

# 1 *Direct and indirect inheritance in Rotuman*

BRUCE BIGGS

## 1 Proto Eastern Oceanic<sup>1</sup>

There is some evidence that Fijian, Polynesian, Rotuman and certain languages of the Solomons–Vanuatu chain, including probably Arosi of San Cristoval, Ulawa of Contrariété Island, Sa'a, Lau and Kwara'ae of Malaita, Nggela of Florida, Kerebuto and Vaturanga of Guadalcanal, Mota of the Banks Islands, and Efate of Vanuatu, are members of a single subgroup of Austronesian.<sup>2</sup> This paper assumes such to be the case, calls the protolanguage of the subgroup Proto Eastern Oceanic (PEO),<sup>3</sup> and on the basis of regular correspondences

<sup>1</sup> This paper was written while the author was a Senior Specialist at the Institute of Advanced Projects, East–West Center, Honolulu. The opportunity to do full-time research without teaching duties is gratefully acknowledged. [This is an edited version of the paper that first appeared in *Lingua* 14:383–415 (1965).]

<sup>2</sup> For example, Codrington (1885) has an interesting discussion of those languages of Melanesia which he considers to be alike; they include Mota, Nggela and the languages round Florida in Guadalcanal and Malaita, and Efate, and Fijian. Ray (1926:595) included among those languages 'where IN words are especially prominent' the Central Solomons in the general area of Florida, San Cristoval, and Mota. Dyen's (1963) Heonesian Hesion includes all the languages I have named which were included in his study. Wilhelm Schmidt considered the languages most closely related to Polynesian to be Fijian, Rotuman, certain languages of the southern Solomons, and certain languages of the central Vanuatu (see Grace 1961 note 8.6).

<sup>3</sup> *Abbreviations and Orthographic Conventions.*

PAn reconstructions follow Dyen's (1963) orthography except that *ŋ* is used for his *N*. My Rotuman orthography is explained in §3.1 and §3.2. For other languages I use the orthography of the sources except that in all cases glottal stop is here written ʔ, and, in all Polynesian languages and in Fijian, long vowels are written as geminate clusters.

among the above languages reconstructs 328 starred forms, each one of which has cognates in Rotuman and at least one other non-Polynesian language.

Most of the evidence for PEO is contained in §4, where it may be seen that Fijian, Tongan, Samoan and Māori, together with Rotuman, have been cited most frequently. However, cognates from Nggela, Sa'a, Kwara'ae, Mota, Uvea, Futuna, and occasionally Lau, Arosi, Motu, Bugotu and Gedaged,<sup>4</sup> also appear. Since Fijian, Rotuman and all of the Polynesian languages fail to reflect \*R, this phoneme may be missing in a few reconstructions where cognates in other languages are not cited. If George Grace is right in supposing that Fijian, Rotuman, and Polynesian themselves form a subgroup, it is also possible that some of the reconstructed forms, for which no cognates were located in the West, are innovations.

**Table 1:** PEO consonants and their PAn and PPn correspondences

| PAn | p b | mp mb | t nt | d D | nd nD l r | s z c j Z | ns nz nc nj nZ |
|-----|-----|-------|------|-----|-----------|-----------|----------------|
| PEO | p   | mp    | t nt | d   | nd l r    | s         | ns             |
| PPn | f   | p     | t    | r   | l         | s         | h              |

  

| PAn | k g ŋk ŋg | m n ñ N | w q R h y   |
|-----|-----------|---------|-------------|
| PEO | k nk      | m n ŋ   | w ? R Ø y   |
| PPn | k         | m n ŋ   | w ? Ø Ø (Ø) |

In PEO there was probably a process whereby word bases containing one of the protoconsonants \*p, t, d, k, s alternated with forms in which the homorganic nasal preceded the oral consonant. In what follows the consonant alone is spoken of as the oral grade, while the nasal plus consonant is called the nasal grade. The existence of some such process is suggested (a) by the number of doublets in the daughter languages, one member containing the reflex of the oral grade and the other that of the nasal grade, (b) by imperfect correlation in this regard among cognates in the daughter languages, and (c) by possible traces of this process in certain Central Vanuatu languages.<sup>5</sup>

Language abbreviations are: Bug. – Bugotu; Fij. – Fiji; Fut. – Futuna; Ngg. – Nggela (Florida); Ni. – Niue; Mao. – NZ Māori; Rov. – Roviana; Sam. – Samoa; To. – Tonga; Tu. – Tuvalu; Ulw. – Ulawa; Uv. – Uvea; dial. – dialect.

<sup>4</sup> The subgroup membership of the last three is not implied. To include Bugotu would require the reconstruction of \*ñ as well as \*n. Gedaged gives the impression of considerable structural divergence from the others.

<sup>5</sup> See Capell (1962a:217; 1962b:382) and Ray (1926:241, 251). I am indebted to George Grace for drawing my attention to these features and supplying the references. This paper was also discussed with him on a number of occasions, and he read a draft, making a number of corrections, and offering several suggestions which I adopted. I take this opportunity of thanking him sincerely.

In spite of the possibility that nasal accretion reflects a morphemic process, it is shown here in reconstructed forms if the reflex of a nasal grade appears in the daughter languages. For example, while the Fijian forms *butu* 'to tread' and *qari* 'to scratch' (cf. *vutu* 'to pound' and *kari* 'to scrape') may in fact derive from morphologically complex forms in which the first morpheme ended in a nasal, nevertheless the protoforms are reconstructed as *\*mbutu* and *\*ɣkari*.<sup>6</sup>

On the basis of phonetic plausibility and some positive correlations (though as noted above total correlation is not found), I associate the oral and nasal grade protophonemes with reflexes in certain of the daughter languages as follows:<sup>7</sup>

**Table 2:** Oral and nasal grade reflexes of PEO phonemes

| PEO    | <i>*p</i> | <i>*mp</i> | <i>*t</i> | <i>*nt</i> | <i>*d</i> | <i>*nd</i> | <i>*s</i> | <i>*ns</i> | <i>*k</i> | <i>*ɣk</i> |
|--------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|
| Fijian | v         | b          | t         | d          | r         | dr         | s         | c          | k         | q          |
| Samoan | f         | p          | t         | t          | l         | l          | s         | Ø          | k         | k          |
| Tongan | f         | p          | t         | t          | Ø         | l          | h         | h          | k         | k          |
| Māori  | wh/h      | p          | t         | t          | r         | r          | h         | Ø          | k         | k          |
| Sa'a   | h         | p/q        | Ø         | d          | r         | d          | t/s       | d          | ʔ         | k          |
| Nggela | p/v       | mb         | t         | nd         | r         | nd         | s         | h          | k/g       | ngg        |
| Mota   | v/w       | p/q        | t         | t          | r         | r          | s         | s          | k/g       | q          |

## 2 Polynesian

The existence of a Polynesian closed group is generally admitted though the internal and immediate external relationships of the group are not agreed on.

Elbert (1953) suggested that the first Polynesian split occurred between Proto Tongan (ancestor of Tongan, Niuean, and Uvean), and the protolanguage of the rest of Polynesian. A later split separated Proto Samoan from Proto Eastern Polynesian. Unpublished comparative structural work by Pawley (1962) confirms this picture on the basis of phonological and grammatical innovations. The evidence suggests that Proto Samoan was ancestral to Tuvaluan, Tokelauan and Futunan, while Proto Eastern Polynesian was ancestral to Rarotongan, Māori, Hawaiian and all languages to the east. The position of the outliers is uncertain.

<sup>6</sup> If the reflex of the nasal grade appears in some but not all cognates, the starred nasal is parenthesised, for example PEO *\*(m)baʔa*, Fij. *baa*, To. *faʔa* 'the stem of taro'.

<sup>7</sup> This interpretation, as it applies to palatals, and to *\*d*, is at variance with conclusions reached by others. I attempt to justify my decisions in a forthcoming paper. [The editors are not aware of this foreshadowed paper having been published.]

### 3 Rotuman

Rotuman is a non-Polynesian language spoken by people of Polynesian physical type on a small isolated island 250 miles [400 km]<sup>8</sup> north of the most northerly Fijian island, Vanua Levu. The Polynesian islands of Futuna and Uvea lie 238 miles [385 km] and 375 miles [605 km] miles respectively to the east of Rotuma, while the Polynesian-speaking island of Funafuti in the Tuvalu group lies 260 miles [420 km] to the north. Niuafo'ou, the nearest island of the Tongan group, lies 470 miles [760 km] south-east of Rotuma. The rest of Tonga lies 200 miles [320 km] to 400 miles [645 km] south of Niuafo'ou. Savai'i, the closest Samoan island, lies 636 miles [1025 km] east of Rotuma. To the west, Tikopia (a Polynesian outlier), and Vanua Lava in the Banks Islands lie 540 miles [870 km] and 558 miles [900 km] distant from Rotuma.

The Rotuman language originally attracted attention because of its appearance of complexity, occasioned especially by the grammatical function of long and short forms of all bases in the language, and by the morphophonemic changes associated with the two forms.

More recently attention has been focused on the precise relationship of Rotuman to other Austronesian languages. Grace (1959) considers that Rotuman, Polynesian and Fijian form a subgroup within Austronesian, a decision based on innovations and lexicostatistical closeness.<sup>9</sup> Dyen (1959) considers Grace's thesis unproven, and not confirmed by his (Dyen's) lexicostatistical work. Goodenough (1961) argues that if Grace's group exists it must also include West Nakanai of New Britain, which appears to be at least as close to Fijian as is Rotuman. Goodenough (1962) points out that Rotuman has borrowed many words from Polynesian and that this must be allowed for in any assessment of the relations between the two.

#### 3.1 Rotuman vowels

Hocart (1919) listed twelve vowels for Rotuman, Codrington (1885) seven. The Wesleyan missionaries for many years wrote five, the Roman Catholics ten. Churchward (1940) writes ten distinctions but says 'to be strictly scientific ... the Rotuman alphabet requires not five vowel letters, nor yet ten, but fourteen'. He also says that each of the five primary vowels can be long, short, or medium. Haudricourt (1957–58), following Churchward, recognises fourteen vowel phonemes. Grace (1959), using the same sources, favours twelve.

This confusion over the number of vowels in Rotuman is in marked contrast to the general agreement, from earliest missionary days, concerning the vowels of Polynesian languages and Fijian, which were without exception agreed to be five in number. It also contrasts with the absence of disagreement concerning Rotuman consonants.

---

<sup>8</sup> Distances rounded off to nearest 5 kilometres: editor.

<sup>9</sup> See also Grace (1961).

**Table 3:** The vowel phonemes of Rotuman

|      | Unrounded |          | Rounded  |          |
|------|-----------|----------|----------|----------|
|      | Front     | Back     | Front    | back     |
| High | <i>i</i>  | –        | <i>ü</i> | <i>u</i> |
| Mid  | <i>e</i>  | –        | <i>ö</i> | <i>o</i> |
| Low  | <i>æ</i>  | <i>a</i> | <i>œ</i> | <i>ɔ</i> |

In 1959 I had the opportunity of working with Rotuman informants, and it seemed clear that there are ten contrasting vowels in the language, essentially as written by Churchward, whose orthography is phonemic, though his discussion obscures this fact.

/i e u o ɔ a/ occur in all positions. /æ/ occurs initially and medially. /ü ö œ/ occur medially only. Reasons for the restricted distribution of certain vowels appear in what follows.

Almost every base in Rotuman has two forms called long and short. The short form of any base is predictable from the long form, though the reverse does not apply. Every long form is stressed on its penultimate syllable, every short form on its final syllable. Pairs minimally distinguished by stress occur, e.g. *fāfa* ‘await’, *fafá* ‘challenge’. A stress phoneme is therefore marked.

### 3.1.1 The history of Rotuman vowels

The vowel phonemes of Rotuman appear to derive from the five vowels of Proto Eastern Oceanic as follows.

Pre-Rotuman had a five-vowel system reflecting one-for-one the vowels of PEO but with allophones (*æ a ɔ*) of the phoneme /a/. The *æ* allophone occurred before a syllable containing /e/, the *ɔ* allophone occurred before a syllable containing /u/ or /i/, and the *a* allophone occurred elsewhere. Pre-Rotuman /\*hafu/ (PAn \**batu*) ‘stone’ and /\*afe/ (PAn \**qatay*) ‘liver’ were phonetically [həθu]<sup>10</sup> and [æθe].

At some time in pre-Rotuman, the dynamic being unknown, the language innovated wholesale metathesis of final syllables of bases. The metathesis had grammatical function and the non-metathesised forms continued to exist side by side with the innovated forms. Previously base shapes had been (C)V(C)V: now final consonants occurred in such base shapes as (C)VC.

Possibly simultaneously with the metathesis, but more probably after an interval of time, each metathesised form was reduced one syllable, by (a) reducing the less sonorous of two vowels to a semivowel, or (b) coalescing two similar vowels in the quality of one of them, or (c) coalescing two unlike vowels and retaining features of the quality of each. These changes had far-reaching effects on the phonology. Stress, which had always been on the penultimate

<sup>10</sup> θ, which occurred only in directly inherited words, fell together with f subsequent to 1846 when Hale (1846:469–478) had distinguished the two consistently.

syllable of bases, now occurred on the penultimate syllable of long forms and the final syllable of short forms. A further effect was the addition of two phonemes /æ/ and /ɔ/, for in short forms such as *áʔ* and *hɔʔ* the quality of the vowel was no longer predictable. Examples follow illustrating the three processes by which the short forms were achieved. It is assumed that two steps were involved, first metathesis, then syllable reduction. The hypothetical first step is starred.

The second step resulted in a further three vowel phonemes, thus completing the inventory of ten. The last three examples in Table 4 provide illustration. In each case the new phoneme results from the coalescence of two vowels in a cluster, retaining in each case the rounding of one vowel and the front position of the other.

**Table 4:** Origin of Rotuman short forms

|     | Pre-Rotuman     | Metathesised form | Present short form |
|-----|-----------------|-------------------|--------------------|
| (a) | * <i>tiro</i>   | * <i>tior</i>     | <i>tyór</i>        |
| (a) | * <i>totóka</i> | * <i>totóak</i>   | <i>totwák</i>      |
| (a) | * <i>óta</i>    | * <i>óat</i>      | <i>wát</i>         |
| (b) | *ʔ <i>éfe</i>   | *ʔ <i>éef</i>     | ʔ <i>ef</i>        |
| (b) | * <i>tutúru</i> | * <i>tutúur</i>   | <i>tutúr</i>       |
| (b) | * <i>láje</i>   | * <i>læj</i>      | <i>læej</i>        |
| (c) | * <i>séru</i>   | * <i>séur</i>     | <i>sör</i>         |
| (c) | *ʔ <i>úli</i>   | *ʔ <i>úil</i>     | ʔ <i>ül</i>        |
| (c) | * <i>kámi</i>   | * <i>káim</i>     | <i>kæm</i>         |

### 3.2 Rotuman consonants

I write the consonant phonemes of Rotuman as follows: *p, t, k, m, n, g, j, s, l, r, v, f, ʔ, h*. This differs from the conventional orthography only in the use of ʔ for glottal stop instead of '. *g* is a velar nasal, *j* an unvoiced palatal affricate.

Rotuman words exhibit two sets of correspondences with protoforms. Those set I and set II reflexes which differ in shape are called diagnostic. The diagnostic members of the same set may co-occur, but no diagnostic member of one set co-occurs with diagnostic members of the other set. Thus the set I reflex ʔ < \**k* co-occurs with the set I reflex *f* < \**t* in the forms ʔ*áfo* (PEO \**kato*) 'basket', and ʔ*éfe* (PEO \**kete*) 'basket', 'belly', but no co-occurrence of *f* < \**t* and the set II reflex *k* < \**k* can be found.

As will be seen later, at least one diagnostic reflex is needed before the history of a Rotuman word can be decided.

**Table 5:** The two sets of Rotuman reflexes of PEO consonant phonemes

|     |   |    |                 |     |      |     |    |   |    |   |   |                 |   |                 |                  |   |   |   |   |   |
|-----|---|----|-----------------|-----|------|-----|----|---|----|---|---|-----------------|---|-----------------|------------------|---|---|---|---|---|
| PEO | p | mp | t <sup>11</sup> | nt- | -nt- | d   | nd | k | ŋk | R | l | r               | q | s <sup>11</sup> | ns <sup>11</sup> | m | n | ŋ | w | y |
| I   | h | p  | f               | f   | t    | r   | t  | ʔ | k  | Ø | l | Ø <sup>12</sup> | Ø | s               | s                | m | n | ŋ | v | Ø |
| II  | f | p  | t               | t   | t    | r/Ø | r  | k | k  | Ø | r | r               | ʔ | s/h             | h/Ø              | m | n | ŋ | v | Ø |

The words with etymologies fall into two groups, those containing reflexes that are specific for either set I or set II, and those containing no diagnostic correspondences.

A number of doublets occur, for example: *híti* ‘to start with surprise’, *fíti* ‘to spring, or move suddenly’, PEO *\*pi(n)ti*; *sóʔa* ‘dig with a pointed stick’, *sóka* ‘to root in ground with snout’, PEO *\*(n)soka*; *lúmu* ‘seaweed or moss’, *rímu* ‘lichen sp.’, PEO *\*limu*; *séle* ‘cut off, intercept’, *sére* ‘to cut’, PEO *\*sele*; *séʔe* ‘upwards’, *sæke* ‘project, jut out’, PEO *\*(n)sake*; *síʔi* ‘to lift’, *hiki* ‘to exaggerate’, PPn *\*siki*; *fóʔa* ‘come ashore’, *tóka* ‘to cease’, PEO *\*toka*.

It is apparent that we have here what Dyen (1956:83) refers to as ‘the classical problem of determining which of two opposing groups of words are inherited, and which borrowed, when in any event the borrowings must be from a related language’.

I propose to speak of directly and indirectly inherited words, rather than inherited and loan words, in order to emphasise that *all* of the words with etymologies were once part of a language ancestral to Rotuman in the comparativist’s sense. Some of them however re-entered Rotuman from a collateral related language after undergoing changes other than those which affected forms which had remained continuously in the Rotuman line. The different histories of directly inherited words and indirectly inherited words, together with factors introduced by the re-entry of the latter into Rotuman, resulted in two sets of correspondences with the protolanguage.

The decision as to which set of correspondences occur in directly inherited words, and which in those words that have re-entered Rotuman from another language, is made with reference to basic vocabulary, which contains those items less likely to have been lost or substituted for in the original word store. The following sections show that set I correspondences occur in such basic words as: *three*, *seven*, *ten*, *land*, *man*, *star*, *fruit*, *house*, *eye*, *ear*, *navel*, *skin*, and in several pronouns. Set II diagnostic correspondences occur in few body parts, no numerals, no pronouns, and distinctly fewer words of all categories that might be considered basic, than do set I correspondences.

Set I correspondences then, are those which occur in directly inherited words, and of the set the following correspondences are diagnostic: *h* from *\*p*; *f* from *\*t* and *\*nt-*; *t* from *\*nd-*; *ʔ* from *\*k*; *Ø* from *\*r*.

<sup>11</sup> Rotuman *j* also reflects both *\*t* and *\*(n)s* under conditions which cannot be stated at present (see §4.1).

<sup>12</sup> As far as I know, Rotuman is the only Eastern language which distinguishes PAn *\*d* and *\*r* (see §4.6 and §4.12a).

Set II correspondences are found in indirectly inherited words, and the following correspondences are diagnostic: *f* from *\*p*; *t* from *\*t* and *\*nt*; *Ø* from *\*d*; *k* from *\*k*; *r* from *\*l*; *r* from *\*r*; *ʔ* from *\*ʔ*; *h* from *\*(n)s*; *Ø* from *\*(n)s*.

## 4 PEO reflexes in Rotuman

### 4.1 Rotuman *j*

The history of Rotuman *j* is problematical. It apparently reflects both *\*(n)s* and *\*(n)t* under conditions which cannot be defined at present.

(a) Rotuman *j* reflects PEO *\*(n)s*:

PEO *\*(n)sipo* 'downwards'. Fij. *civocivo* 'wind sweeping down from the hills' also *sivo* 'to debase, remove from office', To. *hifo*, Sam. *ifo*, Mao. *iho*, Mota *siwo*, Rot. *jio*.

PEO *\*lase* 'coral, lime'. Fij., Fut. *lase*, Mota *las*, Motu, Lau *lade*, Aro. *rade*, Ef. *läs*, Rot. *læje*.

PEO *\*(n)sepu* 'splash, sprinkle'. Fij. *sevu* 'throw or splash water about, make libation', Mao. *ehu* 'dash water out of a canoe', Rot. *jéhu* 'fall lightly, of rain'.

PEO *\*(sei)* 'split, tear'. Fij. *sei*, Sam. *sa/sai*, To., Mao. *hae*, Rot. *jéi*.

PEO *\*ke(n)su* 'back of head'. Fij. *kesu*, Rov. *kizu*, Rot. *ʔéju*.

PEO *\*ɣu(ts)u* (PAN *\*ɣu(ts)u*) 'lips, mouth'. Fij. *gusu* 'mouth', PPn *\*ɣutu* 'lips', Rot. *núju* 'mouth'.

PEO *\*(n)samu*. Mota *samw/ai* 'useless remains, refuse', Sam. *samusamu*, Mao. *hamuhamu* 'to eat scraps', To., Uv. *hamu* 'to eat only one kind of food', Rot. *jɔmjɔmu* 'to eat sparingly'.

(b) Rotuman *j* reflects PEO *\*(n)t* or PPn *\*t*:

PEO *\*mataʔu* (PAN *\*ma/taquh*) 'to be expert'. Fij. *vaka/matau* 'cleverly', To. *mataʔu*, Mao. *maatau* 'to know', Rot. *majáu*.

PEO *\*(tompu)* 'dive, plunge'. Fij. *tobu/raka*, Rot. *jópu*.

PPn *\*tuli* 'shorebird sp.'. Sam., Fut. *tuli*, Rot. *júli*.

PPn *\*tona* 'excrescence'. To. *tona* 'yaws', Mao. 'wart', Rot. *jóna* 'yaws'.

PPn *\*toli* 'pick, gather'. To., Sam. *tolí*, Mao. *toritori* 'cut in pieces, separate', Rot. *jóli*.

PEO *\*(n)tusu* (PAN *\*tuZug*) 'to point'. Fij. *dus/i*, To. *tuhu*, Sa'a *usu* 'index finger', Rot. *júju*.

PEO *\*tasi* (PAN *\*tazim* 'sharp') 'scrape, peel, shave'. Fij. *tasi* 'shave', Mao. *tahi* 'dress timber', Rot. *jóji* 'shave'.

PPn \*tii ‘*Cordyline* spp.’. To. *sii*, Sam., Mao. *tii*, Rot. *ji*.

PEO \*(*ta/dawa*) ‘green’. Fij. *karaka/rawa*, Mota *ta/rave*, Rot. *ja/ráva*.

PPn \**tao* ‘spear, lance’. Sam., To., Mao. *tao*, Rot. *jáo*.

## 4.2 PEO \**p*

PEO \**p* (PAN \**p*, *b*) is inherited (a) directly as Rotuman *h* (b) indirectly as Rotuman *f*.

(a) Rotuman *h* directly reflects PEO \**p*:

PEO \**patu* (PAN \**batu*) ‘stone’. Fij. *vatu*, Sa’a *hëu*, To. *fatu/kala*, Sam. *fatu*, Mao. *koo/whatu*, Rot. *hófu*.

PEO \**puke* (PAN \**buka*) ‘uncover’. Fij. *vuke*, Sa’a *hu<sup>?</sup>e*, To. *fuke*, Sam. *fu<sup>?</sup>e*, Mao. *huke*, Rot. *hu<sup>?</sup>e*.

PEO \**pa(n)da* (PAN \**panDan*) ‘pandanus’. Fij. *vadra*, To. *faa* (also *fala* ‘mat’), Sam. *fala*, Mao. *whara/whara* ‘*Astelia* sp.’, Rot. *háta*.

PEO \**panua* (PAN \**banu(w)a*) ‘land’. Fij. *vanua*, Sa’a *hënué*, To. *fonua*, Sam. *fanua*, Mao. *whenua*, Rot. *hanúa*.

PEO \**pata* ‘shelf’ (PAN \**bataŋ*). Fij. *vata*, Sa’a *haa*, To., Sam. *fata*, Mao. *whata*, Rot. *háta*.

PEO \**potu* (PAN \**betu*) ‘to appear’. Fij. *vodu*, Sa’a *hou* ‘to make known’, To., Sam. *fotu*, Mao. *hotu* ‘to dawn’, Rot. *hófu*.

PEO \**pitu* (PAN \**pitu*) ‘seven’. Fij. *vitu*, Sa’a *hiu*. To., Sam. *fitu*, Mao. *whitu*, Rot. *hifu*.

PEO \**pua* (PAN \**buaq*) ‘fruit’. Fij. *vua*, Sa’a *hue/hue*, To., Sam. *fua*, Mao. *hua*, Rot. *húe*.

PEO \*(*m*)*pula* (PAN \**bulan*) ‘moon; to shine’. Fij. *vula*, Sa’a *hule*, Sam. *pula* ‘to shine’, Mao. *purapura* ‘twinkle’, Rot. *húla*.

PEO \**ŋapulu* (PAN \**puluq*) ‘ten’. Fij. *sa/gavulu*, Mao. *ngahuru*, Rot. *sa/ghúlu*.

PEO \**poki* ‘to return’. Fij. *ya/voki* ‘shift, of wind’, To. *foki*, Sam. *fo<sup>?</sup>i*, Mao. *hoki*, Rot. *hó<sup>?</sup>i*.

PEO \**p(e, a)i-* ‘reciprocal prefix’. Fij. *vei-*, To. *fe-*, Rot. *hói-*.

PEO \**paja* ‘to feed’ (PAN \**paNan* ‘food’). Sa’a *haja* ‘to eat’, To. *fanga*, Sam. *fagai/fata* ‘to feed on a raised bed’, Mao. *whaangai*, Rot. *hága*.

PEO \**putu* ‘*Barringtonia*’ (PAN \**bu(n)tun* (Goodenough 1961) ‘tree sp.’). Fij. *vutu*, Sa’a *huu*, To., Sam. *futu*, Mao. *poo/hutu/kawa* ‘coastal tree sp.’, Rot. *húfu*.

(b) Rotuman *f* indirectly reflects PEO \**p*:

PEO \**po<sup>?</sup>oRu* (PAN \**baqeRu(h)*) ‘new’. Fij. *vou*, Ulw. *haolu*, To. *fo<sup>?</sup>ou*, Sam. *fou*, Mao. *hoou*, Rot. *fo<sup>?</sup>óu*.

- PEO *\*pana* (PAN *\*panaq*) 'to shoot'. Fij. *vana*, Sa'a *hana*, To., Sam. *fana*, Mao. *whana* 'kick, spring back', Rot. *fána*.
- PEO *\*pulu* 'body hair' (PAN *\*bulu*). Fij. *vulu/a*, To., Sam. *fulu*, Mao. *huru/huru*, Rot. *fúru* 'pile, nap'.
- PEO *\*pi(n)ti* 'spring up' (PAN *\*piTik*). Fij. *vidi*, To. *fisi*, Sam. *fiti*, Mao. *whiti*, Rot. *fíti*.
- PEO *\*puti* (PAN *\*putput*) 'to pluck, pull out'. Fij. *vuti*, To. *fusi*, Sam. *futi*, Mao. *huti*, Rot. *fúti*.
- PEO *\*pu(n)ti* (PAN *\*pun(t)i*) 'banana'. Fij. *vudi*, Sa'a *hutši*, To. *fusi*, Sam. *futi*, Rot. *fúti*.
- PEO *\*tapi* 'sweep' (PAN *\*ta(m)pi* 'winnow'). Fij. *tavi/a*, To., Sam. *tafi*, Mao. *tahi*. Rot. *tōfi*.
- PEO *\*ʔipi* 'Tahitian chestnut'. Fij. *ivi*, To. *ʔifi*, Sam. *ifi*, Mao. *iwi* 'stone of fruit', Rot. *ʔifi*.
- PEO *\*(n)sapu* 'falling water'. Fij. *savu*, To. *hafu*, Sam. *afu*, Rot. *sōfu*.
- PEO *\*paka-* 'causative prefix'. Fij. *vaka-*, To. *faka-*, Sam. *faʔa-*, Mao. *whaka-*, Rot. *fáka-*.
- PEO *\*paʔa* 'split, rend' (PAN *\*paqat* 'chisel'). Fij. *va/sia* 'to cut yams for planting', To. *maffaʔa* 'cracked open', Sam. *faa/si*, Mao. *waa/hi*, Rot. *faʔa*.
- PEO *\*paʔu* 'to tie'. Fij. *vau/ca*, To. *faʔu*, Sam. *fau*, Mao. *wha/whau*, Rot. *fʃʔu*.
- PEO *\*(m)paʔa* 'stem of ensiform leaves' (PAN *\*paqa*). Fij. *baa*, To. *faʔa*, Sam. *faa*, Mao. *whaa*, Rot. *fáʔa* 'jelly-like food prepared from taro leaves'.

### 4.3 PEO *\*mp*

PEO *\*mp* (PAN *\*mp*, *mb*) is reflected both directly and indirectly as Rotuman *p*.

(a) Rotuman *p* directly reflects PEO *\*mp*:

- PEO *\*mputo* (PAN *\*pusej*) 'navel'. Fij. (dial.) *buto*, To., Mao. *pito*, Sam. *pitopito* 'anus', Rot. *púfa*.
- PEO *\*tampu* 'ritual restriction, protected by supernatural sanction'. Fij. *tabu*, To., Sam., Mao. *tapu*, Rot. *fapú/i* 'marked by taboo sign'.
- PEO *\*tumpu* (PAN *\*tu(m)buh*) 'grow'. Fij. *tubu*, To., Sam., Mao. *tupu*. Rot. *fúpu*.

(b) Rotuman *p* indirectly reflects PEO *\*mp*:

- PEO *\*mpule* 'cowry' (PAN *\*bulay* 'white'). Fij. *buli*. To., Sam. *pule*, Mao. *pure* 'bivalve mollusc', Rot. *púre*.
- PEO *\*mpoko* 'blot out, extinguish'. Fij. *boko*, Mao. *poko*. Rot. *pokó/i* 'crush'.
- PEO *\*mpalolo* 'balolo worm'. Fij. *balolo*, To., Sam. *palolo*, Rot. *paróro*.

PEO \**mpola* ‘coconut thatch’. Fij. *bola*, To., Sam. *pola*, Mao. *pola* ‘mat’, Rot. *póla*.

(c) In the following cases there is no indication as to whether the reflection is direct or indirect:

PEO \**mpulu* (PAN \**pulut*) ‘gum, sap’. Fij. *bulu/bulut/i* ‘sticky’, To., Sam. *pulu*, Mao. *puru* ‘pulp’, Rot. *púlu*.

PEO \**mpoŋi* (PAN \**beŋi*) ‘night’. Fij. *bogi*, To., Sam., Mao. *poo*, Rot. *pógi*.

PEO \**mpou* ‘post’. Fij. *bou*, To., Sam., Mao. *pou*, Rot. *póu*.

PEO \**mpe(e)mpe(e)* ‘butterfly’. Fij. *beebee*, To., Sam. *pepe*, Mao. *pee/pepe*, Rot. *pépe*.

PEO \**mpaa* ‘fence, barrier’. Fij. *baa*, To., Sam., Mao. *paa*, Rot. *pá*.

#### 4.4 PEO \**t*, \**nt*-

PEO \**t*, \**nt*- (PAN \**t*, *T*, *nt*-, *nT*-) are reflected (a) directly by Rotuman *f*, (b) indirectly by Rotuman *t*, and (c) indeterminantly by Rotuman *j*.

(a) Rotuman *f* directly reflects PEO \**t*, \**nt*-:

PEO \**tolu* (PAN \**telu*) ‘three’. Fij., To., Sam. *tolu*, Mao. *toru*, Rot. *fólu*.

PEO \**tu<sup>2</sup>u* (PAN \**tuquD*) ‘stand’. Fij. *tuu*, To. *tu<sup>2</sup>u*, Sam., Mao. *tuu*, Rot. *fú*.

PEO \**tunu* (PAN \**tunu*) ‘cook’. Fij., To., Sam., Mao. *tunu*, Rot. *fúnu*.

PEO \**tumpu* (PAN \**tu(m)buh*) ‘grow’. Fij. *tubu*, To., Sam., Mao. *tupu*, Rot. *fúpu*.

PEO \**pitu<sup>2</sup>u* (PAN \**bituqen*) ‘star’. To. *fetu<sup>2</sup>u*, Mao. *whetuu*, Sam. *fetuu*, Rot. *héfu*.

PEO \**batu* (PAN \**batu*) ‘stone’. Fij. *vatu*, To., Sam. *fatu*, Mao. *koo/whatu*, Rot. *hófu*.

PEO \**ntuna* (PAN \**(t)u(n)a*) ‘eel’. Fij. *duna*, To., Sam., Mao. *tuna*, Rot. *fúna*.

PEO \*(*n*)*taliga* (PAN \**taliga*) ‘ear’. Fij. *daliga*, Sa’a *ēlige*, Ngg. *talinga* ‘earwax’, Mao. *taringa*, To. *telinga*, Sam. *taliga*, Rot. *falíga*.

PEO \*(*n*)*taku* ‘back’. Fij. *daku*-, Mao. *taku* ‘to skirt’, Rot. *fǝ<sup>2</sup>u*.

PEO \**toka* ‘to land, come ashore’. Fij. *toka* ‘to squat’, To. *toka*, Sam. *to<sup>2</sup>a*, Mao. *to/toka* ‘solidify, set’, Rot. *fǝ<sup>2</sup>a*.

PEO \**kete* ‘belly, basket’. Fij., To., Mao. *kete*, Sam. *ǝéfe*.

PEO \**koti* (PAN \**ke(t)ip*) ‘clip, cut’. Fij. *kotiv/a*, To. *kosi*, Sam. *ǝoti*, Mao. *koti*, Rot. *ǝófi*.

PEO \**kutu* (PAN \**kutu*) ‘louse’. Fij., To., Mao. *kutu*, Sam. *ǝutu*, Rot. *ǝúfu*.

PEO \**kumete* ‘bowl, dish’. Fij., To., Mao. *kumete*, Sam. *ǝumete*, Rot. *ǝuméfe*.

- PEO *\*kaRati* (PAN *\*kaRat*) 'bite'. Mota *gara*, Sa'a *ʔala*, Fij., Mao. *kati*, Sam. *ʔati*, Rot. *ʔʒfi*.
- PEO *\*kato* (PAN *\*kaTug*) 'basket'. Fij., To. *kato*, Sam. *ʔato*, Rot. *ʔáfo*.
- PEO *\*(n)тали* (PAN *\*tali*) 'cord, rope'. Fij. *dali*, Sa'a *ēli*, Mao. *tari* 'a four-plait cord', Rot. *fʒli* 'a belt'.
- PEO *\*(n)tuli* (PAN *\*tuli*) 'deaf'. Fij. *dule* 'earwax', Mota *tul* 'earwax', To., Sam. *tuli*, Mao. *turi*, Rot. *fúli*.
- PEO *\*taʔo* 'cook in earth oven'. To. *taʔo*, Mao. *tao*, Rot. *fáo*.
- PEO *\*taʔu* (PAN *\*taqun*) 'year, season'. To. *taʔu*, Sam., Mao. *tau*, Rot. *fáu*.
- PEO *\*tuʔa* 'back, beyond'. To. *tuʔa* 'outside', Mao. *tua*, Rot. *fúa* 'edge, corner, ridge, midrib of leaf'.
- PEO *\*tiko* 'defecate'. Fij. *tiko* 'to squat down', To. *siko*, Sam. *tiʔo*, Mao. *tiko*, Rot. *fíʔo*.
- PEO *\*tuku* 'place, let go, let down'. Fij., To., Mao. *tuku*, Sam. *tuʔu*, Rot. *fúʔu*.
- PEO *\*taʔaki* 'to draw water'. Fij. *taki*, To. *taʔaki* 'dig up, extract', Mao. *taaki* 'take out, as an eel-trap from water', Rot. *fʒʔi*.
- PEO *\*tanum* (PAN *\*tanem*) 'bury'. To. *tonum/ia*, Mao. *tanum/ia*, Rot. *fʒmu*.
- PEO *\*tan(a, o)* (PAN *\*tanaq*) 'earth, soil'. Sa'a *ano*, Rot. *fanfána*.
- (b) Rotuman *t* indirectly reflects PEO *\*t*, *\*nt*:-
- PEO *\*ntanipa* 'fish sp.'. Fij. *daniva*, Sam. *tanifa*, Mao. *taniwha* 'mythical water monster', Rot. *tanífa*.
- PEO *\*tapi* 'sweep'. Fij. *tavi*, To., Sam. *tafi*, Mao. *tahi*, Rot. *tófi*.
- PEO *\*taanoa* 'bowl for kava'. Fij. *tanoa*, To. *taanoʔa*, Sam. *taanoa*, Rot. *tanóa*.
- PEO *\*taki* (PAN *\*(t)aki*) 'to lead'. Fij. *taki* 'to creep up to ambush', Sam. *taʔi*, Rot. *tóki*.
- PEO *\*toko* (PAN *\*teken*) 'staff, pole'. Fij., To., Mao. *tokotoko*, Sam. *toʔotoʔo*, Rot. *tóko*.
- PEO *\*toʔa* 'brave'. Fij., Mota *toa* 'fowl', To. *toʔa*, Sam., Mao. *toa*, Rot. *tóʔa*.
- PEO *\*tuki* (PAN *\*TukTuk*) 'hammer, pound'. Fij., To., Mao. *tuki*, Sam. *tuʔi*, Rot. *túki*.
- PEO *\*ntalo* (PAN *\*tales*) '*Colocasia* sp.'. Fij. *dalo*, To., Sam. *talo*, Mao. *taro*, Rot. *tar/kúra*, *tar/téa* 'taro varieties'.
- PEO *\*tawake* 'tropic bird'. Fij. *tawake* 'banner', To. *tavake*, Sam. *tavaʔe*, Mao. *tawake*, Rot. *tæwæke*.
- PEO *\*tuʔa* 'to lean on'. Bug. *tua*, To. *tuʔa/naki* 'to rely on', Rot. *tuʔa/naki*.
- PEO *\*taja* (PAN *\*tajan* 'hand') 'bag'. Fij. *taga*, To. *tanga/i*, Sam. *taga*, Rot. *tága*.

- PPn \**takai* ‘wind, bind’. To., Mao. *takai*, Sam. *taʔai*, Rot. *təkái*.
- PPn \**take* ‘base, butt’. To. *take* ‘pointed end of a coconut’, Mao. *take*, Sam. *taʔe*. Rot. *táke* ‘the piece chipped off the end of a drinking nut’.
- PPn \**tamaki* To. *tamaki* ‘very unpleasant’, Mao. ‘ominous’, Sam. *tamaʔi* ‘bad news’, Rot. *tamóki* ‘seriously ill’.
- PPn \**tanaki* ‘gather’. To. *tanaki*, Sam. *tanaʔi* ‘overload’, Rot. *tanóki*.
- PPn \**tapakau* ‘coconut leaf mat’. To. *tapakau*, Sam. *tapaʔau*, Rot. *tapakáu*.
- PPn \**tataʔo* ‘to put under a weight’. To. *tataʔo*, Sam. *tatao*, Mao. *tao* ‘weigh down’, Rot. *tataʔo* ‘to conceal under something’.
- PPn \**fatfata* ‘chest, upper part of body’. To., Sam. *fatafata*, Rot. *fatafáta*.

(c) Rotuman *j* indeterminantly reflects PEO \**t*, \**nt*- (see §4.1.):

#### 4.5 PEO \*-nt-

PEO \*-nt- (PAn \*-nt-, -nT-) is reflected (a) directly and (b) indirectly by Rotuman *t*.

(a) Rotuman *t* directly reflects PEO \*-nt-:

PEO \**pinti* (PAn \**piTik*) ‘jump, spring’. Fij. *vidi*, Ngg. *vindi*, To. *fisi*, Mao. *whiti*, Rot. *híti* ‘start with surprise’.

(b) Rotuman *t* indirectly reflects PEO \*-nt-:

PEO \**punti* (PAn \**pun(t)i*) ‘banana’. Fij. *vudi*, Sa’a *huti*, To. *fusi*, Sam. *futi*, Rot. *fíti*.

PEO \**pinti* (PAn \**piTik*) ‘jump, spring’. Fij. *vidi*, Ngg. *vindi*, To. *fisi*, Mao. *whiti*, Rot. *fíti*.

(c) In the following it is not possible to say whether the Rotuman reflection is direct or indirect:

PEO \**muntu* (PAn \**buntu* ‘block, obstruct’) ‘severed, cut short’. Fij. *mudu*, To., Sam., Mao. *mutu*, Rot. *mútu*.

#### 4.6 PEO \*d

PEO \**d* (PAn \**d*, *D*) is reflected (a) directly and (b) indirectly by Rotuman *r*, and (c) indirectly by Rotuman  $\emptyset$ .

(a) Rotuman *r* directly reflects PEO \**d*:

PEO *\*tido* (PAN *\*ti(n)daw*) ‘look at, especially in mirror’. Fij. *tiro*, Ngg. *tiro* ‘to gaze’, To. *sio*, Mao. *tiro*, Rot. *fíro* ‘to give variety by adding another colour’.

PEO *\*daʔa* (PAN *\*(dD)aqan*) ‘branch’. Mao. *raa/kau* ‘tree’, To. *ʔa/kau* ‘tree’, Rot. *rá*.

(b) Rotuman *r* indirectly reflects PEO *\*d*:

PEO *\*tido* (PAN *\*ti(n)daw*) ‘to look, especially in mirror’. Fij. *tiro*, Ngg. *tiro* ‘to gaze’, To. *sio*, Mao. *tiro*, Rot. *tíro*.

(c) Rotuman  $\emptyset$  indirectly reflects PEO *\*d*:

PEO *\*dompe(e)* ‘to overhang, be suspended’. Fij. *robee*, To. *ope*, Rot. *ópe*.

PEO *\*didi* (PAN *\*dindij*) ‘house, shelter’. Fij. *riri*, Rot. *rí*.

PEO *\*dudu* (PAN *\*DugDug*) ‘shake’. Ngg. *ruru* ‘to collect fruit’, To. *lulululu*, Sam. *luuluu*, Mao. *ruu*, Rot. *rú*.

(d) In the following forms there is no indication as to whether Rotuman *r* is reflecting PEO *\*d* directly or indirectly:

PEO *\*dada* (PAN *\*(dardar)*) ‘to heat, be hot’. Fij. *rara*, To. *aa*, Mao. *rara*, Rot. *rára*.

PEO *\*dama* (PAN *\*damaR*) ‘torch, light’. Fij. *ra/rama*, To. *ama*, Sam. *lama*, Mao. *rana*, Rot. *ráma*.

PEO *\*(do)ʔo* (PAN *\*degar*) ‘hear’. Fij. *rogo*, Ngg. *rongo*, Sam. *logo*, Mao. *rongo*, Rot. *rógo* ‘be notorious’.

PEO *\*dua* (PAN *\*Dewha*) ‘two’. Fij., Ngg. *rua*, To. *ua*, Sam. *lua*, Mao. *rua*, Rot. *rúa*.

PEO *\*maʔudi* (PAN *\*quDip*) ‘life, live’. Fij. *mauri/mu* ‘interjection of blessing’, Sa’a *mëuri*, Ngg. *mauri*, To. *moʔui*, Mao. *mauri* ‘soul’, Rot. *máuri*.

PEO *\*deja* ‘turmeric’. Fij. *re/rega*, To. *enga*, Sam. *lega*, Mao. *renga* ‘yellow’, Rot. *réga*.

PEO *\*dupe* ‘dove’. Fij. *ruve*, To. *lupe*, Sam. *lupe*, Mao. *rupe*, Rot. *rúpe-váo*.

PEO *\*ʔuda* (PAN *\*quDaŋ*) ‘lobster, crayfish’. Fij. *ura*, Ngg. *ura*, To. *ʔuo*, Mao. *koo/ura*, Rot. *úra*.

#### 4.7 PEO *\*nd*

PEO *\*nd* (PAN *\*nd*, *nD*) is reflected (a) directly by Rotuman *t*, (b) indirectly by Rotuman *r*.

(a) Rotuman *t* directly reflects PEO *\*nd*:

PEO *\*ndanu* (PAN *\*(dD)anum*) ‘freshwater’. Fij. *dranu*, To. *lanu* ‘bathe’, Mao. *ranu* ‘to mix with liquid’, Rot. *tónu*.

PEO *\*panda* (PAN *\*panDan*) ‘pandanus’. Fij. *vadra*, To. *fala* ‘pandanus mat’, Sam. *fala*, Mao. *wharawhara* ‘*Astelia* sp.’, Rot. *háta*.

PEO *\*ndami* ‘to chew’. Fij. *drami* ‘lick’, Ngg. *ndami*, To., Sam. *lami*, Mao. *rami* ‘to squeeze’, Rot. *tómi*.

PEO *\*ma(n)da* ‘fermented, soft’. Fij. *madra/i*, Ngg. *manda* ‘ripe’, To. *maa*, Sam. *mala*, Mao. *mara*, Rot. *máta* ‘wet’.

(b) Rotuman *r* indirectly reflects PEO *\*nd*:

PEO *\*ndeke* ‘hollow, concavity’. Fij. *dreke*, To. *leke* ‘small room or recess’, Rot. *réke* ‘pocket of seine net’.

(c) In the following it is not clear whether the Rotuman forms are direct or indirect reflections of PEO *\*nd*:

PEO *\*ndau* (PAN *\*Dahun*) ‘leaf’. Fij. *drau*, To. *lau*, Sam. *lau*, Mao. *rau*, Rot. *ráu*.

PEO *\*(n)dano* (PAN *\*Danaw*) ‘lake, swamp’. Fij. *drano*, To. *ano*, Sam. *lano*, Rot. *ráno*.

#### 4.8 PEO *\*k*

PEO *\*k* (PAN *\*k*, *g*) is reflected (a) directly as Rotuman *ʔ* and (b) indirectly as Rotuman *k*.

(a) Rotuman *ʔ* directly reflects PEO *\*k*:

PEO *\*kumete* ‘bowl, dish’. Fij., To., Mao. *kumete*, Sam. *ʔumete*, Rot. *ʔuméfe*.

PEO *\*poki* ‘return’. Fij. *vuki*, To. *foki*, Sam. *foʔi*, Mao. *hoki*, Rot. *hóʔi*.

PPn *\*feke* ‘octopus’. To. *feke*, Sam. *feʔe*, Mao. *wheke*, Rot. *heʔe*.

PEO *\*loku* (PAN *\*le(ŋ)kuŋ*) ‘bend, fold’. Fij. *lok/i*, To. *loku*, Sam. *loʔu*, Mao. *roku*, Rot. *lóʔu*.

PEO *\*kati* ‘bite’. Fij. *kati*, Sam. *ʔati*, Mao. *kati*, Rot. *ʔʔfi*.

PEO *\*kato* (PAN *\*kanTuy*) ‘basket’. Fij., To. *kato*, Sam. *ʔato*, Rot. *ʔáfo*.

PEO *\*kananse* ‘mullet’. Fij. *kanace*, To. *kanahe*, Sam. *ʔanae*, Mao. *kanae*, Rot. *ʔanósi*.

PEO *\*kete* ‘basket’. Fij. *kete* ‘stomach’, To., Mao. *kete*, Sam. *ʔete*, Rot. *ʔéfe* ‘stomach’.

PEO *\*koti* (PAN *\*ke(t)ip*) ‘cut, clip’. Fij. *kotiv/a*, To. *kosi*, Sam. *ʔoti*, Mao. *koti*, Rot. *ʔófi*.

- PEO \**kutu* (PAN \**kutu*) 'louse'. Fij., To., Mao. *kutu*, Sam. *ʔutu*, Rot. *ʔúfu*.
- PEO \**kuli* (PAN \**kulit*) 'skin'. Fij. *kuli*, To. *kili*, Sam. *ʔili*, Mao. *kiri*, Rot. *ʔúli*.
- PEO \**puke* (PAN \**buka*) 'uncover'. To. *fu*, Sam. *fuʔe*, Mao. *huke*, Rot. *húʔe*.
- PEO \**ika* (PAN \**ikan*) 'fish'. Fij., To., Mao. *ika*, Sam. *iʔa*, Rot. *íʔa*.
- PEO \**tiko* 'squat, defecate'. Fij. *tiko*, To. *siko*, Sam. *tiʔo*, Mao. *tiko*, Rot. *fiʔo*.
- PEO \*(n)*taku* 'back'. Fij. *daku*, Mao. *taku* 'to skirt', Rot. *fʔu*.
- PEO \**kari* (PAN \**gariz*) 'to scratch'. Fij. *kari*, Sam. *ʔaʔali*, Mao. *kari* 'dig', Rot. *ʔʔi* 'root up'.
- PEO \**kami* (PAN \**kami*) 'first person exclusive pronoun'. Fij. *kema-* (dial.), Kwara'ae *kami*, PPn \**ma(a)*- Rot. *ʔʔmi*.
- PEO \**kasi* (PAN \**kaskas* 'to scrape') 'bivalve shellfish'. To. *ka/kahi*, Sam. *ʔaʔasi*, Fut. *kasi* 'mussel sp.', Mao. *kaa/kahi* 'freshwater mussel', Rot. *ʔʔsi* 'cockle'.
- PEO \**kiRa* 'axe'. Fij. *kia* 'club', Rot. *ʔía*.
- PEO \**kinta* (PAN \**kita*) 'first person inclusive pronoun'. Fij. *keda*, PPn \**kita*, Rot. *ʔíta*.
- PEO \**kuku* (PAN \**kuku*) 'claw, nail'. Fij. *kuku*, Sa'a *ʔuʔu* 'toe', PPn \**maikuku*, Rot. *ʔúʔu* 'hand'.
- PPn \**kulu* (PAN \**kulu(r)*) 'breadfruit'. Rot. *ʔúlu*.
- PEO \**kai* (? PAN \**kahiw*) 'tree, wood'. Fij. *kai* (dial.), Ngg. *gai*, Mao. *kai/kawaka*, *kai/koomako* 'tree spp.', Rot. *ʔʔi*.
- PEO \**ka*, *ka/en*, *ka/i* (PAN \**ka*) 'food'. Fij. *kana*, PPn \**kai*, Rot. *ʔá*.
- PEO \**uku* 'wipe, wash'. Fij. *uku* 'to adorn', To., Mao. *uku*, Sam. *uʔu*, Rot. *íʔu*.
- PEO \**toka* 'come ashore, land'. Fij. *toka* 'to squat', To. *toka*, Sam. *toʔa*, Mao. *to/toka* 'solidify', Rot. *fʔa*.
- PEO \**aku* 'scrape out with hands'. Fij. *yaku*, Sam. *aʔu*, Mao. *aku*, Rot. *áʔu*.
- PEO \**tuku* 'to place, put down'. Fij., To., Mao. *tuku*, Sam. *tuʔu*, Rot. *fúʔu*.
- PPn \**faki* 'pluck, pull out'. To. *faki*, Sam. *faʔi*, Mao. *wha/whaki*, Rot. *hʔi*.
- PEO \**taʔaki* 'draw water'. Fij. *taki*, To. *taʔaki* 'dig up, extract', Mao. *taaki* 'take out, as eel-trap from water', Rot. *fʔi*.
- PEO \**nsoka* 'stab, pierce, husk coconuts'. Fij. *coka*, To. *hoka*, Sam. *oʔa*, Mao. *oka*, Rot. *sóʔa*.
- PEO \**ko-e* (PAN \**kaw*) 'thou'. Fij. *ko*, PPn \**koe*, Rot. *ʔæéa*.

(b) Rotuman *k* indirectly reflects PEO *\*k*:

PEO *\*toko* (PAN *\*teken*) 'staff, pole'. Fij., To. *toko*. Sam. *toʔo*, Mao. *toko/toko*, Rot. *tóko*.

PEO *\*toka* 'come ashore, land'. Fij. *toka* 'squat', Sam. *toʔa*, To. *toka*, Mao. *to/toka* 'congeal', Rot. *tóka* 'settle down, subside'.

PPn *\*katea* 'hull of boat'. To., Mao. *katea*, Rot. *katéa*.

PEO *\*tawake* 'tropic bird'. Fij. *tawake* 'banner', To. *tavake*, Sam. *tavaʔe*, Mao. *tawake*, Rot. *tævæke*.

PEO *\*tuki* (PAN *\*TukTuk*) 'pound, hammer'. Fij., To., Mao. *tuki*, Sam. *tuʔi*, Rot. *tuki*.

PEO *\*tuku* 'let go, place, put down'. Fij., To., Mao. *tuku*, Sam. *tuʔu*, Rot. *túku* 'go down, become lower'.

PEO *\*-ʔaki* 'grammatical formative'. Fij. *-aki*, To. *-ʔaki*, Sam. *-aʔi*, Rot. *-ʔóki*.

PPn *\*kilikili* 'gravel'. To. *kilikili*, Mao. *kirikiri*, Rot. *kirkíri*.

PPn *\*kiato* (PAN *\*katiR*) 'outrigger boom'. To., Mao. *kiato*, Sam. *ʔiato*, Rot. *kiáta*.

PPn *\*kefukefu* 'brown, reddish'. To., Fut. *kefukefu*, Mao. *uru/kehu* 'blonde, of hair', Rot. *kefkéfu* 'dust, powder'.

(c) In the following it cannot be stated definitely that the forms are directly or indirectly inherited since although *\*k* is reconstructed, it is possible that Rotuman *k* directly reflects *\*ɣk*:

PEO *\*ko(dr)o* 'enclosed fortress'. Fij. *koro*, To. *kolo*, Sam. *ʔolo*, Mao. *koro* 'noose', Rot. *kóro*.

PPn *\*keu* 'move, remove'. To. *keuʔi* 'rebuff', Sam. *ʔeu*, Mao. *keu*, Rot. *kéu* 'push'.

PPn *\*kava* 'kava'. To. *kava*, Sam. *ʔava*, Mao. *kawa* 'bitter', Rot. *káva*.

PEO *\*kaso* (PAN *\*kasaw*) 'rafter'. Fij. *kaso*, Mao. *kaho*, Rot. *kása* 'small roof timbers resting on purlins'.

PEO *\*kawe* 'to fasten on with straps'. Fij. *kawe/ki* 'to bind a sail', To. *kave/i* 'handle, strap', Fut., Uv. *kare/ga* 'burden', Mao. *kawe* 'to carry by straps', Rot. *kæve*.

PPn *\*kia* 'neck, throat'. To., Fut., Uv., Mao. *kia*, Rot. *kía*.

PEO *\*kiekie* 'pandanus'. Fij. *kiekie*, To. *kie*, Mao. *kiekie* '*Freycinetia banksii*', Rot. *kiakía*.

PEO *\*ko* 'grammatical particle'. Fij., To., Mao. *ko*, Rot. *kó*.

PEO *\*kumi* (PAN *\*kumis*) 'beard'. Fij. *kumi*, Rot. *kumkúmi*.

PPn *\*kamakama* 'crab sp.'. To., Uv., Fut. *kamakama*, Sam. *ʔamaʔama*, Rot. *kamkáma*.

PEO *\*kawakawa* 'fish sp.'. Fij. *kawakawa* 'yellow-finned groper', To. *kavakava* 'scavenger fish', Fut. *kavakava*, Rot. *kavkáva*.

PPn \**kanapu* 'gannet'. Mao. *kanapu*, Rot. *kaŋpu*.

PEO \**kimo* 'wink, blink'. Fij. *kimo/mo*, To. *kemo*, Mao. *kimo*, Rot. *kémo*.

#### 4.9 PEO \**ŋk*

PEO \**ŋk* (PAN \**ŋk*, *ŋg*) is reflected (a) directly and (b) indirectly by Rotuman *k*.

(a) Rotuman *k* directly reflects PEO \**ŋk*.<sup>13</sup>

PEO \**ŋkala* 'male genitals'. Fij. *qala*, Lau. *qala* 'beget', Rot. *kála*.

PEO \**ŋkele* 'dirt, dirty, black'. Fij. *qe*le 'earth', To. *kele*, Sam. *ʔele/ʔele*, Mao. *kerekere* 'of very dark night', Rot. *kéle*.

PEO \**leŋkileŋki* 'puzzlenut tree'. Fij. *leqileqi*, To. *lekileki*, Rot. *lekiléki*.

(b) Rotuman *k* indirectly reflects PEO \**ŋk*:

PEO \**tiŋka* 'dart'. Fij. *tiqa*, To. *sika*, Sam. *tiʔa*, Mao. *teka*, Rot. *tíka*.

PEO \**loŋki* 'inner room'. Fij. *loqi*, To. *loki*, Sam. *loʔi*, Rot. *ráki*.

(c) In the following it is not clear whether the reflection is direct or indirect:

PEO \**saŋka* 'vigorous action'. Fij. *saka* 'collide', Fut. *saka* 'dance with hand and foot actions', To. *haka* 'hand action in singing', Mao. *haka* 'a vigorous dance', Rot. *sáka* 'to display vigour'.

#### 4.10 PEO \**l*

PEO \**l* (PAN \**l*) is reflected (a) directly as Rotuman *l*, (b) indirectly as Rotuman *r*, and (c) perhaps indirectly as Rotuman *l*.

(a) Rotuman *l* directly reflects PEO *l*:

PEO \**pili* (PAN \**piliq*) 'select, choose'. Fij. *vili* 'pick up scattered things', To., Sam. *fili*, Mao. *whiri/whiri*, Rot. *híli*.

PEO \*(*m*)*pula* (PAN \**bulan*) 'moon'. Fij. *vula*, Sam. *pula* 'to shine', Mao. *purapura* 'twinkle', Rot. *húla*.

PEO \*(*n*)*тали* (PAN \**тали*) 'cord, rope'. Fij. *dali*, Rot. *fáli* 'belt'.

<sup>13</sup> If PEO \**l* can in fact be reflected indirectly as Rotuman *l* (see §4.10 (c)) the history of the three Rotuman forms which follow must be regarded as indeterminate.

PEO *\*(n)taliga* (PAN *\*taliga*) ‘ear’. Fij. *daliga*, To. *telinga*, Sam. *taliga*, Mao. *taringa*, Rot. *falíga*.

PEO *\*tolu* (PAN *\*telu*) ‘three’. Fij., To., Sam. *tolu*, Mao. *toru*, Rot. *fólu*.

PEO *\*(n)tul(ie)* (PAN *\*tuli*) ‘deaf’. Fij. *dule* ‘earwax’, To., Sam. *tuli*, Mao. *turi*, Rot. *fúli*.

PEO *\*pola* ‘spread out’. Fij. *vola* ‘to make marks, write’, To., Sam. *fola*, Mao. *hora*, Rot. *hóla*.

PEO *\*pale* (PAN *\*balay*) ‘house’. Fij. *vale*, To., Sam. *fale*, Mao. *whare*, Rot. *hále* ‘section of house thatch’.

PEO *\*lako* (PAN *\*laku*) ‘to go’. Fij. *lako*, Motu. *lao*, Rot. *láʔo*.

PEO *\*ʔuli* ‘to steer’. Fij. *uli*, To. *ʔuli*, Rot. *úli*.

(b) Rotuman *r* indirectly reflects PEO *\*l*:

PEO *\*pulu* (PAN *\*bulu*) ‘body-hair, fur, feathers’. Fij. *vulu/a*, Sa’a *hulu*, To. *fulu*. Mao. *huru/huru*, Rot. *fúru* ‘pile. nap’.

PPn *\*fuli* ‘to turn’. Rot. *fúri*.

PEO *\*kolo* (PAN *\*keleŋ*) ‘desire’. To. *kolo*, Mao. *koro*, Rot. *kóro*.

PEO *\*kuli* (PAN *\*kulit*) ‘skin’. Fij. *kuli*, To. *kili*, Sam. *ʔili*, Mao. *kiri*, Rot. *kíri/á* ‘leprosy’.

PEO *\*(n)talo* (PAN *\*tales*) ‘taro’. Fij. *dalo*, To., Sam. *talo*, Mao. *taro*, Rot. *tár/kúra* ‘taro variety’.

PEO *\*limu* (PAN *\*lumut*) ‘seaweed, moss’. Fij. *lumi*, To., Sam. *limu*, Mao. *rimu*, Rot. *rímu* ‘lichen sp.’.

PEO *\*sele* ‘knife, cut’. Fij. *sele*, To. *sele*, Sam. *sele*, Rot. *sére*.

PEO *\*(n)sala* (PAN *\*salaq*) ‘to err’. Fij. *cala*, To. *hala*, Sam. *sala*, Mao. *hara*, Rot. *sára*.

PEO *\*(m)pela* ‘dirty’. Fij. *velavela* ‘nauseous’, Fut. *pela/pela*, To. *pefa* ‘pus, matter’, Mao. *pera* ‘putrefying flesh’, Rot. *pear/péra*.

(c) The following forms suggest that Rotuman *l* sometimes reflects PEO *\*l* indirectly:

PEO *\*(n)tali* (PAN *\*tali*) ‘cord, rope’. Fij. *tali* ‘to plait’, Mao. *tari* ‘a kind of plait’, Rot. *tóli* ‘to plait’.

PPn *\*kalae* ‘seabird sp.’. Rot. *kalæe* ‘bird with long legs and red beak’.

(d) If the suggestion in (c) above that Rotuman *l* can indirectly reflect PEO *l* is correct, the following forms must be regarded as indeterminate:

PEO *\*(n)sala* (PAN *\*zalan*) ‘road’. Fij. *sola*, To. *hala*, Sam. *ala*, Mao. *ara*, Rot. *sála*.

- PEO \**sulu* (PAN \**suluq*) 'torch'. To. *huhulu*, Sam. *sulu*, Mao. *huru* 'to glow', Rot. *súlu*.
- PEO \*(*m*)*pulu* (PAN \**pulut*) 'sap, gum'. Fij. *bulu/bulu/li* 'sticky'. To., Sam. *pulu*, Rot. *pul/púlu* 'sticky'.
- PEO \**lima* (PAN \**lima*) 'five'. Fij., To., Sam. *lima*, Mao. *rima*, Rot. *líma*.
- PEO \**lagi* (PAN \**lagit*) 'sky'. Fij. *lagi*, To. *langi*, Sam. *lagi*, Mao. *rangi*, Rot. *lôgi*.
- PEO \**limu* (PAN \**lumut*) 'moss. seaweed'. Fij. *lumi*, To., Sam. *limu*, Mao. *rimu*, Rot. *lúmu*.
- PEO \**lajo* (PAN \**lajaw*) 'fly (insect)'. Fij. *lago*, To. *lango*, Mao. *rango*, Rot. *lâgo*.
- PEO \**laya* (PAN \**layaR*) 'sail'. Fij. *laca*, To., Fut.. Sam. *laa*, Mao. *raa*, Rot. *lâe*.
- PEO \**lolo* 'coconut cream'. Fij., To. *lolo*, Mao. *roro* 'bone marrow', Rot. *lôlo*.

#### 4.11 PEO \**s*, *ns*

PEO \**s*, *ns* (PAN \**s*, *z*, *Z*, *c*, *j*, *ns*, *nz*, *nZ*, *nc*, *ñj*) are reflected (a) directly, and (b) indirectly as Rotuman *s*, (c) indirectly as Rotuman *h*, (d) indirectly as Rotuman  $\emptyset$ , and (e) indeterminantly as Rotuman *j*.

(a) Rotuman *s* directly reflects PEO \**s*, *ns*:

- PEO \**ponse* (PAN \**besay*) 'paddle'. Fij. *voce*, To. *fohe*, Sa'a *hote*, Sam. *foe*, Mao. *hoe*, Rot. *hóse*.
- PEO \**nsoka* 'stab, pierce'. Fij. *coka*, To. *hoka*, Sam. *oʔa*, Mao. *oka*, Rot. *sóʔa* 'dig, husk nuts'.
- PEO \**nsakaRu* 'reef'. Fij. *cakau*, Bug. *hagalu*, To. *hakau*, Sam. *aʔau*, Mao. *aakau* 'shore', Rot. *saʔáu*.
- PEO \**pinsa* (PAN \**pija*) 'how many?'. Fij. *vica*, To. *fiha*, Sam. *fia*, Mao. (*w*)*hia*, Rot. *his/aghúlu* 'how many tens?'.
- PEO \*ʔ*unsa* (PAN \**quzan*) 'rain'. Fij. *uca*, To. ʔ*uha*, Sam., Mao. *ua*, Rot. *úsa*.
- PEO \**sika* 'net needle'. Fij. *sika ni lawa*, To. *hika*, Sam. *siʔe*, Rot. *síʔa*.
- PPn \**siku* 'tail, end'. To. *hiku*, Sam. *siʔu*, Mao. *hiku* 'tail of fish', Rot. *síʔu* 'hand'.
- PEO \*(*n*)*sake* (PAN \**sakay*) 'upwards'. Fij. *cake*, To. *hake*, Sam. *aʔe*, Mao. *ake*, Rot. *séʔe*.

(b) Rotuman *s* indirectly reflects PEO \**s*, *ns*:

- PEO \*(*n*)*sala* (PAN \**salaq*) 'to err'. Fij. *cala*, To. *hala*, Sam. *sala*, Mao. *hara*, Rot. *sára*.
- PEO \*(*n*)*solo* 'rub, grind'. Fij. *solo*, To. *Olo* (? borrowed), Sam. *olo*, Mao. *oro*, Rot. *sóro*.

PPn \*siki 'to lift'. To., Mao. *hiki*, Sam. *siʔi*, Fut. *siki*, Rot. *sɪki*.

PEO \*sapu 'falling water'. Fij. *savu*, Fut. *safu*, Rot. *sɔʔu*.

PEO \*nsudu 'to enter'. Fij. *curu*, To., Uv. *huu*, Sam. *ulu*, Fut. *ulu*, Mao. *uru*, Rot. *súru*.

PPn \*tusa 'equal to'. To. *tuha*, Sam. *tusa*, Mao. *tuha* 'to split in two', Rot. *túsa*.

PEO \*sele 'knife; to cut'. Fij. *sele*, To. *hele*, Sam. *sele*, Rot. *sére*.

PEO \*mokosoi or \*mosokoi 'Cananga odorata'. Fij. *mokosoi* also *makosoi*, To. *mohokoi*, Sam. *mosoʔoi*, Rot. *moskói*.

PEO \*(n)sake (PAN \*sakay) 'upwards'. Fij. *cake*, To. *hake*, Sam. *saʔe*, Mao. *ake*, Rot. *sæke* 'project, jut out'.

(c) Rotuman *h* indirectly reflects PEO \*s, ns:

PEO \*tosi 'to mark, draw a line'. Fij. *tosi*, To. *tohi*, Sam. *tosi/tosi*, Mao. *tohi* 'cut, separate', Rot. *tóhi*.

PPn \*siki 'to lift'. To., Mao. *hiki*, Sam. *siʔi*, Rot. *híki* 'to exaggerate'.

PEO \*(n)sa(n)sa 'to hunt, drive'. To. *haha* 'thrash', Sam. *sasa* 'a whip', Mao. *aa*, Rot. *hahói*.

PPn \*hano 'to brood over'. To. *hahano*, *hanono*, Mao. *anoano* 'alarm', Rot. *hanóno*.

PPn \*siko 'to juggle'. To. *hiko*, Mao. *hiko* 'snatch', Rot. *húko*.

PEO \*nsaʔat (PAN \*Zaqat) 'bad'. Fij. *caat/a* 'to dislike', To. *haʔa*, Rot. *háʔa*.

(d) Rotuman Ø indirectly reflects PEO \*ns:

PEO \*nsola 'health, well-being'. Fij. *cola* (dial.), Sam. *ola*, Mao., Rot. *óra*.

PEO \*wa(n)se 'to divide'. Fij. *wase*, To. *vahe*, Sam. *vae*, Mao. *wehe*, Rot. *væe*.

(e) In the following it cannot be determined whether the reflection of PEO \*s, ns is direct or indirect:

PEO \*i(n)su (PAN \*ijug) 'nose'. Fij. *ucu*, To. *ihu*, Sam. *isu*, Mao. *ihu*, Rot. *ísu*.

PEO \*monse (PAN \*peZem) 'sleep'. Fij. *moce*, Sa'a *mode* 'inattentive', To. *mohe*, Sam., Fut. *moe*, Rot. *móse*.

PEO \*o(n)so 'provisions'. Fij. *oco*, To. *oho*, Sam. *oso*, Mao. *oo*, Rot. *óso*.

PEO \*nsama 'outrigger'. Fij. *cama*, To. *hama*, Sam., Mao. *ama*, Rot. *sáma*.

PEO \*oso 'tight, jammed'. Fij. *oso*, Mao. *oo* 'enter with difficulty', Rot. *óso*.

PEO \*su(n)su (PAN \*susu) 'breast'. Fij. *sucu*, To. *huhu*, Sam. *susu*, Mao. *uu*, Rot. *súsu*.

- PEO *\*(n)sampo* 'take hold of'. Fij. *cabo* 'to set apart, of food, etc.', To. *hapo*, Sam. *sapo* 'to catch, as of a ball', Mao. *apo* 'to snatch', Rot. *sápo*.
- PEO *\*(sunu)* PPn *\*sunu* (PAN *\*(s)u(n)uR*) 'sing, burn'. To., Mao. *hunu*, Sam. *sunu/sunu* 'burnt land', Rot. *susúnu*.
- PEO *\*ma/ma(n)sa* 'dry'. Fij. *maamaca*, To. *mamaha* 'low tide', Sam. *masa* 'low tide', Rot. *mamása*.
- PEO *\*seu* 'rake, sweep'. Fij. *seu* 'scratch', To. *heu* 'rake', Sam. *seu* 'shave', Mao. *heu* 'shave', Rot. *séu* 'to catch with sweep of hand'.
- PEO *\*asi* 'tree sp.'. Fij. *yasi*, To. *ahi*, Sam. *asi*, Rot. *ási*.
- PEO *\*a(n)sa* (PAN *\*(h)ajan*) 'name'. Fij. *yaca*, Ged. *n/ea*, Rot. *ása*.
- PEO *\*ma-asi* (PAN *\*asin*) 'salt'. Fij. *ma/asima*, To. *hami* 'coconut cream and seawater', *masima* 'salt', Sam. *sami* 'saltwater', *masima* 'salt', Mao. *maaii* 'fermented', Rot. *mósi*.
- PEO *\*(n)soka* 'stab, pierce'. Fij. *coka*, Sam. *soʔa*, To. *hoka*, Rot. *sóka* 'root in ground'.
- PEO *\*sele* 'knife; to cut'. Fij. *sele*, To. *hele*, Sam. *sele*, Rot. *séle* 'to intercept by cutting across at right angles to path of flight'.
- PPn *\*solo* 'descend, go down'. To. *holo*, Sam. *solo*, Mao. *horo-whenua* 'landslide', Rot. *sólo* 'sink down'.
- PEO *\*sae* 'slash, tear open'. Ged. *sae* 'to stab', Sam. *sae*, Mao. *hae*, Rot. *sáe* 'open out, separate'.
- PEO *\*saja* 'fork, crotch'. Fij. *saga*, To. *ha/hanga*, Sam. *saga* 'fin of turtle', Rot. *sága* 'thigh'.
- PEO *\*(n)saja* 'face towards, act'. Fij. *saga* 'strive', To. *hanga* 'to face', Sam. *saga* 'to be opposite', *aga* 'to act, do', Mao. *hanga* 'to build', *anga* 'to face towards', Rot. *sága* 'to do, act quickly'.
- PEO *\*sau* 'chief'. Fij. *sau*, To. *hau*, Rot. *sáu*.
- PEO *\*sea* 'tree sp.'. Fij. *sea/sea*, To. *hea*, Sam. *sea*, Rot. *séa*.
- PEO *\*sese* 'be wrong'. Fij. *sese*, To. *hee*, Sam. *se/see*, Mao. *hee*, Rot. *sése*.
- PEO *\*sisi* 'mollusc sp.'. To. *hihi*, Sam. *sisi*, Rot. *sísi*.
- PEO *\*soa* 'friend'. Fij. *soo-* 'to help', To. *hoa* 'mate, partner', Sam. *soa*, Mao. *hoa*, Rot. *sóa* 'pair'.
- PEO *\*suRu* (PAN *\*ZuR<sub>μ</sub>q*) 'fluid, liquid'. Fij. *suu* 'broth', Sa'a *sulu*, To. *hu/hua*, Sam. *su/a*, Rot. *sú* 'coconut milk'.
- PEO *\*wasa* (PAN *\*sawaj*) 'open sea'. Fij. *wasa/wasa*, To. *vaha*, Sam. *vasa*, Mao. *waa/moana*, Rot. *vása*.

PEO \**nsiwa* (PAN \**siwa*) ‘nine’. Fij. *ciwa*, To. *hiva*, Sam. *iva*, Mao. *iwa*, Rot. *siva*.

PEO \*(*n*)*sala* (PAN \**zalan*) ‘road’. Fij. *sala* (also dial. *cal/evu*), PPn \**hala*, Rot. *sála*.

PPn \**siŋa* ‘to fall’. Rot. *siŋa*.

PPn \**hoŋe* ‘to starve’. To. *honge*, Sam. *soge*, Mao. *onge* ‘be scarce’, Rot. *sóge*.

#### 4.12 PEO \**r*

PEO \**r* (PAN \**r*) is reflected (a) directly by Rotuman Ø, (b) indirectly by Rotuman *r*.

(a) Rotuman Ø directly reflects PEO \**r*:

PEO \**kari* (PAN \**garis*) ‘scratch’. Fij. *kari*, Sam. ?*a*?*ali*, Mao. *kari* ‘to dig’, Rot. ?*ʔi* ‘root up’.

PEO \**kuru* (PAN \**guruq*) ‘rumble, thud’. Fij. *kuru* ‘thunder’, To. *ta/ŋulu*, Mao. *ngu/nguru*. Rot. ?*ú*.

PEO \*?*aro*?*opa* (PAN \**qarep*) ‘love, like’. Fij. *g/arov/a*, To. ?*alo*?*ofa*, Sam. *t/alofa*, Mao. *aroha*, Rot. *áo* ‘to seek’.

PEO \**kara* (PAN \**karaj* ‘coral rock’) ‘kind of rock’. To. *fatu/kala*, Sam. ?*alaa* ‘a stone worn smooth by water’, Mao. *karaa* ‘flint’, Rot. ?*á* ‘sharp, of edge or point’.

PEO \*(*n*)*turu* (PAN \**turus*) ‘post’. Fij. *duru*, Mao. *tuu/turu* ‘kneel’, Rot. *fú* ‘knee’.

PEO \**raku* (? PAN \**garut* ‘to scratch’). Ngg. *ragu* ‘take a handful’, To. *la/laku* ‘eat clumsily, eat with fingers’, Sam. *la?u* ‘clear off, carry away’, Mao. *raku* ‘scratch’, Rot. ?*ʔu* ‘scrape out with the hands’.

(b) Rotuman *r* indirectly reflects PEO \**r*:

PEO \**parau* (PAN \**parau*) ‘vessel, fleet’. To. *folau*, Mao. *wharau* ‘canoe shed’, Sam. *folau*, Rot. *foráu* ‘to voyage’.

(c) As there is no evidence that Rotuman *r* ever reflects PEO \**r* directly, the following are regarded as cases of indirect inheritance:

PEO \**sere* (PAN \**zerat*) ‘cord, sling’. Fij. *sere* ‘untie’, To. *hele* ‘noose’, Sam. *sele*, Mao. *here-taniwha* ‘clove-hitch’, Rot. *sére* ‘clove-hitch’.

PEO \**seru* ‘comb’. Fij. *seru*, To. *helu*, Sam. *seelu*, Mao. *heru*, Rot. *séru*.

#### 4.13 PEO \**R*

PEO \**R* (PAN \**R*<sub>1</sub>, *R*<sub>2</sub>, *R*<sub>3</sub>, *R*<sub>4</sub>) is reflected (a) directly and (b) indirectly by Rotuman Ø.

(a) Rotuman Ø reflects PEO \**R* directly:

PEO \**paRu* (PAN \**baR<sub>4</sub>u(h)*) ‘hibiscus’. Fij. *vau*, Ngg. *valu*, To., Sam. *fau*, Mao. *whau* ‘*Entelea arborescens*’, Rot. *háu*.

PEO \**paRi* (PAN \**paRi(h)*) ‘stingray’. Fij. *vai*, Sa’a *hēli*, Lau. *fali*, Sam. *fai*, Mao. *whai*, Rot. *hái*.

PEO \**ʔaRu* (PAN \**qaR<sub>3</sub>us*) ‘current, stream’. PPn \**ʔau*, Rot. *áu*.

(b) Rotuman Ø reflects PEO \**R* indirectly:

PPn \**toa* (PAN \**teR<sub>2</sub>as*) ‘tree sp.’. To. *toa* ‘casuarina’, Mao. *toa/toa* ‘*Phyllocladus trichomanoides*’, Rot. *tóa* ‘casuarina’.

PEO \**paʔoRu* (PAN \**baqeR<sub>1</sub>u(h)*) ‘new’. Fij. *vou*, Lau *faalu*, Rov. *vaqura/na*, PPn \**foʔou*, Rot. *foʔóu*.

(c) In the following cases it cannot be determined whether the reflection of PEO \**R* is direct or indirect:

PEO \**suRuʔ* (PAN \**ZuR<sub>1</sub>uq*) ‘fluid, liquid’. Fij. *suu* ‘broth’, Sa’a *sulu*, To. *hu/hua*, Sam. *su/a*, Rot. *sú* ‘coconut milk’.

PEO \**meRa* (PAN \**iRaq*) ‘reddish’. Sa’a *mela* ‘to glow’, To., Mao. *mea*, Rot. *maf/méa* ‘red-eyed’.

PEO \**uRa* (PAN \**uR<sub>2</sub>at*) ‘sinew, vein’. Fij. *ua*, Sa’a *ule/u*, Ngg. *ula*, Sam. *uaua*, Mao. *ua*, Rot. *ua/úa*.

#### 4.14 PEO \*ʔ

PEO \*ʔ (PAN \**q*) is reflected (a) directly by Rotuman Ø and (b) indirectly by Rotuman ʔ:

(a) Rotuman Ø directly reflects PEO \*ʔ:

PEO \*ʔ*a(n)ta* (PAN \**qantaD*) ‘shadow’. To. \*ʔ*ata* ‘mark’, Mao., Sam. *ata*, Rot. *áfa*.

PEO \*ʔ*ate* (PAN \**qatay*) ‘liver’. Fij. *yate-*, To. ʔ*ate*, Sam., Mao. *ate*, Rot. *ǎfe*.

PEO \*ʔ*atu* (PAN \**qatur*) ‘line, row’. Fij. *yatu*, To. ʔ*otu*, Sam. *atu*, Rot. *ǎfu*.

PEO \*(ʔ*uta*) PPn \*ʔ*uta* (PAN \**qutan*) ‘inland’. To. ʔ*uta*, Sam., Mao. *uta*, Rot. *úfa*.

PEO \*ʔ*unsa* (PAN \**quzan*) ‘rain’. Fij. *uca*, To. ʔ*uha*, Sam., Mao. *ua*, Rot. *úsa*.

PEO \*(ʔ*unap*) (PAN \**qunap*) ‘(fish) scale’. To. ʔ*uno*, Sam. *unaf/i*, Mao. *unah/i*, Rot. *unéh/i*.

PEO \*ʔ*oti* (PAN \**qen(t)i*) ‘finished, completed’. Fij. *oti*, To. ʔ*osi*, Sam., Mao. *oti*, Rot. *ófi*.

PEO *\*ma-(n)taʔu* (PAN *\*taqu*) ‘accustomed, suited’. Fij. *dau-*, To. *ma-taʔu* ‘right (hand)’, Sam. *tau* ‘particle marking habitual action’, Mao. *tau*, Rot. *ma-fáu* ‘right (hand)’.

PEO *\*taʔu* (PAN *\*taqun*) ‘season, year’. Sa’a *ëu*, To. *taʔu*, Sam., Mao. *tau*, Rot. *fáu*.

PEO *\*tuʔa* (PAN *\*tuqa*) ‘old’. To. *ma/tuʔa*, Sam., Mao. *ma/tua*, Rot. *ma/fúa*.

PEO *\*tuʔu* (PAN *\*tuqud*) ‘stand’. Fij. *tuu*, To. *luʔu/laki* ‘stand in position’, Sam., Mao. *tuu*, Rot. *fú*.

PEO *\*(ma-ʔanu)* (PPn *\*ma-ʔanu*) (PAN *\*qanud*) ‘be afloat’. To., Uv., Fut. *ma-ʔanu*, Sam., Mao. *maanu*, Rot. *mónu*.

PPn *\*muʔa* ‘front’. To., Uv. *muʔa*, Mao., Fut. *mua*, Rot. *múa*.

(b) Rotuman *ʔ* indirectly reflects PEO *\*ʔ*:

PEO *\*nsaʔat* (PAN *\*zaqat*) ‘bad’. Fij. *caat/a*, To. *haʔa*, Rot. *háʔa* ‘forbidden’.

PEO *\*-ʔaki* ‘grammatical formative’. Fij. *-aki*, To. *-ʔaki*, Sam. *-aʔi*, Rot. *-ʔóki*.

PEO *\*paʔu* ‘tie, bind’. Fij. *vau-ca*, To., Fut., Uv. *faʔu*, Sam. *fau*, Mao. *wha/whau*, Rot. *fǝʔu*.

PEO *\*paʔa* ‘to split’. Fij. *va/sia* (also *va/cia*) ‘to cut yams for planting’, To., Fut., Uv. *ma-faʔa* ‘cracked open’, *faʔa/i* ‘to stretch open’, Sam. *faa/si*, Mao. *waa/hi*, Rot. *fǎʔa* ‘tear, rend’.

PEO *\*(m)paʔa* ‘stem of ensiform leaves’. Fij. *baa*, To., Fut. *faʔa*, Sam. *faa*, Mao. *whaa*, Rot. *fǎʔa* ‘food made from taro stems’.

PPn *\*maʔa* ‘clean, clear’. To., Fut., Uv. *maʔa*, Sam. *ma/maa*, Rot. *máʔa*.

#### 4.15 PEO *\*w*

PEO *\*w* is reflected (a) directly and (b) indirectly by Rotuman *v*.

(a) Rotuman *v* directly reflects PEO *\*w*:

PEO *\*waka* (PAN *\*waka(r)*) ‘root’. Fij. *waka*, Sa’a *waʔawaʔa* ‘wild yams’, Mao. *waka*, Rot. *váʔa*.

PPn *\*weka* ‘bird sp.’. To. *veka*, Mao. *weka*, Rot. *véʔa*.

(b) Rotuman *v* indirectly reflects PEO *\*w*:

PEO *\*wale* ‘ordinary, worthless’. Fij. *wale*, To. *vale*, Mao. *ware*, Rot. *vǎ/vǎre*.

PEO *\*wiri* ‘to twist, bore’. Fij. *wiri* ‘revolve’, Ngg. *viri* ‘bind round and round’, Bug. *viri* ‘twisted’, To., Sam. *vili*, Mao. *wiri*. Rot. *víri*.

(c) In the following forms it is not clear whether the reflection is direct or indirect:

PEO *\*wai* (PAN *\*wayeR*) ‘water’. Fij., To., Sam., Mao. *wai*. Rot. *vɔl*.

PEO *\*walu* (PAN *\*walu*) ‘eight’. Fij. *walu*, To., Sam. *valu*, Mao. *waru*, Rot. *vólu*.

PPn *\*wao* ‘forest’. To. *vao*, Mao. *wao*, Rot. *váo*.

PEO *\*waŋka* (PAN *\*waŋkaŋ*) ‘canoe’. Fij. *waqa*, To., Fut. *vaka*, Sam. *vaʔa*, Mao. *waka*, Rot. *váka*.

PPn *\*wawe* ‘quick’. To. *vave*, Mao. *wawe*, Rot. *váve*.

PEO *\*lawe* (PAN *\*lawi*) ‘feather’. Fij. *lawe*, Sam. *lave*, Rot. *lalóvi*.

PEO *\*wii* ‘*Spondias dulcis*’. Fij. *wii*, Sam. *vii*, Rot. *ví*.

#### 4.16 PEO *\*m*

PEO *\*m* (PAN *\*m*) is (a) directly and (b) indirectly reflected by Rotuman *m*.

(a) Rotuman *m* directly reflects PEO *\*m*:

PEO *\*mata*<sup>1</sup> (PAN *\*mata*) ‘eye’. Fij., To., Sam., Mao. *mata*, Rot. *máfa*.

(b) Rotuman *m* indirectly reflects PEO *\*m*:

PEO *\*(munde)* ‘blow gently; breeze’. Fij. *mudre*, Mao. *muri/muri*, Rot. *múre*.

#### 4.17 PEO *\*n*

PEO *\*n* (PAN *\*n, ñ*) is reflected (a) directly and (b) indirectly by Rotuman *n*.

(a) Rotuman *n* directly reflects PEO *\*n*:

PEO *\*ntuna* (PAN *\*(t)u(n)a*) ‘eel’. Fij. *duna*, PPn *\*tuna*, Rot. *fúna*.

PEO *\*tunu* (PAN *\*tunu*) ‘to cook’. Fij. *tunu* ‘warm up food’, PPn *\*tunu*, Rot. *fúnu*.

PPn *\*nofo* ‘to sit, dwell’. To., Sam. *nofo*, Mao. *noho*, Rot. *nóho*.

PEO *\*/mp/anupe* ‘caterpillar’. Fij. *banuve*, To. *ʔunufe*, Mao. *anúhe*, Rot. *niha*.

(b) Rotuman *n* indirectly reflects PEO *\*n*:

PEO *\*pana* (PAN *\*panaq*) ‘shoot’. Fij. *vana*, To. *fana*, Mao. *whana*, Rot. *fána*.

PPn *\*nofo* ‘sit, dwell’. Rot. *nofó/ʔa* ‘chair’.

#### 4.18 PEO \*ŋ

PEO \*ŋ (PAN \*ŋ) is reflected (a) directly and (b) indirectly by Rotuman *g*, and (c) indeterminantly by *n* when \*ŋ occurs before \**u*.

(a) Rotuman *g* directly reflects PEO \*ŋ:

PEO \**paŋa* (PAN \**paŋa*) 'to feed'. Ngg. *vanga* 'food', Mao. *whaanga'i*, Rot. *hága*.

PEO \*(*peŋu*). Mao. *whengu* 'snort', Rot. *hégu* 'blow the nose'.

(b) Rotuman *g* indirectly reflects PEO \*ŋ:

PPn \**ŋaakau* 'guts', Rot. *gakau* 'small intestine'.

PEO \**taŋa* (PAN \**taŋa*) 'bag'. Fij. *taga*, To. *tanga/i*, Rot. *tága*.

(c) Rotuman *n* reflects PEO \*ŋ before \**u*, indeterminantly:

PEO \**ŋu(ts)u* (PAN \**ŋu(s)u*) 'mouth, lips'. PPn \**gutu* 'lips', Fij. *gusu*, Rot. *núju*.

PPn \**ŋuu* 'squid, cuttlefish'. To. *nguuf/feke*, Mao. *nguu*, Rot. *nú*.

## 5 Discussion

### 5.1 The source of the indirectly inherited component of Rotuman lexicon

It is clear that Rotuman has borrowed extensively from a related language or languages. Other things being equal, near rather than far-distant islands are most likely sources. Vanua Levu, the most northerly island of importance in the Fijis, lies 240 miles [385 km] to the south and in recent times some Fijian words have come into use in Rotuman, for there is frequent communication with Fiji, and many Rotumans are resident in Suva. However, there is little or no evidence to suggest that any of the Fijian dialects had extensive influence on the language in pre-contact times.

Funafuti, nearest island of the Tuvalu group, is 260 miles [420 km] to the north and there is some reference to contact with Tuvalu in Rotuman traditions. The rather inadequate linguistic sources for the group provide no evidence that points specifically to Tuvalu as the source of borrowing. Yet it can hardly be doubted that some part of Polynesia provided the indirectly inherited component of Rotuman. Almost every word so classified has Polynesian cognates, and the meaning correlation is usually precise. Moreover the physical traits of Rotumans imply long contact with Polynesians.

To the east and south-east of Rotuma are Futuna (238 miles [385 km]), Uvea (375 miles [605 km]), Niufo'ou (460 miles [740 km]) and Savai'i, the most northerly and westerly island of the Samoan group (636 miles [1025 km]). As noted previously the dialects spoken on Niufo'ou and Uvea group with Tongan, as opposed to Samoan and Futunan. By far the greatest number of Polynesian voyages historically attested have been from east to west, and

it would not be surprising to find Rotuman contacts in this quarter. It turns out that Rotuman traditions are definite in associating at least two occupations of their island with the Samoa–Tonga area, particularly the islands of Savai'i and Niuafo'ou.

There are several phonological points which suggest that both the Samoa–Futuna and Tonga–Uvea–Niuafo'ou areas were sources of influence on Rotuman:

- (i) Rotuman words in which *h* reflects *\*(n)s* indirectly (§4.11c) strongly suggest borrowing from Tongan or Uvean, the only relatively near Polynesian islands which reflect these protophonemes as *h*.
- (ii) Rotuman words in which *ʔ* indirectly reflects *\*ʔ* (§4.14b) suggest the same source. While Futunan also reflects *\*ʔ* as *ʔ* in some words at present, there is evidence that these words are loan words in Futunan too.
- (iii) Rotuman *s* indirectly reflecting *\*s* (§4.11b) suggests a Samoa – Futuna source.
- (iv) Rotuman *Ø* indirectly reflecting *\*(n)s* (§4.11d) suggests a Samoa – Futuna source.

If we conclude that Tonga – Uvea – Niuafo'ou and Samoa – Futuna both contributed to the Rotuman lexicon two further points are raised:

- (v) There are no Rotuman forms indirectly reflecting *\*k* as *ʔ*, the present Samoan reflex. This suggests that Samoan has made the *k* to *ʔ* shift recently, a suggestion supported by the fact that it is the only language in the western Polynesian area to have made this shift.
- (vi) There are no Rotuman forms indirectly reflecting *\*ʔ* as *Ø*, as Samoan does at present. Since Tuvaluan, Tokelauan, Niuean, and all of the outliers except Rennell reflect *\*ʔ* as *Ø*, it is not plausible to argue that this shift too is recent in Samoa, even though the recent discovery of the Easter Island reflex *ʔ* from *\*ʔ* suggests that the loss of the glottal postdates the Samoa – Eastern Polynesia split. It is more likely that the lack of a zero reflex of *ʔ* in an indirectly inherited form is accidental, and related to the relative infrequency of the protophoneme.

## 5.2 The extent of borrowing in Rotuman

Of 328 Rotuman words with etymologies, 124 (38%) are directly inherited, 107 (33%) are indeterminable, and ninety-seven (29%) are indirectly inherited. The last figure indicates the massive nature of Polynesian influence on Rotuman, influence which has not been confined to non-basic vocabulary, for of the fifty-eight items on the 200-word basic vocabulary list which contain diagnostic reflexes fifteen (25.5%) are borrowed. If, on the grounds that they are probably directly inherited (see §4.10), twenty-eight basic words containing *l* are added to the forty-three words which are definitely in this category, the percentage of indirectly inherited words drops to eighteen, a figure which is possibly low, since we have now been less rigorous in defining the directly inherited component.

It is not unreasonable to suppose that the proportion of borrowed to inherited words is about the same in the whole 200-word list as it is in the eighty-three words with diagnostic

reflexes, and to conclude that at least 18% of Rotuman basic vocabulary is borrowed. The same reasoning and calculations applied to the total reconstructed vocabulary suggests that 43% of the recognisably Oceanic portion of Rotuman lexicon results from external (mainly Polynesian) influence.

Just what effect this has had on cognate percentages with other languages is not clear, except in the case of Polynesian comparisons, and here the expectation that they will be raised is confirmed by the following conflation of figures taken from Grace (1959), Pawley (1962) and Walsh (1963) all of which show Tongan–Rotuman and Samoan–Rotuman as sharing more cognates than Fijian–Rotuman.

**Table 6:** Cognate percentages among Tongan, Samoan, Fijian and Rotuman

|               | Rotuman–Tongan | Rotuman–Samoan | Rotuman–Fijian |
|---------------|----------------|----------------|----------------|
| 100-word list | 31–38          | 30             | 25–34          |
| 200-word list | 25–31          | 26             | 16–22          |

The Samoan–Rotuman indices are from Pawley (1962) whose comparable figures for Tongan–Rotuman were 31% and 25%. No one, as far as I know, has suggested that Rotuman is actually closer to Polynesian than to Fijian, so the conclusion seems inescapable that the higher cognate percentages shared by Rotuman with Samoan and Tongan are due to borrowing.

### 5.3 Minor morphemes borrowed from Polynesian

The following minor morphemes (function words) were noted as borrowed by Rotuman, probably from Polynesian sources:

- (i) *ko* (PEO \**ko*). This particle is prominent in Polynesia and Fiji, where it is usually called a specifying particle. In Rotuman it is a vocative particle, *ko gagaj* ‘ye assembly of chiefs’!
- (ii) *-ʔ oki* (PEO \**ʔ aki*). Borrowed from Tongan, this suffix is fully productive in Rotuman where, as in Tongan, it is suffixed to verbs to indicate cause or instrument.
- (iii) *fak(a)-* (PEO \**paka*). This prefix is widespread in Oceania. In Rotuman the indirectly inherited form, which is fully productive, can be glossed ‘to resemble, to pertain to, to have the quality of’, while the directly inherited doublet *aʔ(a)-* retains the more widespread causative function. Thus *faksoge* ‘to be short of food, to starve’ but *aʔsoge* ‘to cause to be without food, to starve’.

### 5.4 Conclusion

Besides the identifiable PEO elements in Rotuman, which we have attempted to further define as directly or indirectly inherited, there are many English loan words borrowed over

the past 175 years. These are noted as such by Churchward (1940) in his *Rotuman grammar and dictionary*. Many words in the total lexicon remain unidentified but some of these will no doubt be later recognised as Oceanic.

There is no reason to think that Rotuman is unique among Pacific languages. Indeed it has often been asserted that the Melanesian languages contain more than one vocabulary component, usually distinguished as Austronesian on the one hand and Papuan, Aboriginal, or some such, on the other. Less frequently it has been pointed out that, as is the case in Rotuman, the Austronesian element itself may be composite. Elbert (1965) has demonstrated that there are substantial borrowed components, in part identifiable as Austronesian, in a number of Polynesian outliers. Borrowing, including perhaps indirect inheritance, may also explain the occurrence of *p*, *v* and *k*, *g* in such languages as Roviana, Bambatana, Nggela and Lau of the Solomons, and Mota of the Banks Islands, though other hypotheses need to be tested (see Haudricourt (1965) and Holmer (1965)).

In general what we know of culture history in the Melanesian area suggests a complex rather than a simple linguistic history, involving a good deal of movement in certain maritime areas, and long continued contact among speakers of related languages (e.g. in the Solomons and Vanuatu) and unrelated languages (e.g. the New Guinea coast). It would be surprising indeed if such contacts did not have substantial effects upon the languages concerned, effects which could be vitally important to comparative work, and to our understanding of Pacific prehistory. While talk of substrata and mixed languages may in fact introduce concepts which are both ill-defined and unhelpful, the multiple origins of Melanesian lexicons, if real, should be studied. Failure to examine the extent to which one language has been affected by others can lead to erroneous subgrouping. On the positive side, the identification of various components in a lexicon provides clues to linguistic migrations, an aspect of linguistics with which Malayo-Polynesianists are much concerned.

## References

- Capell, Arthur, 1962a, *A linguistic survey of the south-western Pacific*. 2nd ed. Nouméa.  
 1962b, Oceanic linguistics today. *Current Anthropology* 3.
- Churchward, C. Maxwell, 1940, *Rotuman grammar and dictionary*. Sydney: Australasian Medical Publishing Company.
- Codrington, Robert Henry, 1885, *The Melanesian languages*. Oxford: The Clarendon Press.
- Dyen, Isidore, 1956, The Ngaju-Dyak 'Old Speech Stratum'. *Language* 32.  
 1959, Review of: The position of the Polynesian languages within the Austronesian (Malayo-Polynesian) Language Family, by George W. Grace. *Journal of the Polynesian Society* 69:180-184.
- 1963, *The lexicostatistical classification of the Austronesian languages*. New Haven: Yale University.
- Elbert, Samuel H., 1953, Internal relationships of Polynesian languages and dialects. *Southwestern Journal of Anthropology* 9.

- 1962, Phonemic expansion in Rennellese. *Journal of the Polynesian Society* 71/1:25–31.
- 1965, Phonological expansions in outlier Polynesia. *Lingua* 14(1):431–458.
- Goodenough, Ward H., 1961, Migrations implied by relationships of New Britain dialects to Central Pacific languages. *Journal of the Polynesian Society* 70:112–126.
- 1962, Comment on *Oceanic linguistics today* by Arthur Capell. *Oceanic Anthropology* 3(4):406–408.
- Grace, George W., 1959, The position of the Polynesian languages within the Austronesian (Malayo-Polynesian) language family. *Memoir 16 of International Journal of American Linguistics and Supplement to International Journal of American Linguistics* 25(3). Baltimore.
- 1961, Lexicostatistical comparison of six Eastern Austronesian languages. *Anthropological Linguistics* 3(9).
- Hale, Horatio, 1846, United States Exploring Expedition during the years 1838, 1839, 1840, 1841, 1842, under the command of Charles Wilkes, U.S.N., Ethnography and Philology. Philadelphia: Lea & Blanchard.
- Haudricourt, André G., 1957–58, La phonologie des voyelles en Rotumien (Océanique). *Bulletin de la Société de Linguistique de Paris* 53.
- 1965, Problems of Austronesian comparative phonology. *Lingua* 14(1):315–329.
- Hocart, A.M., 1919, Notes on Rotuman grammar. *Journal of the Royal Anthropological Institute* 49.
- Holmer, Nils M., 1965, Types of consonantal alternation in Austronesian, especially Melanesian. *Lingua* 14(2):475–496.
- Pawley, Andrew, 1962, On the position of Rotuman in the Austronesian language family. [typescript]
- Ray, Sidney H., 1926, *The Melanesian island languages*. Cambridge: Cambridge University Press.
- Walsh, David S., 1963, Dictionaries versus informants: an aspect of glottochronology. *Te Reo* 6.

### List of other works consulted

- Bataillon, Pierre, 1932, *Langue d'Uvea (Wallis)*. Paris: P. Geuthner.
- Biggs, Bruce, 1959, Rotuman vowels and their history. *Te Reo* 2.
- Capell, Arthur, 1941, *A new Fijian dictionary*. Sydney: Australasian Medical Publishing Company.
- 1943, *The linguistic position of South-Eastern Papua*. Sydney: Australasian Medical Publishing Company.

- Churchward, C. Maxwell, 1940, *Tales of a lonely island: Rotuman legends translated by C. Maxwell Churchward*. Oceania Monographs, 4. Sydney: Australasian Medical Publishing Company.
- 1959, *Tongan dictionary*. London: Oxford University Press.
- Deck, N.C., 1933–34, *Grammar of the language spoken by the Kwara'ae people of Mala, British Solomon Islands*. Polynesian Society reprint, 5. Wellington.
- Dempwolff, Otto, 1934–38, *Vergleichende Lautlehre des austronesischen Wortschatzes*. 3 vols. Berlin: Vohsen.
- Fox, C.E., 1947, Phonetic laws in Melanesian languages. *Journal of the Polynesian Society* 56.
- 1950, Some notes on Nggela Grammar. *Journal of the Polynesian Society* 59.
- 1955, *A dictionary of the Nggela language*. Auckland: Unity Press.
- Gardiner, J.S., 1898, Natives of Rotuma. *Journal of the Royal Anthropological Institute* 27.
- Grézel, Isidore, 1878, *Dictionnaire Futunien–Français*. Paris: Maisonneuve.
- Ivens, W.G., 1918, *Dictionary and grammar of the language of Sa'a and Ulawa, Solomon Islands*. Washington: Carnegie Institution of Washington.
- 1934, *A vocabulary of the Lau language*. Polynesian Society Memoir. Wellington.
- Mager, John F., 1952, *Gedaged–English dictionary*. Columbus, Ohio: Board of Foreign Missions of the American Lutheran Church.
- Milke, Wilhelm, 1961, Beiträge zur ozeanischen Linguistik. *Zeitschrift für Ethnologie* 86.
- Milner, G.B., 1963, Notes on the comparison of two languages (with and without a genetic hypothesis). In H.L. Shorto, ed. *Linguistic comparison in South East Asia and the Pacific*. London.
- 1963, Liquid consonants and the relationship of Polynesian to Austronesian languages. *Bulletin of the School of Oriental and African Studies* 26(3).
- 1965, Initial nasal clusters in eastern and western Austronesian. *Lingua* 14(1):416–430. [Reprinted in this volume.]
- Waterhouse, J.H.L., 1949, *A Roviana and English dictionary*. Sydney: Epworth Printing and Publishing House.