Kwamera
	<i>*rani</i> '(be) day'	<i>ran</i>
	<i>*kabu</i> 'fire'	<i>n/apw</i>
	<i>*kutu</i> 'louse'	<i>ur</i>
	<i>*qupi</i> 'yam'	<i>n/uk</i>
	<i>*panua</i> 'village'	<i>ru/kwanu</i>
	<i>*rua</i> 'two'	<i>kə/ru</i>

There are almost no examples of word-final rising diphthongs in my data, since protoforms ending in such diphthongs either take a transitive or possessive suffix or have accreted some other material to make these diphthongs non-final. Note, however, Kwamera *nai* 'tree, wood', ultimately from POc **na-kayu* but probably more immediately from a PSV form **n-ɣai*; and *nui* 'water' from PSV **n-wai* (though ultimately from POc **waiR*). These forms show retention of the final vowel in a rising diphthong.

It should be noted parenthetically here that, although POc **q* is lost in SV languages, and **R* is lost word-finally, these losses occurred **after** the word-final vowel loss rule. Thus the vowel in a final **Vq* or **VR* sequence is protected from this rule:

(26)	Proto Oceanic	Kwamera
	<i>*tubuq</i> 'swell up'	<i>rupu</i>
	<i>*piRaq</i> 'k.o. taro'	<i>nu/via</i>
	<i>*tanoq</i> 'earth'	<i>təna</i>
	<i>*qauR</i> 'bamboo'	<i>n/au</i>

New Caledonia

Geraghty (1989a:148) noted a contrast between the languages of Southern Vanuatu and New Caledonia: he says that in SV "many final vowels are lost", whereas in NC "most final vowels are retained, except that *a* is lost in some forms". However, an examination of the data suggests that this is inaccurate, and that there is quite a deal of final vowel loss in the NC languages. For example:

Les voyelles finales POC disparaissent quand le réflexe en Hienghène est un nom indépendant (sans suffixe), un verbe intransitif ou un terme grammatical. ...Les voyelles finales POC se maintiennent quand le réflexe en Hienghène est un verbe transitif ou un nom comportant un suffixe possessif ou une consonne finale épenthétique.

(Haudricourt & Ozanne-Rivierre 1982:55)

That is, in the Hienghène languages, a transitive or possessive suffix or some other excrement consonant protects final vowels from deletion, as in:

(27)	Proto Oceanic	Pije
	<i>*kani</i> 'eat'	<i>cani</i>
	<i>*taci</i> 'younger sibling'	<i>tali-</i>
	<i>*kutu</i> 'louse'	<i>cii/k</i>

However, in other environments, final vowels are deleted:

(28)	Proto Oceanic	Pije
	<i>*-gu</i> 'my'	<i>-ŋ</i>
	<i>*mate</i> 'die, dead'	<i>mac</i>
	<i>*qate</i> 'liver'	<i>kec</i>
	<i>*qone</i> 'sand'	<i>kon</i>
	<i>*maqati</i> 'reef'	<i>maac</i>

Something similar could be said about Kumak (Grace 1972) and other languages of the Northern subgroup at least (Rivierre 1991). There thus appears to be a similar process at work here as there is in South Efate and the Southern Vanuatu languages, though this needs further checking.

Discussion

Obviously, final vowel loss is not a strikingly unusual innovation. It occurs, for example, in many of South Efate's northern relatives, in both the CV and NV subgroups. The important point here, however, is that the rule which applied in South Efate did not apply in South Efate's **immediate** relatives in the Central Vanuatu subgroup – Nakanamanga, Namakira, and the languages of Epi.¹¹ That is, in the language immediately ancestral to South Efate, final vowels were still present. These have been subsequently lost – in South Efate, in Southern Vanuatu, and in New Caledonian. This suggests, therefore, a close link between the South Efate and SM languages, the exact nature of which I will leave until §5 below.

3.2.2 Word-medial vowel loss: earlier interpretations

I mentioned earlier that Geraghty (1989a) proposed that a rule of pretonic vowel loss may be a shared innovation between SV and NC languages, and Clark (1985a) has discussed a quite different rule of medial vowel loss in South Efate. I will look at published treatments of these processes in this section, and will offer a reanalysis in the next.

¹¹ There is some evidence of incipient word-final vowel loss in some of those languages, but this is probably a much more recent, and independent, process, and may be part of a wider areal phenomenon.

Southern Vanuatu

I have described a rule in Proto Southern Vanuatu which deleted the vowel of the antepenultimate syllable of words of four or more syllables under certain conditions (Lynch 1978b:739). I assume that penultimate stress was the norm in PSV, that final long or geminate vowels counted as two syllables for purposes of assigning stress, and that the word-final short vowel deletion rule described above was a later rule. That is:

- (29)
- | | | |
|------------------------|----------------|----------------|
| | *...C"VCVC'VCV | *...C"V CVC'V: |
| PRETONIC VOWEL LOSS | ...CVCØC'V CV | ...CVCØC'V: |
| FINAL SHORT VOWEL LOSS | ...C'V CØCVCØ | |

In the examples below, stress is marked in both Pre-Proto Southern Vanuatu and Anejoñ (representing SV languages) to illustrate the operation of this rule; a long dash indicates vacuous application of a rule.¹²

- | | | | | |
|------|-----------------|-----------------|----------------|---------------|
| (30) | Pre-PSV | *"na-li'ma-ñā | *"e-ta'ma-gu | *"a-ke'li-i |
| | PALATALISATION | <i>nijimaña</i> | <i>etamagu</i> | <i>akejii</i> |
| | PRETONIC V LOSS | <i>nijmaña</i> | <i>etmagu</i> | <i>akjii</i> |
| | FINAL V LOSS | <i>nijmañ</i> | <i>etmag</i> | — |
| | Anejoñ | <i>'nijman</i> | <i>'etmak</i> | <i>ac'jii</i> |
| | | 'his hand' | 'my father' | 'dig it' |

When the consonants on either side of the pretonic vowel were identical, then one was lost (presumably via gemination). Compare the following:

- | | | | |
|------|-----------------|-----------------|----------------------|
| (31) | Pre-PSV | <i>*a-'susu</i> | <i>*"nà-su'su-na</i> |
| | PRETONIC V LOSS | — | <i>nassuna</i> |
| | FINAL V LOSS | <i>a-sus</i> | <i>nassun</i> |
| | Anejoĩm | <i>'eded</i> | <i>'naden</i> |
| | | 'suck' | 'her breast' |

New Caledonia

A similar rule operated in New Caledonian languages. Geraghty (1989a:149) says that it only operated between identical consonants, producing geminates which then became aspirated (if stops) or voiceless (if sonorants) – known as “hard” consonants in the NC literature. The examples in (32) show the “normal” development of **k*, **p* and **n* in Nemi (representing New Caledonian languages), while those in (33) show the development of “hard” consonants through vowel loss and gemination (Haudricourt & Ozanne-Rivierre 1982):

¹² The Pre-Proto SV forms given here (and the Pre-Proto NC ones below) are basically Proto Oceanic roots with various accretions or affixes, some of POc origin, others more recent. However, I have parenthesised the final consonant of a POc noun root when it is followed by a consonant-initial possessive suffix, since it is likely that root-final consonants were lost in this environment, even though they may have been retained in others (Malcolm Ross pers. comm.).

- (32) **Pre-PNC** **Nemi**
 **ku'li(t)-ñā* *cii-n* 'his/her skin'
 **'patu* *paik* 'stone'
 **na'tu-ñā* *nai-n* 'his/her child'
- (33) **Pre-PNC** **Nemi**
 **ku'ku-ñā* *hi-n* 'his/her finger(nail)'
 **pa'pa-ñā* *hwa-n* 'his/her mouth'
 **na'na(q)-ñā* *hnaa-n* 'his/her pus, snot'

However, there is evidence that the vowel loss rule also applied to pretonic vowels between non-identical consonants – especially to a vowel between a stop and a nasal; for example:

- (34) **Pre-PNC** **Nemi**
 **qe'no-* *kno-* 'laid down'
 **ta'ma-ñā* *tnau-n* 'his/her father'
 **ti'na-ñā* *tne-n* 'his/her mother'

South Efate

Word-medial vowel loss also occurs in South Efate. Clark (1985a:20), however, describes the operation of this rule in quite different terms from the process described for SV and NC languages. According to his analysis,

- (i) the final vowel loss rule **preceded** the medial vowel loss rule (though descriptions of SV languages at least have the reverse order);
- (ii) the rule, which applies from right to left, deletes a vowel before a single consonant followed by a vowel, irrespective of the position of stress (and so a stressed vowel may be deleted); but
- (iii) the rule does **not** apply to the low vowel *a*.

His word-medial vowel deletion rule is:

- (35) V > Ø / C__CV
 [-low]

The examples he gives to illustrate the operation and sequencing of these rules involve the Proto Efate forms **nasuñā* 'house', **nasama* 'outrigger', **napati-gu* 'my tooth' and **nakini-gu* 'my finger':

- | | | | | | |
|------|--------------------|-----------------|-----------------|--------------------|--------------------|
| (36) | Proto Efate | * <i>nasuñā</i> | * <i>nasama</i> | * <i>napati-gu</i> | * <i>nakini-gu</i> |
| | DISSIMILATION | — | <i>nesema</i> | <i>nepatigu</i> | — |
| | FINAL V LOSS | <i>nasuñ</i> | <i>nesem</i> | <i>nepatig</i> | <i>nakinig</i> |
| | MEDIAL V LOSS | — | <i>nsem</i> | <i>npatig</i> | <i>naknig</i> |
| | S. Efate | <i>nasuñ</i> | <i>nsem</i> | <i>npatik</i> | <i>naknik</i> |

Cognates in Nakanamanga, in which these rules do not operate, are:

(37)	Proto Efate	Nakanamanga
	* <i>nasuṃa</i> 'house'	<i>nasuṃa</i>
	* <i>nasama</i> 'outrigger'	<i>nasama</i>
	* <i>napati-gu</i> 'my tooth'	<i>napati-ŋu</i>
	* <i>nakini-gu</i> 'my finger'	<i>nakini-ŋu</i>

3.2.3 Vowel loss: a reinterpretation

There is, however, another way of looking at both the SM and the South Efate data which suggests that these processes are far more similar than they first appear.

I will deal with South Efate first. It is possible that a set of rules partially different from those proposed by Clark operated in South Efate which, for purposes of this discussion, I presume had regular penultimate stress.¹³ The following set of rules, which I suggest applied in the order given below, is proposed as an alternative:

- (38)a. Dissimilation of **a* (as above).
- b. Article Reduction (see below).
- c. Medial – i.e. pretonic – vowel loss. This is identical to the Proto SM rule except that it did not apply to *a*.
- d. Final short vowel loss (as above).

The proposed Article Reduction rule deleted the vowel from the accreted article, except if that vowel was *a*: i.e. *na-* remained *na-*, but *nV-* (where *V* is not *a*) became *n-*.

The application of these rules to the same set of forms as in (36) above, where stress is now marked, is shown below:

(39)	Proto Efate	* <i>na'suṃa</i>	* <i>na'sama</i>	* <i>napa'ti-gu</i>	* <i>naki'ni-gu</i>
	DISSIMILATION	—	<i>ne'sema</i>	<i>nepa'tigu</i>	—
	ART. RED.	—	<i>n'sema</i>	<i>npa'tigu</i>	—
	MEDIAL V LOSS	—	—	—	<i>nak'nigu</i>
	FINAL V LOSS	<i>nasuṃ</i>	<i>nsem</i>	<i>npatig</i>	<i>naknig</i>
	S. Efate	<i>nasuṃ</i>	<i>nsem</i>	<i>npatik</i>	<i>naknik</i>

The only differences between this set of ordered rules and those described above for Southern Vanuatu at least are (i) the Article Reduction rule, and (ii) the fact that a non-final *a* is never deleted.

There is in fact fairly clear evidence that the Article Reduction rule also applied in Southern Vanuatu. Its operation is most transparent in Sye and Anejoŋ. Sye permits the following noun-initial clusters: *nm*, *np*, *nr*, *nt*, *nv* and *ny*.¹⁴ In all cases which I have examined from Crowley's dictionary (in preparation,) the vowel of the article is lost when the vowel in the first syllable of the noun is **a*. Examples:

¹³ Clark (1985a:17-19) says that word stress in the Nguna dialect is antepenultimate, but "evidence on the other dialects is not so clear". Development of antepenultimate stress in some or all Efate communalests may in any case have been a later development, since most of Efate's closerelatives have penultimate stress.

¹⁴ Underlying *nr* is orthographically *nd*. There are other initial consonant clusters in Sye as well (like *mr*, *pr*, *kt*) which also seem to derive from earlier initial **CaCa*; however, I am specifically interested here in comparing similar forms, with the accreted article **na*.

(40)	Proto Oceanic	Sye
	<i>*maRi</i> 'breadfruit'	<i>n/mar</i>
	<i>*baga</i> 'banyan'	<i>n/pag</i>
	<i>*draRaq</i> 'blood'	<i>n/re</i>
	<i>*talos</i> 'taro'	<i>n/tal</i>
	<i>*patu</i> 'stone'	<i>n/vat</i>
	<i>*yaRu</i> 'casuarina'	<i>n/yar</i>

Compare:

(41)	Proto Oceanic	Sye
	<i>*kutu</i> 'louse'	<i>no/cut</i>
	<i>*puaq</i> 'fruit'	<i>no/vwa-</i> 'seed'
	<i>*kurat</i> 'Morinda citrifolia'	<i>no/crat</i>
	<i>*lima</i> 'hand'	<i>ne/lman</i> 'outrigger'
	<i>*molis</i> 'citrus'	<i>ne/mli</i>
	<i>*piRaq</i> 'k.o. taro'	<i>ne/vie</i> 'water taro'

This suggests very strongly that the **a*-dissimilation rule applied to the vowel of accreted **na*, which became *ne-* and was then subject to loss of the vowel. Presumably, the assimilatory processes which applied to **na* in (41) derive from some later rule. Thus:

(42)	Proto Oceanic	<i>*na-patu</i>	<i>*na-kutu</i>
	DISSIMILATION	<i>ne-patu</i>	—
	ART. REDUCTION	<i>n-patu</i>	—
	ASSIMILATION	—	<i>no-kut</i>
	PRETONIC V LOSS	—	—
	FINAL V LOSS	<i>n-pat</i>	<i>no-kut</i>
	Sye	<i>nvat</i>	<i>nocut</i>
		'stone'	'louse'

In Anejoñ, some nouns show accretion of *nV-*, as in (43)a, others show accretion of *in-*, like those given in (43)b:

(43)	Proto Oceanic	Anejoñ
a.	<i>*kutu</i> 'louse'	<i>ne/cet</i>
	<i>*pudi</i> 'banana'	<i>no/hos</i>
	<i>*lipon</i> 'tooth'	<i>ne/lve-</i>
	<i>*Rumwaq</i> 'house'	<i>n/ioñ</i>
	<i>*lisa</i> 'nit'	<i>na/lad</i>
b.	<i>*patu</i> 'stone'	<i>in/hat</i>
	<i>*talos</i> 'taro'	<i>in/tal</i>
	<i>*baga</i> 'banyan'	<i>in/pak</i>
	<i>*laje</i> 'coral'	<i>in/las</i>
	<i>*kayu</i> 'tree'	<i>in/cai</i>

Now surface noun-initial *in-* is underlying *n-* – i.e., *intal* ‘taro’ is phonemically /ntal/ – with the /i/ being inserted by a regular morphophonemic rule which prevents the generation of word-initial consonant clusters.¹⁵ Once again, most cases of *in*-initial nouns derive from Proto Oceanic roots where the first vowel is **a*, while most cases of *nV*-initial nouns derive from POC forms whose first vowel was not **a*, as the data in (43) show. Thus the same process appears to be at work here.

Apparent cases of *nə-* initial nouns in Tanna languages admit of a similar explanation. There is a regular rule in Lenakel, for example, which inserts /ə/ between the members of an underlying word-initial two-consonant cluster; this /ə/ does not occur when these words take a prefix. For example:

- (44) **Lenakel**
- | | | |
|---------------|-----------|-----------------|
| <i>nəsiin</i> | /n-sii-n/ | ‘his excrement’ |
| <i>nəkom</i> | /n-kom/ | ‘fire’ |
- but
- | | | |
|--------------------|-----------------|----------------|
| <i>nəmwa-nsiin</i> | /n-mwa-n-sii-n/ | ‘his buttocks’ |
| <i>le-nkom</i> | /le-n-kom/ | ‘in the fire’ |

Once again, it appears that **na-* reduced to **n-* in Tanna when the following vowel was *a*, with the resultant consonant cluster being broken up by the insertion of *ə*.

As will be seen in §4.1 below, New Caledonian languages also accreted the article. There, however, not only was the vowel lost in all cases, but the resultant *n* + consonant developed into a prenasalised consonant, indicating that the same process was once again at work.

Discussion

There appears to have been an ordered set of rules which was shared by South Efate, Proto Southern Vanuatu and Proto New Caledonian. The rules involved are similar enough to suggest a common origin, although further investigation of the historical phonologies of these languages is necessary. The hypothesis here is that this was a **single** rule, which applied in what I will refer to in §5.1 below as the **Efate-Southern Melanesian linkage**.

Pretonic or word-medial vowel loss also occurs in a number of NCV languages to the north of Efate. However, its occurrence is more sporadic, or less thoroughgoing, than it is in the Southern Melanesian languages and in South Efate. And just as with word-final vowel loss, it does not occur to anywhere near the same extent in South Efate’s closest relatives in North Efate, the Shepherds and Epi, suggesting that it was an unrelated process.

4 The Southern Oceanic hypothesis

The Southern Oceanic hypothesis states that the Southern Melanesian and North-Central Vanuatu families have a single and unique common ancestor, Proto Southern Oceanic (PSO). The evidence presented below is not overpoweringly compelling, but it does suggest that the hypothesis is worthy of further and closer investigation.

¹⁵ This same rule, for example, applies when the echo-subject marker *m-* (cf. §2.1 above) is prefixed to a consonant-initial morpheme: thus *m-amjeg* (E S-sleep) ‘and sleeps/slept’, but *im-tas* (E S-talk) ‘and says/said’.

4.1 Article accretion

Central and Southern Vanuatu

Southern Vanuatu languages and most Central Vanuatu languages have accreted the Proto Oceanic common article **na* to the noun.¹⁶ Many of the examples in the previous section illustrate this, and there is little need to elaborate here. Perhaps what does need to be briefly discussed, however, is how firmly attached to the noun the accreted article is.

In most SV languages, the article can almost never be removed. It is sometimes deleted in compounds in Sye (e.g. *ompi* 'do' + *nurac* 'thing' > *ompurac* 'work', for example), while in Tanna it seems to be deleted only in the so-called valued possession construction:

(45) **Lenakel**

taha-k nau
POSS-1SG knife
'my knife'

ta-k au
POSS-1SG knife
'my favourite knife'

In Anejoñ, however, the accreted article is less bound. It is regularly deleted when the noun is non-singular indefinite,¹⁷ and also in non-initial elements of compounds:

(46) **Anejoñ**

<i>nelcau</i> 'canoe'	<i>elcau</i> 'canoes'	<i>nev-elcau</i> 'which canoe?'
<i>natimi</i> 'person'	<i>elpu-atimi</i> 'people'	<i>nef-atimi</i> 'an old or important person'
<i>incai</i> 'tree'	<i>cai</i> 'trees'	<i>nariram-cai</i> 'k.o. banana'

In those CV languages which have article accretion, the article is often removed in compounds or in contexts similar to those mentioned above for Anejoñ. Crowley (1985:152) shows that in the Nguna dialect of Nakanamanga, *na-* is dropped from both *na-* initial forms in compounds: *namata* 'eye' + *namaloku* 'kava' > *mata-maloku* 'drunkenness'. In Port Sandwich, accreted *nV-* is deleted

when the noun phrase is generic rather than specific...when the noun is accompanied by a determiner of some kind...[and] when the noun appears in a compound

(Crowley 1985:153-154)

For example:

(47) **Port Sandwich**

Narbaix e-cav-i mbuangg.
ART:woman 3SG-slice-TR taro
'The woman sliced the taro.'

Rbaix e-cav-i mbuangg.
woman 3SG-slice-TR taro
'Women slice taro.'

¹⁶ In SV at least, this accretion does not take place with most directly possessed kin terms and with some names of higher animates.

¹⁷ This even applies to some loanwords in which initial *n* was part of the word in the source language: thus *aifi* is the indefinite non-singular of *naifi* 'knife'.

Rbaix *Amansumbon* *e-lum-i* *mbuangg*.
 woman Amansumbon 3SG-plant-TR taro
 'Amansumbon's wife planted taro.'

Article-accretion is not universal in the CV subgroup: the languages of Ambrym and Epi have no preposed articles, nor do they show much evidence of having accreted a reflex of **na* noun-initially. However, Early (1994:106-107) notes that in Lewo there are some forms that appear to retain an earlier article (POc **na*) as part of their synchronic form ...[although] it no longer functions as a full article on Epi.

He gives as examples *none* (< POc **qone* 'sand'), and also the variation between *nompui* and *pui* 'pig'. The form *na-* does occur in Lewo as a nominaliser (with or without suffixed *-ena*), a fairly common pattern in Vanuatu.

New Caledonia

The New Caledonian languages do not show obvious article accretion like their relatives in central and southern Vanuatu, nor do there appear to be reflexes of **na* as articles which may have separated from the noun in these languages.¹⁸ However, there is some evidence that Proto NC may have had accreted articles:

The oldest and most productive source of nonetymological prenasalized consonants in the languages of New Caledonia, as elsewhere in Oceanic, has been the prenasalization of oral consonants by progressive assimilation of clitics with an NV [nasal + vowel] shape, particularly the earlier common article **na*.

This process must have remained productive after the languages began to separate off, in view of the doublets and irregular correspondences illustrated [below].

(Ozanne-Rivierre 1992:200).

A few of her examples, together with additional data, are presented in (48) below; the forms following "but" on the second line in each case show no prenasalisation.

(48) Proto Oceanic

<i>*pulu</i>	'body hair'	Drehu <i>pen/e</i> , Nengone <i>din</i> but Kumak <i>pōlē-</i> , Nemi <i>puni</i> , Iaai <i>le/ün</i>
<i>*qauR</i>	'bamboo'	Nyelâyü <i>ngao</i> , Kumak <i>ngaa</i> , Jawe <i>ngo</i> but Cèmuhî <i>ō</i> , Drehu <i>aw</i>
<i>*susu</i>	'suck, breast'	Nemi <i>ndit</i> 'breast', Xârâcùù <i>njii</i> 'suck' but Nemi <i>tit</i> 'suck', Drehu <i>iði</i>
<i>*tali</i>	'rope'	Pije <i>ndan</i> , Jawe , Nyelâyü <i>njan</i> but Iaai <i>te/keny</i> , Nengone <i>wa/cen</i>

We can take this argument a little further by looking again at the languages of Hienghène. POc initial **t* is generally reflected as *t* (Jawe *c*) before **a* and as *c* elsewhere, while **d* (phonemic /nt/) is reflected as *d* (Jawe *j*) before **a* and as *j* elsewhere. Verbs and directly possessed kin terms which were **t*-initial show the expected pattern:

¹⁸ Ozanne-Rivierre (1995:51), however, notes that "**na* is still found today as a noun subject marker in a small number of languages", like Ajië and Cèmuhî. See also the earlier brief discussion of this topic in Geraghty (1989b:98).

(49)	POc	Pije	Jawe	
	<i>*taci</i>	<i>tali-</i>	<i>cali-</i>	'younger sibling'
	<i>*tama-</i>	<i>tama-</i>	<i>cnau-</i>	'father'
	<i>*tunu</i>	<i>cini</i>	<i>cini</i>	'burn'
	<i>*tupa</i>	<i>civa</i>	<i>civa</i>	'poison (fish)'
	<i>*tuqur</i>	<i>tuut</i> ¹⁹	<i>cuut</i>	'stand'

However, other *t*-initial nouns behave as if they were *d*-initial:

(50)	POc	Pije	Jawe	
	<i>*taku</i>	<i>dai-</i>	<i>jai-</i>	'back'
	<i>*tali</i>	<i>dan</i>		'rope'
	<i>*tasik</i>	<i>dalik</i>	<i>jalik</i>	'sea'
	<i>*turu</i>	<i>jili-</i>	<i>jili-</i>	'knee'
	<i>*tian</i>	<i>jia-</i>	<i>jie-</i>	'stomach'

This suggests that, while the verbs and kin terms were **t*-initial, other nouns began with **d* (< **n-t*).

We do not find this pattern occurring with **k*-initial nouns in these languages, but in any case **k* and **g* appear to have merged, so we would not expect to find any evidence. However, **p* and **b* have not merged, and yet this pattern does not occur there either: e.g. **paka-* > Pije, Jawe *pa-* 'causative prefix', **patu* > Pije, Jawe *paik* 'stone', but **boni* > Pije, Jawe *gen* 'night'. It may be that **n-p*, rather than yielding **m-p* (i.e. **b*), simply underwent cluster simplification.

The **t*/**d* variation illustrated in (49) and (50) might be explained as just another example of oral/nasal grade crossover, were it not for the very high correlation between reflexes of **d* with non-kin nouns and reflexes of **t* with other roots, paralleling the situation in SV languages where kin terms constitute the main exception to an otherwise general rule of article accretion. Despite the lack of evidence relating to other consonants, this suggests that Ozanne-Rivierre is correct: i.e. that NC languages had accreted articles.

Northern Vanuatu

The situation in the NV languages is quite different. In Mwotlap (alias Motlav), spoken on Mota Lava in the Banks Is., *nV-* occurs prefixed to most nouns, but must be removed in certain restricted contexts – e.g. (i) after a possessed noun, a pronominal number marker or collective noun or a bound preposition, (ii) in a compound, and (iii) after the partitive prefix *te-* (Crowley forthcoming). An examination of the lists in Tryon (1976) shows that the only other NV language which has anything like frequent article accretion to nouns is Wetamut (Dorig), spoken on Gaua Island (also in the Banks). Given the large geographical gap between these two languages and those of the CV subgroup, this almost certainly represents an independent development.

¹⁹ Haudricourt and Ozanne-Rivierre (1982:41) state that Pije *tuut* 'stand' for expected *cuut* is one of only a couple of exceptions to the palatalisation rule; in any case, it is not relevant to the argument here.

Summary

Article accretion does not appear to have been a part of Proto Northern Vanuatu historical morphosyntax. It does, however, appear to have been widespread in Central Vanuatu, Southern Vanuatu and New Caledonia, suggesting that these languages may have formed a genetic unity at one time.²⁰

4.2 Other morphosyntactic evidence

4.2.1 Development of the locative preposition

In (1)d-(1)f above, I listed Clark's (1985b:208) proposed innovations relating to the development of the locative preposition in PNCV: POc **i* became PNCV **a*, POc **i lalo* 'LOC inside' fused as PNCV **(a)lo* 'LOC'.

In Southern Vanuatu languages, the form of the locative/oblique preposition which governs nouns and noun phrases differs from that which governs pronouns (which occur as possessive suffixes):

(51)	Governing NPs	Governing pronouns
Sye	<i>ra</i>	<i>ira-</i>
Whitesands	<i>ie</i>	<i>la-</i>
Lenakel	<i>le</i>	<i>la-</i>
S.W. Tanna	<i>ie</i>	<i>ila-</i>
Kwamera	<i>ia</i>	<i>ira-, ianira-, ian-</i>
Anejoŋ	<i>a</i>	<i>era-</i>

In order to interpret these data, we need to examine the relevant sound correspondences in these languages; the situation **appears** to be as shown below; the environment "adjacent to POc **i*" is to be interpreted as /__**i* and /**i*__ in Whitesands and Lenakel, but only as /__**i* in Anejoŋ.

(52)	Adjacent to POc <i>*i</i>		Elsewhere	
Proto Oceanic	<i>*l</i>	<i>*r</i>	<i>*l</i>	<i>*r</i>
Sye	<i>l</i>	<i>r</i>	<i>l</i>	<i>r</i>
Whitesands	<i>l</i>	<i>l</i>	<i>i</i>	<i>i</i>
Lenakel	<i>l</i>	<i>l</i>	<i>i</i>	<i>i</i>
S.W. Tanna	<i>l</i>	<i>l</i>	<i>l</i>	<i>l</i>
Kwamera	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>
Anejoŋ	<i>j</i>	<i>r, -Ø</i>	<i>l</i>	<i>r</i>

The SV languages may well have made the same innovations as the NCV languages, but have subsequently taken different directions. The reconstruction of **ira-* as the form governing pronouns is unproblematic, initial *i* subsequently being lost in Whitesands and Lenakel. With the form governing NPs, however, there are some problems. Sye and

²⁰ We still need to explain why the languages of Ambrym and Epi generally do not show this innovation. Article accretion may have been a change in progress, rather than a wholly accomplished fact, at the time that putative Proto Nuclear Southern Oceanic began to break up: the preposed article may have become more and more closely attached to the noun as an enclitic, but perhaps it was not fully and irrevocably bound to the noun. The Ambrym and Epi languages may thus have subsequently undergone a change in which the article was reanalysed as a nominaliser (Epi), or was lost altogether (Ambrym).

Whitesands suggest **ra*, Anejoñ suggests **a*. Lenakel *le* may be a back-formation from the pronominal form. The *i*-initial forms in Southwest Tanna and Kwamera may be either the result of influence from a northern lect (Whitesands, for example), or they may reflect **i* 'locative' + **a* 'locative'. Thus while there appear to be a number of similarities between SV and NCV here, there do not seem to be a set of **identical** developments.

In New Caledonia, the Hienghène languages generally have *a* (< **a*?) as the locative preposition. Ajië *na* 'to, towards' and Iaai *hnyi* 'in, on, at' (< **la*?) also appear to confirm that the NCV innovation occurred in Proto New Caledonian, though further data are needed.

4.2.2 Development of pronominal forms

A number of innovations in various pronominal forms in PNCV or PCV were discussed above. These are repeated here:

- (53)a. POc **-mu* 2SG possessive suffix replaced by PNCV **-mwa* (= (1)a).
- b. POc **koe* 2SG independent pronoun replaced by PNCV **ni(kg)o* (= (1)b).
- c. POc **(kg)u* 1SG subject pronoun replaced by PNCV **na* (= (1)c).
- (54)a. POc **inau* 1SG independent pronoun becomes PCV **(kg)inau* (= (3)b).
- b. PNCV **ni(kg)o* 2SG independent pronoun (see (1)b above) replaced by PCV **(kg)aigo* (= (3)c).

Of these, (53)c and (54)a have no parallels in SM languages, and thus remain uniquely NCV and CV innovations respectively. The others, however, require comment.

PNCV **-mwa* 2SG possessive pronoun

Innovation (53)a suggests that the POc second person singular possessive pronoun **-mu* was replaced by PNCV **-mwa*. However, because of the loss of the final vowel in many NCV languages, the form with the final *a* thus to be found only in Mota, Lewo, Nakanamanga and Baetora (Clark 1985b:207, though the final vowel also occurs in Paamese *-mo*):

the evidence for the change (or lack of it) is thus reduced to the difference between a labial and a labiovelar nasal, a distinction which is lost in some languages, and which cannot be reliably extracted from most available descriptions, particularly in final position. (Clark 1985b:207).

Clark further notes (1985b:207) that the two languages of Ambae have *-mu* rather than *-mwa*. While it is possible that *-mu* in these languages derives from **-mwa* (via ***mua*), it is equally possible that PNCV retained **-mu*; this form may have been in the process of changing to **-mwa*, but that change may not have been complete.²¹

The basic form of the 2SG possessive pronoun in all Southern Melanesian languages appears to be *-m*, except that Anejoñ has *-m̃*. Although there is contrast between Anejoñ *m* and *m̃* word-finally, this is not of much assistance, since *m̃* derives not only from **mw*

²¹ Capell (1971:59) notes that in Arosi (South-East Solomons), a final *a* may be added to possessive pronouns suffixed to the general possessive marker "without change of meaning": thus *a-gu*, *a-gu-a* "my", *a-mu*, *a-mu-a* "your (sg.)", etc. This may possibly explain the development of PNCV **-mwa* and, if it is the explanation, serves to link NCV with South-East Solomons.

(**Rumwaq* > *n/ioṃ* 'house'), but also from **m* before **u*, whether or not that **u* was later lost (**ṇamuk* > *in/yaṃ* 'mosquito').

Although *-m* is the commonest form of this possessive suffix in Sye, a few nouns show *-mu* in a particular morphophonemic context: e.g. *nelve-* 'tooth' has *nelpmu* 'your tooth' for expected ***nelvom*.²² This suggests that the innovation may not have taken place in SV languages at least, and that *-m* in these languages derives from **-mu* rather than from **-mwa*. The situation is thus somewhat confused. Bearing in mind the earlier discussion, this does not seem to be strong evidence for the NCV family either.

PNCV **ni(kg)o*, PCV *(*kg*)aigo, 2SG independent pronoun

Clark suggests that the POc 2SG independent pronoun **ko(e)* was replaced by PNCV **ni(kg)o* (innovation (53)b), which later became PCV *(*kg*)aigo (innovation (54)b).

Erromango appears to be alone among SM subgroups in sharing the CV innovation: e.g. Sye *kik*. Other SV languages reflect **i-ko(e)* (Lenakel *iik*, Anejoṃ *a/ek*). However, they do have forms possibly derivable from **ni(kg)o* as 2SG subject markers: all Tanna languages except Kwamera have *n-* marking second person subject, and Anejoṃ has *na(i)* (2SG aorist). NC languages do not reflect the *n*-initial form in independent pronouns, nor do those that I have looked at have *nV* as a 2SG subject marker.

The evidence is not all that clear, but does show some links between SV and NCV.

4.3 Lexical innovations

Clark (1985b) also listed a number of putative lexical innovations in PNCV and its subgroups, involving either a phonological irregularity or else a replacement. Over time, some of these have been shown to have cognates in, for example, Solomon Islands languages, and thus no longer constitute PNCV innovations.

There are, however, a number of apparent irregular phonological developments shared by PNCV and PSV, some of these at least also being shared with NC languages (for which the necessary data are not all available). In the data below, I will give a tentative PSO form; I will then give the PNCV form, and one or two examples of cognates in SV languages (without at this stage giving a PSV reconstruction), and will comment where necessary on NC forms.

- | | |
|----------------------------------|---|
| (55) POc * <i>inum</i> 'drink' > | PSO * <i>munim</i>
PNCV * <i>muni</i>
SV: Lenakel <i>a/mnuumw</i> , Anejoṃ <i>a/ṃoṃ</i> |
| (56) POc * <i>asa</i> 'scrape' > | PSO * <i>rasa</i>
PNCV * <i>rasa</i>
SV: Kwamera <i>a/rəsi</i> |

²² There are other possible ways of accounting for *-mu* from underlying final *m* in this morphophonemic context, though they are somewhat ad hoc (Terry Crowley pers. comm.).

- (57) POc **tokon* 'crutch' > PSO **tikon*
PNCV **tiko*
SV: Lenakel *a/skən*, Anejoñ *i/sec* 'walk with crutch'
NC: Jawe *jek*, *jexe-* could derive from **tokon* or **tikon*
- (58) POc **katama* 'outside' > PSO **(k)atava*
PNCV **katava*
SV: Lenakel *i/atəv*
- (59) POc **kalo* 'ant, spider' > PSO **makal(ai)*
PNCV **makala*
SV: Whitesands *makali*, Kwamera *ka/mkəri*
- (60) POc **kaŋaRi* 'almond' > PSO **qaŋaRi*
PNCV **qaŋaRi*
SV: Whitesands *n/age*, Anejoñ *n/agai*
- (61) POc **kapat(ao)* 'wood-grub' > PSO **avato*
PNCV **avato*
SV: Sye *n/avat*, Anejoñ *n/ahat*
NC: Nemi *havo* suggests loss of **k-*
- (62) POc **Rumwaq* 'house' > PNCV **yumwa*
SV: Lenakel *n/imwa*, Anejoñ *n/ioñ*
NC: The initial syllable has been lost: Nemi *ŋa*, Kumak *mwa*
- (63) POc **kumi* 'chin', 'beard' > PNCV **kumwi*
SV: Whitesands *na/kmw-*, Lenakel *nə/kmw-*
- (64) POc **wakaR* 'root' > PNCV **kawa-ri*
SV: Anejoñ *necva-*
NC: forms such as Iai *wâân*, Xârâcùù *kwêe* are problematic, depending on which syllable has been lost.

5 Summary

The discussion in the previous sections has made the following suggestions:

First, there is evidence supporting the existence of a **Southern Melanesian** grouping, consisting of the Southern Vanuatu and New Caledonian families. This is defined on the basis of the development of the conjunction **ma* as an echo-subject marker (§2.1), shared irregular developments in the plural pronouns (§2.2), as well as some irregular phonological developments (§2.3). To use the terminology elaborated in Ross (forthcoming), this would be an **innovation-defined subgroup**, the product of **language fissure**: i.e. there was a single ancestral language, Proto Southern Melanesian, which split into two descendants, Proto Southern Vanuatu and Proto New Caledonian.

Second, there is evidence supporting the existence of what I will refer to as the **Efate-Southern Melanesian linkage**, consisting of the South Efate language and Proto Southern Melanesian. This is defined on the basis of the shared phonological rules relating to the development and loss of vowels discussed in §3.1 and §3.2 above. In Ross' terminology, this is an **innovation-linked subgroup**, the product of **lectal differentiation**. That is, the original chain of dialects (presumably spoken in the south of Efate) became more and more distant from one another, linguistically as well as geographically, until a point was reached where contact was lost.

Third, there is some evidence supporting the existence of a **Nuclear Southern Oceanic (NSO) linkage**, comprising the Central Vanuatu family and the Efate-Southern Melanesian Linkage. This consists of the accretion of the article (§4.1), and the shared development of the second person singular independent pronoun **(kg)aigo* in CV and Erromango (§4.2.2). This hypothesis is not particularly strong at this stage.

Finally, there is evidence supporting the existence of a **Southern Oceanic linkage**, comprising the Northern Vanuatu subgroup and the NSO linkage. This evidence consists of developments in the locative preposition (§4.2.1), the shared development of the second person singular independent pronoun **ni(kg)o* (§4.2.2), and certain irregular phonological developments in a number of lexical items (§4.3).

These interrelationships can be diagrammed as illustrated in Figure 1. (I use Ross' convention of a double line to indicate a linkage.)

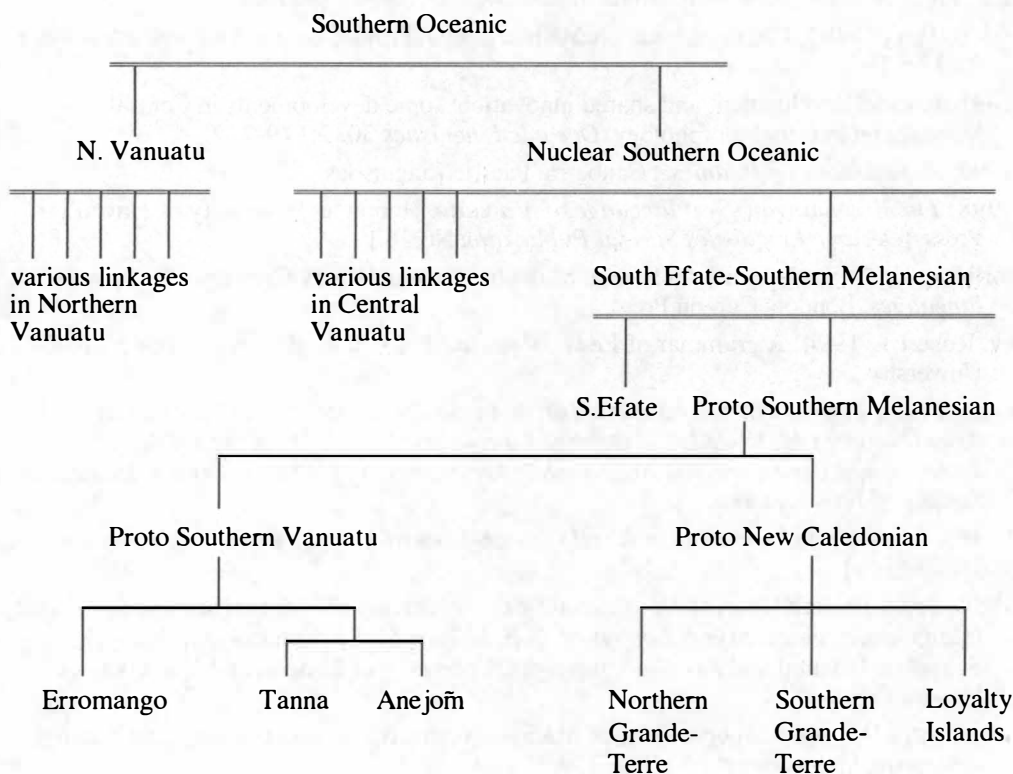


Figure 1

The position of the Central Pacific subgroup in relation to this proposal is one that needs to be investigated. It has been generally assumed that NCV's closest relatives within Oceanic are the Central Pacific languages. If the Southern Oceanic hypothesis is valid, NCV no longer exists as a discrete subgroup; and the relationship of Central Pacific to the Southern Oceanic grouping would thus need to be re-evaluated.

The hypotheses presented above are no more than indications at this stage. Clearly, a great deal of work needs to be done to clarify the historical phonology of the Southern Melanesian languages particularly, and the historical morphosyntax of all of the languages under discussion. The relationship of putative Southern Oceanic not only to the Central Pacific subgroup, but to Southeast Solomonian and Micronesian, also needs detailed investigation. I hope, however, that this paper will stimulate this research further.

References

- Capell, A., 1971, *Arosi grammar*. Canberra: Pacific Linguistics.
- Clark, Ross, 1985a, The Efate dialects. *Te Reo* 28:3-35.
- 1985b, Languages of north and central Vanuatu: groups, chains, clusters and waves. In Andrew Pawley and Lois Carrington, eds, *Austronesian linguistics at the 15th Pacific Science Congress*, 199-236. Canberra: Pacific Linguistics.
- n.d., Proto North-Central Vanuatu reconstructions. Computer printout.
- Crowley, Terry, 1985, Common noun phrase marking in Proto-Oceanic. *Oceanic Linguistics* 24:135-193.
- 1991, Parallel development and shared innovation: some developments in Central Vanuatu inflectional morphology. *Oceanic Linguistics* 30, 2:179-222.
- 1992, *A dictionary of Paamese*. Canberra: Pacific Linguistics.
- 1998, *The Erromangan (Sye) language of Vanuatu*. Honolulu: University of Hawai'i Press. [*Oceanic Linguistics Special Publication* No.26.]
- forthcoming, Mwotlap. In John Lynch, Malcolm Ross and Terry Crowley, *The Oceanic languages*. London: Curzon Press.
- Early, Robert J., 1994, A grammar of Lewo, Vanuatu. PhD thesis, The Australian National University.
- Geraghty, Paul, 1989a, The reconstruction of Proto-Southern Oceanic. In Ray Harlow and Robin Hooper eds, *VICAL 1 – Oceanic Languages: Papers from the Fifth International Conference on Austronesian Linguistics*, 141-156. Auckland: Linguistic Society of New Zealand.
- 1989b, Review article: Haudricourt and Ozanne-Rivierre (1982). *Oceanic Linguistics* 28.1:96-101.
- 1990, Proto-Eastern Oceanic *R and its reflexes. In Jeremy H.C.S. Davidson, ed., *Pacific Island languages: essays in honour of G.B. Milner*, 51-93. London and Honolulu: School of Oriental and African Languages, University of London and University of Hawaii Press.
- Grace, George W., 1955, Subgrouping of Malayo-Polynesian: a report of tentative findings. *American Anthropologist* 57:337-339.
- 1972, On canonical shapes in the language of Koumac. In Jacqueline M.C. Thomas and Lucien Berndt, eds, *Langues et techniques, nature et société (Hommage à A.-G. Haudricourt)* 1:135-140. Paris: Klincksieck.

- 1975, *Canala dictionary (New Caledonia)*. Canberra: Pacific Linguistics.
- Haudricourt, André-G., 1963, *La langue des Nénémas et des Nigoumak (dialectes de Poum et de Koumac, Nouvelle-Calédonie)*. Auckland: Linguistic Society of New Zealand [*Te Reo Monographs*].
- Haudricourt, André-G. and Françoise Ozanne-Rivierre, 1982, *Dictionnaire thématique des langues de la région de Hienghène (Nouvelle-Calédonie)*. Paris: Société d'Etudes Linguistiques et Anthropologiques de France [*Langues et Civilisations à Tradition Orale, Asie-Australasie* 4].
- Lichtenberk, Frantisek, 1978, A sketch of Houaïlou grammar. *University of Hawaii Working Papers in Linguistics* 10, 2:74-116.
- Lindstrom, Lamont, 1986, *Kwamera dictionary – Nīkukua sai Nagkiariien Nininife*. Canberra: Pacific Linguistics.
- Lindstrom, Lamont and John Lynch, 1994, *Kwamera*. Munich: Lincom Europa [*Languages of the World/Materials* 02].
- Lynch, John, 1978a, *A grammar of Lenakel*. Canberra: Pacific Linguistics.
- 1978b, Proto-South Hebridean and Proto-Oceanic. In S.A. Wurm and Lois Carrington, eds, *Second International Conference on Austronesian Linguistics: Proceedings*, 717-779. Canberra: Pacific Linguistics.
- 1982a, South-West Tanna grammar outline and vocabulary. In John Lynch, ed., *Papers in Linguistics of Melanesia* No.4, 1-91. Canberra: Pacific Linguistics.
- 1982b, Anejom grammar sketch. In John Lynch, ed., *Papers in Linguistics of Melanesia* No.4, 93-154. Canberra: Pacific Linguistics.
- 1983, Ura grammar sketch and vocabulary. In John Lynch, ed., *Studies in the languages of Erromango*, 148-183. Canberra: Pacific Linguistics.
- 1992, Verb-initial vowel accretion in Southern Vanuatu languages. In Tom Dutton, Malcolm Ross and Darrell Tryon, eds, *The language game: papers in memory of Donald C. Laycock*, 235-240. Canberra: Pacific Linguistics.
- n.d., Proto Southern Vanuatu reconstructions. Computer printout.
- Lynch, John and A. Capell, 1983, Sye grammar outline. In John Lynch, ed., *Studies in the languages of Erromango*, 11-74. Canberra: Pacific Linguistics.
- Moyse-Faurie, Claire, 1983, *Le drehu: langue de Lifou (Iles Loyauté)*. Paris: Société d'Etudes Linguistiques et Anthropologiques de France [*Langues et Cultures du Pacifique* 3].
- Ozanne-Rivierre, Françoise, 1976, *Le iaai: langue mélanésienne d'Ouvéa (Nouvelle-Calédonie)*. Paris: Société d'Etudes Linguistiques et Anthropologiques de France [*Langues et Civilisations à Tradition Orale* 20].
- 1984, *Dictionnaire iaai-français (Ouvéa, Nouvelle-Calédonie)*. Paris: Société d'Etudes Linguistiques et Anthropologiques de France [*Langues et Cultures du Pacifique* 6].
- 1992, The Proto-Oceanic consonantal system and the languages of New Caledonia. *Oceanic Linguistics* 31, 2:191-207.
- 1995, Structural changes in the languages of northern New Caledonia. *Oceanic Linguistics* 34, 1:45-72.
- Ozanne-Rivierre, F[rançoise] and J[ean]-C[laude] Rivierre, 1989, Nasalization/oralization: nasal vowel development and consonant shifts in New Caledonian languages. In Ray Harlow and Robin Hooper, eds, *VICAL 1 – Oceanic Languages: Papers from the Fifth International Conference on Austronesian Linguistics*, 413-432. Auckland: Linguistic Society of New Zealand.

- Pawley, Andrew, 1972, On the internal relationships of the Eastern Oceanic languages. In Roger C. Green and Marion Kelly, eds, *Studies in Oceanic culture history*, vol.3 (Pacific Anthropological records No.13), 1-142. Honolulu: Bernice Pauahi Bishop Museum.
- Pawley, Andrew and Malcolm Ross, 1995, The prehistory of Oceanic languages: a current view. In Peter Bellwood, James J. Fox and Darrell Tryon, eds, *The Austronesians: historical and comparative perspectives*, 39-74. Canberra: The Australian National University.
- Rivierre, Jean-Claude, 1980, *La langue de Touho: phonologie et grammaire du cèmuhi (Nouvelle-Calédonie)*. Paris: Société d'Etudes Linguistiques et Anthropologiques de France [*Langues et Civilisations à Tradition Orale* 38].
- 1991, Loss of final consonants in the north of New Caledonia. In Robert Blust, ed., *Currents in Pacific linguistics: papers on Austronesian languages and ethnolinguistics in honour of George W. Grace*, 415-432. Canberra: Pacific Linguistics.
- 1993, Tonogenesis in New Caledonia. In Jerold A. Edmondson and Kenneth L. Gregerson, eds, *Tonality in Austronesian languages*, 155-173. Honolulu: University of Hawaii Press. [*Oceanic Linguistics Special Publication* No.24.]
- 1994a, *Dictionnaire cèmuhi-français*. Paris: Peeters.
- 1994b, Contact-induced phonological complexification in New Caledonia. In Tom Dutton and Darrell Tryon, eds, *Language contact and change in the Austronesian world*, 497-522. Berlin: Mouton de Gruyter.
- Ross, M[alcolm] D., 1988, *Proto Oceanic and the Austronesian languages of western Melanesia*. Canberra: Pacific Linguistics.
- forthcoming, Social networks and kinds of speech community event. In Roger Blench, ed., *One world archaeology*.
- Tryon, D.T., 1976, *New Hebrides languages: an internal classification*. Canberra: Pacific Linguistics.
- Walsh, D.S., 1982, The restricted distribution of Raga /k/: starting point for a sub-grouping hypothesis. In Rainer Carle et al., eds, *GAVA: studies in Austronesian languages and cultures dedicated to Hans Kähler*, 237-251. Berlin: Dietrich Reimer.