

# PROBLEMS WITH PROTO CENTRAL PACIFIC

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

The theory that the languages of Fiji, Rotuma and Polynesia form a closed subgroup was first proposed by Grace (1959). He later (1967) named the subgroup “Central Pacific”, and the name has become generally accepted. Many linguists and prehistorians (see Geraghty 1983:352), have accepted the Central Pacific (CP) hypothesis, and a number of Proto Central Pacific (PCP) lexical items have been reconstructed in Blust (1976), Geraghty and Pawley (1981), and Geraghty (1983, 1986, 1990). The idea is particularly appealing since it seems to mesh well with the prehistorical scenario, delineated by archaeologists, of an initial occupation of the Fiji-West Polynesia area by Lapita people, whose culture remained relatively uniform for the first thousand years or so of occupation. It was initially assumed that the language spoken by these Lapita people, Proto Central Pacific, developed as a unity then split into three branches, Proto Fijian, Proto Polynesian and Proto Rotuman. Proto Fijian then split into Proto Western Fijian and Proto Eastern Fijian, and has continued splitting ever since to form the current Fijian quasi-continuum; Proto Polynesian split into Proto Tongic and Proto Nuclear Polynesian and has likewise continued splitting; and Proto Rotuman developed into Rotuman (Pawley & Sayaba 1971; Pawley 1972).

## 2. TOKALAU FIJIAN

Unfortunately, this very attractive hypothesis is not strongly supported by the data. In Pawley (1972), 15 exclusively shared innovations were proposed in support of the Central Pacific subgroup. In Geraghty (1983:352-366), I argued that most of these proposed innovations were invalid for some reason, and that those that do appear to be valid tend to demonstrate a close relationship between Polynesia and Eastern Fiji, and most especially the extreme eastern part of Fiji, comprising eastern Vanualevu and the Lau Group, which I termed “Tokalau Fijian”. The following explanation was offered (pp.379-381):

Under the present Proto Central Pacific hypothesis, this distribution of exclusively shared lexical items is hard to explain. If Proto Central Pacific broke up into Proto Polynesian and Proto Fijian, and Proto Fijian subsequently underwent further division, then there is no cause for any particular daughter language of Proto Fijian to show a closer relationship with Polynesian languages

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than any other. The only explanation compatible with the Proto Central Pacific hypothesis – that the shared items are loans – seems unlikely, because of the large number of grammatical morphemes involved. Nor is the situation explicable by the other possible strictly genetic hypothesis: Tokalau Fijian cannot be subgrouped with Polynesian, since Tokalau Fijian is unquestionably a Fijian language.

The genetic model, therefore, is supplemented to explain the relationships observed, by allowing a language to change its subgroup membership over time. Thus it is claimed that Tokalau Fijian, although it clearly subgrouped now with other Fijian languages (that is, shares most innovations), originally subgrouped with Polynesian.

The implications of this interpretation (p.381) for the prehistory of the area are that:

The Lapita people, who came to Fiji with a homogeneous material culture, had initially also a homogeneous language, but that a dialect chain developed within Fiji before the settlement of Polynesia, and it was speakers of the dialect of Tokalau Fiji (Proto Tokalau Polynesian) who settled Polynesia.

Subsequent archaeological work has added some weight to this proposal, with Best (1984:653-654) arguing that Lakeba (in Tokalau Fiji), initially an outpost of the Fijian islands to the west, subsequently (up to about 500 BC) shows greater affinity to western Polynesia, only to revert to being culturally part of the Fiji group. The Tokalau Fijian origin of the first settlers of Polynesia is supported by the study of placenames (Geraghty 1993, note 37), and my ongoing Proto Central Pacific lexicon project is turning up more and more corroboratory linguistic data.

The thrust of this argument is not, of course, that there was no such language as Proto Central Pacific (Pawley (1979) lists a number of plausible innovations), but that there is relatively little strong evidence for it, since the ancestors of the Rotuman, Fijian and Polynesian languages developed for some time as part of the same dialect continuum; and that, at least in Fiji, the subsequent development of the chain involved fusion as well as fission. This means that when we go about reconstructing Proto Central Pacific, there is a problem: a form that is witnessed in Fijian and Polynesian may not actually date back to Proto Central Pacific, but be a product of the close relationship between Tokalau Fiji and Polynesian. However, it should be fairly easy to spot the odd man out, if it is (a) confined to Tokalau or Eastern Fiji, and/or (b) one of a pair of 'competing' forms, and/or likely to be borrowed (i.e. a non-basic, non-grammatical form such as the name of an artefact or cultivated plant). At the same time, the possibility must be allowed that an innovation of Tokalau Fijian, or any other post-PCP stage, could spread over all of Fiji. It has been demonstrated, for instance, that at least one important phonological innovation, the simplifying of certain vowel clusters, spread throughout Fiji (with the partial exception of some communalects in the extreme north and north-east) *after* the application of an important syntactic change that uniquely characterises Western Fijian, the change from suffix to prefix possession for part-terms (Geraghty & Pawley 1981).

The purpose of this paper is to present further evidence that the relationships among the Central Pacific languages are more complex than previously believed.

## 3. ROTUMAN

I do not intend to delve in depth into the position of Rotuman among the Central Pacific languages, but to summarise briefly the 'state of the art'. The most plausible explanation for the linguistic facts regarding Rotuman is similar to that proposed for Proto Polynesian: that it belonged to part of a Central Pacific continuum, presumably located in Fiji. Pawley (1979) presents evidence for subgrouping Rotuman with Fijian rather than Polynesian, and in particular the western part of the PCP dialect chain. My own assessment of Pawley's evidence, considered along with the results of subsequent research, is that the innovations Rotuman shares with Fijian languages appear to be distributed fairly evenly between Western Fiji and Vanualevu (especially the north coast). Since it appears that Vanualevu was heavily influenced in recent prehistory by languages of the coastal south-east Vitilevu prestige area (Geraghty 1983:383,386), I would tentatively propose that Rotuman derived from Vanualevu at a time when that area was more similar to Western Fijian. The following evidence has come to light since Pawley (1979):<sup>2</sup>

## SHARED WITH ALL FIJI:

Rot, Fij *ogo* 'k.o. fish, *Sphyraena barracuda*'; irregular change from PCP \**ʔono* (cf. PSS \**ono*).

Rot *jija*, Fij *sise* 'k.o. fish, Hemiramphidae'; irregular change from PCP \**ije* (< PEO \**Rije*).

Rot *ʔora* '(eye) smart, (throat) choke', Fij *ora* 'choke'; cf. PEO \**laʔoRa* 'choke', PPn \**laʔoa*; also Rot *lava* 'choke', may be Pn loan.

## SHARED WITH WEST FIJIAN AND VANUALEVU:

Rot, Nalea, Gonedau \**z* > *s*, e.g. \**moze* 'sleep' > *mose*; elsewhere in Fiji *moce*, PPn \**mohe*.

## SHARED WITH WEST FIJIAN:

PCP \**n̄* > Rot, WF *y* (Geraghty 1986).

PCP \**gw* > Rot *v*, Nadi, Vuda *w*, e.g. \**tagwane* 'male' > Rot *vavane* 'husband', Nadi, Vuda *tawane*.

Rot *taʔi* 'a match for, just like', *ʔitake* 'perhaps, as if, resemble', WF *kodaki*, *vodaki*, *wetaki* 'resemble, like'.

## SHARED WITH VANUALEVU:

Rot *se* 'to' may be cognate with North-East Vanualevu (*i*)*ce-* 'to'. The latter is used only with pronouns and personal names, not with placenames and common nouns, as the Rotuman is; but *se* also appears to have a nominal origin, cf. *sine*, *sini* 'to him, her, it, them'

Rot *katV* 'not' may be related to Vanualevu *maqa* (*n*)*i*, though the loss of *ma-* is irregular and Rot-*t* unexplained.

<sup>2</sup> For abbreviations used in this paper see Appendix.

## 4. POLYNESIAN OUTLIERS

In a recent paper on Proto Central Pacific fish names (Geraghty 1994), the first detailed study of any part of the Proto Central Pacific lexicon, I observed that, among Polynesian languages, the Outliers appear to share a large number of forms with Fijian. A similar observation was made 150 years ago by Horatio Hale (1846:186-187), the linguist and ethnologist of the United States Exploring Expedition:

It is remarkable that in this brief vocabulary [of Tikopia] several words are found which are not Polynesian, and which seem to be of Vitian [Fijian] origin, as *sori*, to give (Vit. *solī*); *ḡasau*, arrow (Vit. *ḡasau*, a reed, hence, an arrow); *muna*, to speak (Vit. the same); *tinana*, mother (Vit. *tinana*, his mother); *fūrau*, a stranger (Vit. *vura*, a visitor – *vulaḡi*, a stranger).

Although *tinana* is a shared retention, and *fūrau* should be *forau*, and is not related to the Fijian forms, the other three are valid comparisons, even if not demonstrably shared innovations. Below are listed further forms which appear to show a close relationship between Fiji and the Outliers, sometimes also including East Futuna and Tuvalu.

## SHARED INNOVATIONS:

*tau--na* kin-term reciprocal (EUv(?), Tuv, Ren, Anu, Tik), Fij (Vanualevu) *tau--na*; cf. PPn \**fai--na* (Nuk, Sik, Lua, Tak, Ren, Mel (*fei-*), WFu (*fei-*)) < PEO \**vai--n(a,i)* (Fij *vei--ni*, Rot *hai--gi*), PSS \**vai--na* (Saa, Are); this latter is also a shared retention.

*kawe a'b* (opposite-sex sibling) (Lua, Pil, Anu, Tik, Mel, WFu), Fij *weka-* (Eastern Vitilevu, Lau, Kadavu); cf. PEO \**mwane-*; this may be a shared retention, other Pn languages reflecting the innovative compound \**tua-fafine/ga'ane*.

*lie* 'nit' (Nuk, Lua, Nkr, Ren, Tik, WFu), Fij *li(cs)e*; cf. PPn \**li(hs)a* 'nit' (also Tuv, Sik, Tak) < PEO \**lica*; some South-East Solomons forms also show final *-e*.

*fago* 'wake up (so)' (Tuv, Nuk, Kap, Sik, Lua, Tak, WFu), Fij *vago-n*; PPn \**fagu* < PEO \**vagu-n*; but also PNV \**vago-n*.

*sē* 'flower' (EFu, Sik, Tik, Mae, WFu), Fij *sē-*; PPn \**fuga* (Sam, Tok) < PEO \**vuga*; cf. also Nak *sesē* – if genuinely cognate, this represents a shared retention; but the geographical and genetic distance between Fiji and Nakanai (New Britain) raise some doubt as to the validity of this comparison.

?*oti* 'all' (Pil, Ren, WFu), Fij *oti* (Rewa); PPn \*?*oti* 'finished' < PCP \*?*oti*.

*mī* 'urinate' (Tik), Fij *mī*; PPn \**mimi* (but Haw *mī*) < PEO \**mimi*.

## SHARED RETENTIONS:

*solī* 'give' (EFu, Anu, Tik, Mae, WUv), Fij *solī*; cf. PSS \**soligi* 'assign (portion of food)'; (Are) 'give, grant, permit'.

*sali* 'flow' (EFu, Tuv, Kap, Nuk, Ren, Sik), Fij *sali*, Rot *jali/ga* 'gutter, channel', PEO \**sali*.

*tinana* 'mother' (EFu, Kap, Lua, Sik, Nkr, Tak, Ren, Anu, Tik, Mae, WFu, WUv), Fij *tina-na* 'his/her mother', PEO \**tina-*; in other Pn languages reflecting this form it refers to a female animal.

*tamana* 'father' (EFu, Tok, Tuv, Kap, Lua, Nkr, Tak, Anu, Tik, Mae, WFu, WUv), Fij *tama-na* 'his/her mother', PEO \**tama-*; cf. Sam *tamā*.

*Vkina(i)* 'to it +' (Nuk *akina*, Kap *kinai*, Ren *kinai*), Fij *kina*, *kinia*, PEO \*(*k*)*ini-a*; cf. PPn \**ai*, Rot *e*.

#### EQUIVOCAI BUT INTERESTING:

*samu* 'beat with stick' (Lua, Tak), Fij *samu-t*, Rot *jau* 'beat (clothes, water in fishing)'.

*muna* 'speak, say' (Sam 'answer back', Tuv 'word, speech, say', Tik 'speak, say', Mae 'say'), Fij *muna-k* 'speak (Lau), say (Cakaudrove), swear at (Koro)'.

*gasau* 'arrow' (EFu, Ren, Tik, Mel; WFu *gasau/jiri*), Fij *gasau*. Also in Tongan, but possibly Fijian loan; perhaps Fijian loan in Outliers too.

*kolī* 'dog' (Anu, Tik, Mel), Fij *korī*, *kolī*; other Pn, including Outliers, reflect PPn \**kuī*.

*sake* 'kick' (Ren, Tik), Fij *caqe*; EFu, Tuv, Sam 'raise leg or foot', Puk 'trip with hand or foot'.

*fuli* 'chase (Tuv), flee (Tik)', Fij *vuli* 'flee' (Eastern Vanualevu, Vanuabalavu).

*kole* 'speak, scold' (Tik), Fij *kole* 'speak' (North-East Vanualevu); cf. WF *kwalekwalē* 'myth, legend'.

*nau* 'term of address for mother' (Anu, Tik, Mae), Fij *nau* (Vanualevu, Lomaiviti).

*tala* 'change (clothes)' (Tuv, Kap 'wear', Sik, Lua, Tak 'wear (loincloth)', Tik 'put on (clothes)'), Fij *dara* 'put on, wear (clothes)', Rot *tatarā* 'lift off, slip on (clothes)' (possibly Pn loan); cf. Aro *dara* 'put on (ring, shirt)'.

These comparisons can be accounted for by positing a period after the settlement of Polynesia when the Polynesian languages were beginning to acquire their distinctness, yet were still to some extent a part of the Central Pacific continuum. At this stage, the language ancestral to the Outliers (or at least some of them) was closer to Fiji in this continuum than was the language ancestral to the non-Outlier languages. This theory is not inconsistent with the evidence of early loans between Fiji and Polynesia (Geraghty 1993), and may explain the split reflexes of certain PCP phonemes in Proto Polynesian. For instance, I have been reconstructing PCP \**x* for what is reflected as Fijian /*k*/ and PPn \**ʔ* (Geraghty 1986:305). There is no apparent external source for PCP \**x* distinct from \**k*, so it is economical to attribute the PPn \**ʔ* reflexes to borrowing from an area of Fiji in which \**k* had become glottal stop, as is the case in much of eastern Vanualevu today (Geraghty 1983:58). The same explanation may be applied to the split reflexes of PCP \**r*, \**j* and \**c/z* (Geraghty 1986).

It would be appropriate now to re-examine the question of the possessive suffixes found in the Outliers, which have been attributed to analogical remodelling on Melanesian languages. It is possible that they are retentions from a dialect of the Proto Polynesian continuum.

## 5. CONNECTIONS BEYOND CENTRAL PACIFIC

The classic argument against the reality of a proposed subgroup is the existence of many competing forms, that is, two or more forms that can be reconstructed for the same function or meaning. I have found very few, if any, competing pairs in one of which Rotuman or Polynesian appears to share an innovation with a non-Central Pacific language. In this section I present instances where one of the competing forms appears to be an innovation shared by Fiji and a non-Central Pacific language, beginning with those with the widest distribution in Fiji. In a number of these, parallel development is a possible explanation.

## WIDESPREAD IN FIJI:

PCP \**nivo*- 'tooth' (PPn \**nifo*, PSS \*(*ln*)*ivo*-, PNv \**livo*-); Fij *bati*-, cf. widespread Vanuatu *bati*-.

PCP \**vavine* 'female' (PPn \**fafine*, Rot *haina*, PEO \**vavine*); Fij (*ya*)*lewa*, cf. Kwaio *lekwa* 'female cuscus opposum'.

PCP \**manivi* 'thin' (PPn \**manifi*, Rot *mahini* (met.), PEO \**manivi*); Fij *māmare*, *maremare*, cf. Vanuatu *maremare* (Tangoa).

PCP \**?aco* 'day, daylight, sun' (PPn \**?aho* 'daylight', \**?aso* 'day', Rot *asa* 'sun', PEO \**?aco* 'sun, day'); Fij *sigā*, cf. Kwaio, Ulawa *diga* 'day' (also Kir *ririga* 'clear sunlight, sunshine'), cf. POC \**sinaR* 'shine'.

PCP \**kami* Ixp (first person exclusive plural independent pronoun) (PPn \**kima*- (met.), Rot \**ami*-, PEO \**kami*); Fij *kaimam(iu)*, *kemam(iu)*, cf. Vanuatu *kamam(iu)*, PMc \**kamami*.

PCP \**koe* III (second person singular independent pronoun) (PPn \**koe*, Rot \**æ/a*, PEO \**koe*); Fij *iko*, cf. Vanuatu (*n*)*iko*, Are *i?o*.

PCP \**-rua* 2 (dual pronoun suffix) (PPn \**-rua*, Rot *-ra*, PEO \**-rua*); Fij *-ru*, cf. Vanuatu *-ru*.

PCP \**tuaka*- a'a+ (elder same-sex sibling) (PPn \**tuakana*, Fij *tuaka-na*, PNv \**tuaka*-); Fij *tuka*- (Western, parts of Eastern Vitilevu), cf. PSS \**t(ou)xa*-.

## WIDESPREAD IN WESTERN FIJI:

Given that Western Fiji is geographically closest to potential sources of non-Central Pacific intrusion, it is remarkable that I have so far found no evidence of apparent intrusive replacements widespread in Western Fiji. One possible exception to this generalisation is the corpus in which PEO \**R* is retained as /l/ (Geraghty 1990:89-91), which is largely confined to more westerly areas of Vitilevu (with one startling exception, which will be discussed below), and can be only partially explained by vocalic conditioning.

## WIDESPREAD IN EASTERN FIJI:

PCP \**wa'e*- 'leg, foot' (PPn \**wa'e*, PEO \**wa'e*-); Fij *tua*-, cf. Solomons *tua*- (Ngg, Vat, Aro), Vanuatu *tua*- (Shepherds, Nguna, Efate), cf. PEO \**u'a* 'bone'.

PCP \**?one* 'sand' (PPn \**?one*, PEO \**?one*); Fij *nuku*, cf. Kwaio *nu'u* 'margins of sand', Arosi *nunu'u* 'sand' < PEO \**nuku* 'island, settlement'; \**?one* is reflected as Fij *one* in numerous placenames and Nadrogā (Western Fiji) *ha/wene* 'sand', *wene* 'sand for temper (in pottery)'.

PCP \*-*rua* 2 (dual pronoun suffix) (PPn \*-*rua*, Rot -*ra*, PEO \*-*rua*); Fij -(*d*)*ruka* (Kadavu, Vanualevu), cf. Guadalcanal -*ruka*.

PCP \**lima*- 'hand, arm' (PPn \**lima*, Fij -*lima*, *liga*-, PEO \**lima*-); Fij *taba*- (North-East Vitilevu), cf. Solomons *taba*- (Mal, Lau). Parallel development possible, cf. PEO \**taba*- 'shoulder' (Are *aba*-, Port Sandwich *rapa*-, Eastern Fiji *taba*-); also PMc \**tapa* 'cheek', WF *taba* 'skin, bark, shell', Lau (Fiji) *taba*- 'side', PPn \**tapa* 'edge'.

PCP \*(*cs*)*iku*-, \**iku*- 'tail' (PPn \*(*s*)*iku*, PEO \*(*s*)*iku*-); Fij *bui*- (South-East Vitilevu, Kadavu, Lau), cf. Vanuatu *bue*- (Efate, Shepherds).

There are also a number of such shared innovations that have a very limited distribution, suggesting perhaps a different historical explanation.

The pronouns of the Western Fijian language Waya are formed in a strikingly unusual manner for an Oceanic language, with the number (dual or paucal) marker preceding, rather than following, the base (Geraghty 1983:198; Pawley & Sayaba 1990). This order is not found in any other Central Pacific language, but is found in two other regions of Eastern Oceania: in Bugotu, Nggela and parts of Guadalcanal in the South-East Solomons (Tryon & Hackman 1983); and in Sinesip (Ray 1926), Lembinwen and Benour (Tryon 1976) in Malakula, Vanuatu. Moreover, as noted in Geraghty (1983:364), the actual form of the Wayan paucal number marker, *vati*-, could reasonably be interpreted as deriving from an earlier \**vati*- 'four' (although 'three' is the number from which the marker is usually derived in Oceanic languages); the word for 'four' in all Central Pacific languages is derived from \**vā*, reflexes of \**vati* being found only in non-Central Pacific languages. While it is not impossible that these anomalies developed independently in Waya, it is more likely that they are connected with the similar phenomena in Vanuatu and/or the Solomons, in which case Waya would either be descended from an intrusive language from the west, or would be a remnant of a language more closely related to Vanuatu and/or Solomons languages, which was once more widespread in Western Fiji.

The PCP reflex of PEO \**mw* can be securely reconstructed as \**gw* (Geraghty 1986:306-307). However, two lexical items in the Eastern Fijian communalect of Nadrau (in central Vitilevu) show a bilabial reflex: *umane* 'male' and *madina*- 'maternal uncle' (Geraghty 1983:44,49-50). In languages of Melanesia, \**mw* is reflected as a bilabial much more frequently than as a velar, and the bilabial is often accompanied by /u/, either as /mu/ (or /mw/) or as /um/ (e.g. Bugotu *umata* 'snake'). Strictly speaking, then, both PCP \**gw* and \*(*u*)*m* may be reconstructed. It is possible, but highly unlikely on phonological grounds, that Nadrau /(u)m/ reflects PCP \**gw*. So we have a situation similar to pronouns of Waya, suggesting that Nadrau is either an intrusive language or a relic area.

The third instance of an apparent intrusion concerns the name of a food plant, so is more likely to be simply a loanword. Nonetheless the circumstances of its introduction are curious, since its referent appears to be native to Fiji, and PCP \**talice* (*Terminalia catappa*) is a solid reconstruction, with relexes in Polynesia, Rotuma and both Western and Eastern Fijian. Yet through most of Fiji the form *tāvola* is found, which is cognate with PNV \**tavoRa* (Geraghty 1990:90). The /l/ reflex of \**R* suggests that this term was borrowed from a Solomons language, but I have yet to find a cognate form in the Solomons.

## APPENDIX: ABBREVIATIONS OF LANGUAGE NAMES

Anu	Anuta	PMc	Proto Micronesian
Are	'Are'Are	Pn	Polynesian
Aro	Arosi	PNV	Proto North Vanuatu
EFu	East Futunan	PPn	Proto Polynesian
EUv	East Uvean	PSS	Proto South-East Solomonian
Fij	Fijian	Puk	Pukapuka
Haw	Hawaii	Ren	Rennellese
Kap	Kapingamarangi	Rot	Rotuman
Kir	Kiribati	Saa	Sa'a
Lua	Luangina	Sam	Samoan
Mae	Emae	Sik	Sikaiana
Mal	Malakula	Tak	Takū
Mel	Mele-Fila	Tik	Tikopia
Nak	Nakanai	Tok	Tokalau
Ngg	Nggela	Vat	Vaturanga (Ndi)
Nkr	Nukuria	Tuv	Tuvalu
Nuk	Nukuoro	WF	West Fijian
PCP	Proto Central Pacific	WFu'	West Futunan
PEO	Proto Eastern Oceanic	WUv	West Uvean
Pil	Pileni		

## REFERENCES

- Best, Simon B.**, 1984, Lakeba: the prehistory of a Fijian island. PhD thesis, University of Auckland.
- Blust, Robert A.**, 1976, A third palatal reflex in Polynesian languages. *Journal of the Polynesian Society* 85:339-358.
- Davidson, J.H.C.S.**, ed., 1990, *Pacific Island languages: essays in honour of G.B. Milner*. London: School of Oriental and African Studies/Honolulu: University of Hawaii Press.
- Geraghty, Paul**, 1983, *The history of the Fijian languages*. Oceanic Linguistics Special Publication 19. Honolulu: University of Hawaii Press.
- 1986, The sound system of Proto-Central-Pacific. In Paul Geraghty, Lois Carrington and S.A. Wurm, eds *Focal II: papers from the Fourth International Conference on Austronesian Linguistics*, 289-312. *PL*, C-94.
- 1990, Proto-Eastern Oceanic \*R and its reflexes. In Davidson, ed. 1990:51-93.
- 1993, Pulo, Polynesian homeland. *Journal of the Polynesian Society* 102:343-384.
- 1994, Proto Central Pacific fish names. In A.K. Pawley and M.D. Ross, eds *Austronesian terminologies: continuity and change*, 141-169. *PL*, C-127.
- Geraghty, Paul and Andrew Pawley**, 1981, The relative chronology of some innovations in the Fijian languages. In Jim Hollyman and Andrew Pawley, eds *Studies in Pacific languages and cultures in honour of Bruce Biggs*, 159-178. Auckland: Linguistic Society of New Zealand.
- Grace, George W.**, 1959, *The position of the Polynesian languages within the Austronesian (Malayo-Polynesian) language family*. Memoir 16, *International Journal of American Linguistics*. Bernice P. Bishop Museum Special Publication 46.
- 1967, The effect of heterogeneity in the lexicostatistical test list: the case of Rotuman. In Highland et al., eds 1967:289-302.
- Green, Roger and M. Kelly**, eds, 1972, *Studies in Oceanic culture history*, vol. 3. Pacific Anthropological Records 13. Honolulu: Bernice P. Bishop Museum.
- Hale, Horatio**, 1846, *United States Exploring Expedition, 1838-1842...ethnography and philology*. Philadelphia: Lee & Blanchard.
- Highland, G.A. et al.**, eds, 1967, *Polynesian culture history: essays in honor of Kenneth P. Emory*. Bernice P. Bishop Museum Special Publication 56. Honolulu: Bishop Museum Press.



- Pawley, Andrew K.**, 1972, On the internal relationships of Eastern Oceanic languages. In Green and Kelly, eds 1972:1-142.
- 1979, New evidence on the position of Rotuman. *Working Papers in Anthropology, Archaeology, Linguistics, Maori Studies* 56. Department of Anthropology, University of Auckland.
- Pawley, Andrew K. and Timoci Sayaba**, 1971, Fijian dialect divisions: Eastern and Western Fijian. *Journal of the Polynesian Society* 80:405-436.
- 1990, Possessive-marking in Wayan, a western Fijian language: noun class or relational system? In Davidson, ed. 1990:147-171.
- Ray, S.H.**, 1926, *A comparative study of the Melanesian island languages*. Cambridge: Cambridge University Press.
- Tryon, D.T.**, 1976, New Hebrides languages: an internal classification. *PL*, C-50.
- Tryon, Darrell and B.D. Hackman**, 1983, Solomon Islands languages: an internal classification. *PL*, C-72.

