

# CLASSIFYING OLD RAPA: LINGUISTIC EVIDENCE FOR CONTACT NETWORKS IN SOUTHEAST POLYNESIA

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## **Abstract**

The historical classification of Old Rapa, a Polynesian language spoken on the island of Rapa Iti, has never been thoroughly investigated. Based on the author's recent documentation of the language, this paper provides the first detailed historical investigation of Old Rapa; the results of which reveal a number of unique features in Old Rapa with respect to other Eastern Polynesian languages. Through a comparative analysis, evidence is provided for an especially close relationship between Mangaian and Old Rapa, as well as for shared innovations between Old Rapa and Rarotongan, Mangarevan, and Rapanui. Furthermore, the new linguistic information provided here indicates that there was an ongoing micro contact network between Rapa Iti and Mangaia. This network eventually expanded to include Rarotonga, Mangareva, and Rapa Nui.

**Keywords:** Polynesia, contact networks, historical classification  
**ISO 639-3 code:** rap

## **1. Introduction<sup>1</sup>**

Old Rapa, the indigenous language of Rapa Iti (French Polynesia), is a severely endangered Polynesian language. It is spoken today by only a very few members of the community (mostly elders) and has been almost completely replaced by a Tahitian-Old Rapa mixed language called Reo Rapa (Walworth 2015). The historical relationships of Old Rapa have never been thoroughly analyzed due to the lack of documentation and description of the language. As a result, Old Rapa's close genetic affiliations have been more or less assumed based on very limited data or casual observations. However, upon closer examination through my own field investigations since 2012, it is evident that Old Rapa exhibits a number of unique features with respect to other Eastern Polynesian languages. The existence of these features merits further investigation in order to understand Old Rapa's classification within EP. This paper addresses the results of such an inquiry, and demonstrates the ways in which Old Rapa's unique linguistic qualities can lead to understanding the language's specific genetic affiliation as well as the Rapa people's prehistoric contacts.

This paper primarily highlights the more unique features of Old Rapa and then discusses preliminary comparative observations with other related languages. First, I summarize references to Old Rapa's genetic affiliation in historical observations and in the current literature on Polynesian

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<sup>1</sup> I am indebted to Robert Blust and Yuko Otsuka for their encouragement to write this paper (originally a chapter in my dissertation) and for their suggestions for improvement on earlier versions. I would also like to thank Malcolm Ross and Russell Gray for their interest and support; as well as Terry Hunt, Ross Clark, and Albert Davletshin for their comments on the data within. Special appreciation is due to the native speakers of the languages discussed, with whom I consulted regularly: in Rapa Iti - Te'a Tamata, Ma'urei Angia, Takura Angia, Teuira Vahine, and Lionel Watanbe; in Mangareva - Monica Paheo, Bruno Schmidt, and Ena Manuireva; in Rapa Nui - Petero Huke and Mr. Tongariki; additional thanks to Sally Nicholas who provided data for Ma'u'ke. The research for this paper was funded in part by the Bilinski Dissertation Fellowship and also by the National Science Foundation Documenting Endangered Languages Program. All errors in my interpretation or citation of the data are my own.

languages. I then discuss evidence for Old Rapa as a Central Eastern Polynesian<sup>2</sup> language and examine its possible CEP internal relationships. Third, I explain some of Old Rapa's aberrant features, and discuss how these may demonstrate prehistoric relationships (either genetic or contact-based) with certain other Polynesian languages. Finally, I propose a scenario for Rapa Iti prehistory: early migration from the Southern Cook Islands, subsequent development of a wide-ranging contact sphere that extended to include other areas of South Polynesia, and then a period of significant isolation up until European contact.

## **2. References to Old Rapa's genetic classification**

A number of explorers, missionaries, and early researchers who arrived in Rapa Iti during the nineteenth and twentieth centuries made informal observations about the Rapa language with respect to other Eastern Polynesian (EP) languages. While these accounts cannot be viewed as scientific or technically linguistic, they are important to consider as they indicate intelligibility with other EP languages and offer support that Old Rapa is a very different language than the more widely spoken Reo Rapa. Observations on the language based on contact with Old Rapa speakers prior to heavy Tahitian influence indicate its clear relationship with other CEP languages, and identify it as notably different than Tahitian.

### **2.1. Historical observations**

Vancouver was the first to describe his encounters with people from Rapa Iti. His first impressions of the language he heard in Rapa Iti led him to declare that the island was definitely "part of the Great South Sea nation"; however, he noted that a Hawaiian man traveling with him was unable to understand the Rapa people (Vancouver 1798:75). Stutchbury remarked more specifically "they [Rapa people] do not speak the New Zealand or Tahitian language but something resembling the Marquesan" (1996:71–72). Davies (Newbury 1961:280) also remarked on the dissimilarity of Old Rapa and Tahitian, reporting that two men who were taken from Rapa Iti onto his ship in 1825 could not understand much Tahitian upon arrival in the Society Islands. Furthermore, in 1828, Cuming (Richards 2007:6–7) observed that while "the language of the islanders without doubt had the same [distant] origin with those of the Society Islands...[in their] language, manner and customs [they] differ materially from the inhabitants of the Society Islands of which they had not any knowledge until the arrival of the native teachers from Otaheite...They could not understand them at first."

In 1829, missionaries Pritchard and Simpson (Richards 2007:7) also noted the differences of Old Rapa from Tahitian: "The Rapan [language] in many respects is different from the Tahitian dialect. From the frequent use of the k and the ng or gn, it appears more to resemble New Zealand [Māori] or the Marquesans." Ellis (1838:364) noted that Old Rapa sounded more like Māori than Tahitian. Finally, Hale (1846:141) wrote that the language of Rapa must come from the Cook Islands, as it was nearly identical to Rarotongan.

More linguistically oriented observations about Old Rapa come from Stokes and Schooling in the twentieth century. Stokes (1955:316), while he did not suggest any specific genetic affiliation for Old Rapa, did note that by the time he had arrived on the island in 1921, men were speaking a language that resembled Tahitian, or a mixed Tahitian-Rapa language. Women, on the other hand, were still speaking the older language, and Stokes observed that it was much different than the Tahitianized language that the men used. Finally, in his 1981 sociolinguistic survey, Schooling (1981:22) set out to quantify the extent to which Tahitian had influenced other French Polynesian languages. In this study, he did not go to Rapa Iti; however, he spoke with Rapa people in Tahiti. Based on his observations, he stated that "Rapan" was a language closely related to Marquesan, with Mangarevan influences. He

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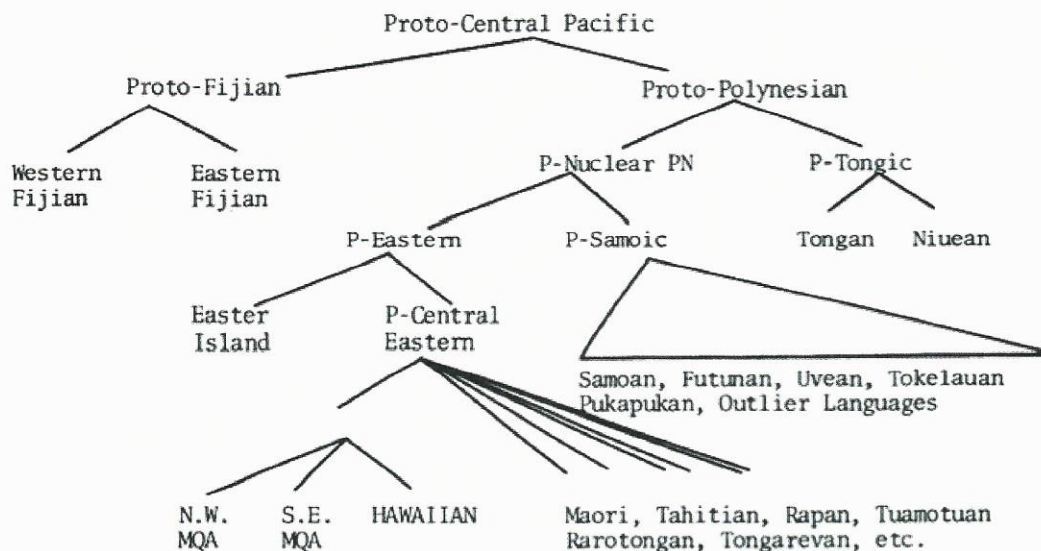
<sup>2</sup> Abbreviations for language names and language groups are as follows throughout the rest of the paper: Aitutaki = ATK, Central Eastern Polynesian = CEP, Eastern Polynesian = EP, Hawaiian = HWN, Ma'uke = MKE, Mangaian = MIA, Mangarevan = MGV, Marquesan = MQS, Moriori = MOR, OR = Old Rapa, Proto Central Eastern Polynesian = PCE, Proto Eastern Polynesian = PEP, Proto Nuclear Polynesian = PNP, Proto-Polynesian = PPN, Rapanui = RN, Rarotongan = RAR, Tahitian = TAH, Tuamotuan dialects = TUA.

furthermore wrote that the Rapa language was “sufficiently different that neither a speaker of another Australs dialect, nor a Tahitian would understand [it] on first hearing it.”

**2.2. Current linguistic literature**

In the current body of literature on historical relationships of Polynesian languages, there is little reference to Rapa Iti. The few that mention Rapa’s language agree that it is an Eastern Polynesian language, though projections on its precise placement within EP are varied. Green (1966:27–28)<sup>3</sup> included “Rapan”<sup>4</sup> among the Marquesic languages, citing four lexical correspondences: *taeti* ‘child’, *nga’u* ‘bite’, *rongo’uru* ‘ten’, and *kami’a* ‘canoe’. Wilson disputed two of these four as genuinely Marquesic in 2010 (293, 298), and in 2012 (350–351) rejected the claims that any of these items are markedly Marquesic. Pawley and Green (1974:44), listed “Rapan” among traditionally Tahitic languages, separate from the traditionally Marquesic languages (Figure 1). Marck (2000:185), like Pawley and Green, identified Rapa as a Tahitic language.

*Figure 1: Pawley and Green’s (1974:44) classification of Central Pacific languages*

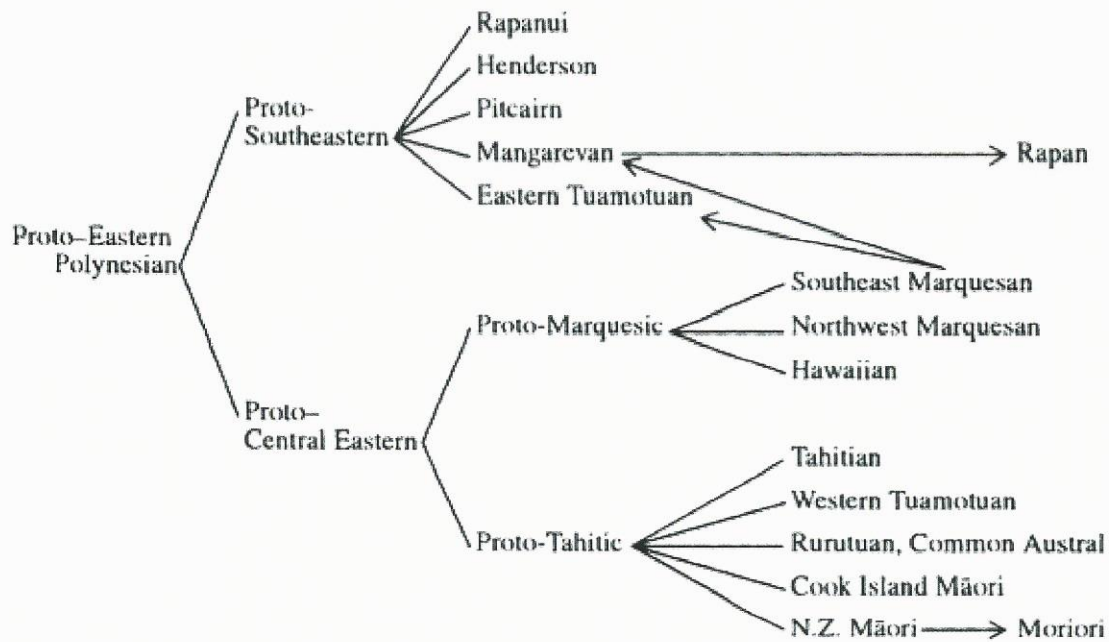


Fischer (2000) classified Old Rapa as Marquesic, and then, in 2001, hypothesized that it is actually part of a South-Eastern Polynesian (SEP) subgroup, a direct descendant of an older form of Mangarevan that had undergone Marquesic influence. Under this hypothesis, he claimed that Rapa Iti had been settled directly from Mangareva.

<sup>3</sup> Based on data from Stokes 1955.

<sup>4</sup> Often, Old Rapa is called “Rapan” by outsiders. This is not a term used by local people or by speakers of Old Rapa.

Figure 2: Fischer's 2001 SEP hypothesis



Fischer's SEP hypothesis is flawed as it is based on a group of languages that is extremely understudied, including two languages (Henderson and Pitcairn) that are only presumed to have been spoken and for which no actual records exist. Furthermore, the data he used to support this hypothesis are limited to Mangarevan. For these reasons, among others, his hypothesis has been widely disputed (Rutter 2002; Marck 2002; Wilson 2012:351–352).

### 3. Old Rapa as a CEP language

The previous assessments of Old Rapa are varied, and do not provide a clear classification of the language. The only commonality among the historical observations and linguistic categorizations is that Old Rapa is most certainly an Eastern Polynesian language. What is critically undecided is its more exact membership within Eastern Polynesian. Based on my present study, Old Rapa appears to share the same innovations as other CEP languages and can thus be classified as such. Table 1 demonstrates Old Rapa's consonant reflexes from PEP and PCE.

Table 1: Consonant reflexes of Proto Polynesian, Proto Eastern Polynesian, and Proto Central Eastern in Old Rapa

PPN	*p	*t	*k	*m	*n	*ŋ	*ʔ	*f	*s	*h	*w	*l	*r
PEP	*p	*t	*k	*m	*n	*ŋ	*ʔ	*f	*s	∅	*w	*r	*r
PCE	*p	*t	*k	*m	*n	*ŋ	*ʔ	*f	*s	∅	*w	*r	*r
OR	p	t	k	m	n	ŋ	∅	ʔ	ʔ	∅	v	r	r

In addition to these consonant reflexes, Old Rapa exhibits most of the defining characteristics of CEP languages. The following have been identified as strong evidence for PCE:<sup>5</sup> \*tahito 'old, ancient' (semantic innovation from Green 1966:17-18); and the phonological innovation PEP \*faf > PCE > \*waf. Examples of this are provided in Table 2.

<sup>5</sup> See Walworth (2014:262–263) for further discussion and summary of PCE's defining characteristics. I no longer use Green's \*kite 'to know, to see' as a PCE innovation and instead list this to be a PEP innovation based on evidence of a reflex in Rapanui: *tikea* 'to see' (Greenhill and Clark 2011). The Rapanui reflex was previously overlooked due to the metathesis that has occurred in this form.

Table 2: PEP \*faf- to PCE \*waf-

PEP	PCE	Gloss
*fafa	*wafa	'carry on back'
*fafie	*wafie	'firewood'
*fafine	*wafine	'woman'
*fafa	*wafa	'mouth'
*fafii	*wafii	'wrap food in a leaf'
*fafa	*wafa	'outside'

Marck (2000:132) identified an additional five sporadic sound changes in PCE. These appear in Table 3.

Table 3: Sporadic sound changes in PCE (Marck 2000:132)

PEP	PCE	Gloss
*ŋu-feke	*mu-feke	'squid'
*ŋau	*ŋahu	'chew, bite'
*faahua	*paahua	' <i>Tridacna</i> (giant clam)'
*kai	*koi	'sharp'
*kau-natu	*kau-nati	'fire-plow'

Finally, Green (1985:12) and Marck (1996) presented nine grammatical innovations for PCE: \*tei 'present position'; \*ina(a) fea 'when (past)'; \*le(')ila 'there, aforementioned place'; \*noo/naa 'possessive particle'; \*me 'and, with, plus'; \*taua 'that aforementioned',<sup>6</sup> \*aanei 'interrogative'; \*vai 'who'; and \*vau '1<sup>st</sup> person singular'.

Old Rapa exhibits Green's (1966) PCE semantic innovation \*tahito as *ta'ito* 'old'. PEP \*faf- to PCE \*waf- is not evident, as Old Rapa has uniquely innovated forms for 'woman' (OR *pē'ā*), 'wrap-up' (OR *veinga*) and 'firewood' (OR *rārā*) and retains PPN \*ngutu for 'mouth'. Old Rapa does not exhibit forms that resemble PCE \*wafo or PEP \*fafa for 'outside' (OR *rāpae*), nor PCE \*vafa or PEP \*fafa for 'carry on back' (OR *amo*).<sup>7</sup>

Of Marck's five sporadic sound changes, Old Rapa possesses *mī'eke* 'type of squid', *nga'u* 'bite', and *koikoi* 'sharp, pointy'. Practical explanations can be sought for the absence of Marck's two additional sporadic sound changes: Old Rapa has a unique innovation for 'fire-plow' and '*Tridacna*' are not found in Rapa Iti's cool waters (pers. comm. with local Rapa fisherman).

Regarding the grammatical innovations outlined by Green and Marck, Old Rapa demonstrates the following reflexes:<sup>8</sup> PCE \*tei as OR *ti* 'immediately, here, now'; PCE \*noo/naa as *nō/nā* 'genitive particle'; and PCE \*vai as OR *vai* 'who'. Old Rapa does not exhibit reflexes of PCE \*me, \*ina(a) fea, or \*vau. For PCE \*ina(a) fea, Old Rapa has merged the past and present interrogative forms for 'when' and uses *a'ea* for both. Old Rapa forms for 'first person singular' (OR *ou*) and 'with, plus' (OR *ma*), have been retained from PPN \*au and \*ma, respectively. The retention of PPN \*au for 'first person singular' is shared only with Mangarevan among the CEP languages.

The evidence presented in this section demonstrates that Old Rapa is a CEP language; but what of its further classification within CEP? This is more difficult to ascertain. Many scholars, as noted in previous sections, have classified Old Rapa as a Marquesic language, or in the case of Fischer (2001), a language descended directly from Mangarevan, after Marquesic "intrusion." Others have categorized Old Rapa as Tahitic. However, this categorization is likely due to the similarities to

<sup>6</sup> \*taua 'retrospective definitive' has been reconstructed for Proto-Tahitic by Greenhill and Clark (2011), as well as for PCE as indicated here, but due to evidence of a related form in the traditionally "Marquesic" languages of Hawaiian (*ua*) and Mangarevan (*tou*); as well as evidence in Rapanui for the form *tou*, I posit a \*taua reconstruction for PEP and not for PCE. This is further discussed in section 4.2.6.

<sup>7</sup> OR *va'a* 'carry a baby on the back' may be representative of Old Rapa's retention of PCE's dual phonological innovations.

<sup>8</sup> See Walworth (2015:74–166) for examples and discussions on the functions of these grammatical markers.

Tahitian that Reo Rapa exhibits, given that it is heavily mixed with Tahitian. Based on my data and analyses, Old Rapa does not exhibit any particular features that would classify it under either of the traditional CEP subgroups, which, in any case, have been recently challenged (see Walworth 2014). This is not to say that Old Rapa does not demonstrate any particular relationships with other CEP languages. To the contrary, it has striking linguistic similarity to several other CEP languages, but not under the traditional subgrouping framework. In the sections that follow, I discuss these potential relationships while highlighting some of Old Rapa's more unusual features.

#### 4. Comparative analyses of some Old Rapa features

In this section, I examine some of the phonological, grammatical, and lexical features of Old Rapa, paying particularly close attention to those features that represent a departure from most of the other CEP languages, either as innovations or as retentions.

##### 4.1. Phonological features

This section addresses Old Rapa's consonant reflexes and the other CEP languages that exhibit the same reflexes from PCE. Furthermore, this section highlights a sporadic vowel change in Old Rapa that is shared with other EP languages.

###### 4.1.1. Consonant reflexes

Old Rapa's consonant reflexes from PCE are identical to those of Rarotongan, Mangaian, Ma'uke, Aitutaki, and Mangarevan. Rarotongan, Mangaian, Ma'uke, and Aitutaki are languages spoken in the Southern Cook Islands (approximately 900 NM northwest of Rapa Iti). Mangarevan is spoken in the Gambier Islands (approximately 570 NM northeast of Rapa Iti). These shared consonant reflexes are striking, as this group of languages represents the largest group of EP languages to share identical consonant reflexes.

**Table 4:** Consonant reflexes of PEP and PCE in OR, RAR, MIA, MGV, ATK, and MKE

PEP	*p	*t	*k	*m	*n	*ŋ	*ʔ	*f	*s	*w	*r
PCE	*p	*t	*k	*m	*n	*ŋ	*ʔ	*f	*s	*w	*r
OR	p	t	k	m	n	ŋ	∅	ʔ	ʔ	v	r
RAR	p	t	k	m	n	ŋ	∅	ʔ	ʔ	v	r
MIA	p	t	k	m	n	ŋ	∅	ʔ	ʔ	v	r
MGV	p	t	k	m	n	ŋ	∅	ʔ	ʔ	v	r
ATK	p	t	k	m	n	ŋ	∅	ʔ	ʔ	v	r
MKE	p	t	k	m	n	ŋ	∅	ʔ	ʔ	v	r

###### 4.1.2. Sporadic sound change

One sporadic sound change of PNP \*k to *t* is observed in OR *tauru* 'tree top' (PNP \*kauru 'tree top'). This change is shared with Mangarevan and Rapanui.

##### 4.2. Grammatical features

This section highlights several of Old Rapa's grammatical words that are historically unusual. These include: the perfective aspect marker *ka*, adverbial *tuai*, adverbial *ta'anga*, negative past *ki'ere*, negative non-past *kāre*, and definite *tō*.

###### 4.2.1. Perfective aspect

Most Eastern Polynesian languages denote the perfective aspect using a reflex of PPN \*kua 'perfective aspect marker' (Clark 1976:30).

Table 5: PPN \*kua reflexes in some CEP languages<sup>9</sup>

TAH	MAO	RAR	MSQ	HAW	TUA
'ua	kua	kua	'ua	'ua	kua

In Old Rapa, however, the perfective is marked by *ka*. A form *kua* does occur but can only be used with a small group of intransitive verbs that incorporate a subject, and it appears to have a deeper ‘past’ connotation that contrasts with the *ka* perfective (Walworth 2015:102-103). There are two possible explanations for the change PPN \*kua > Old Rapa *ka*: (1) Old Rapa underwent an irregular phonological change from PPN \*kua (loss of [u]), resulting in *ka* for the perfect marker. This change is not exhibited in any other EP language. (2) OR *ka*, as a perfective marker, represents a semantic innovation from PPN \*kaa, which Clark (1976:30) reconstructs as ‘future’ or ‘inceptive’ aspect. This innovation may be part of a shared innovation with Māori, Mangaian, and Mangarevan.

Bauer et al. (1993; 1997) and Harlow (2012) offered evidence for a TAM marker *ka* in Māori,<sup>10</sup> with, however, varied interpretations of its function. Harlow (1989) wrote that the particle *ka* serves only to mark that a phrase is verbal and denotes no tense, aspect, or modal value. He expanded on this in 2012: “When no adverbial or previous [tense-aspect] marking determines a tense, the default reading of *ka* is temporally present, aspectually aorist” (137). Bauer et al. (1997:85) wrote that *ka* has more of a non-specific aspect function and can be used to indicate past, future, or present tense.

Mangaian exhibits a similar *ka*; however, it is unclear whether it denotes perfective or is more non-specific and oriented to the surrounding context. The example below from the *Mangaian Dictionary* indicates a perfective translation, but provides no context, making it difficult to surmise if its semantic value is truly perfective or if it is contextually based.

- (1) *ka*      *ʻitonga te*      *kuru*  
 TAM    bruise    DEF    breadfruit  
 ‘The breadfruit is bruised’.

(Mangaian Dictionary, 2013)<sup>11</sup>

Based on analysis of published Mangaian texts (Reilly 1993) as well as examples from the *Mangaian Dictionary* (2013), it appears that Mangaian typically uses *kua* to denote the perfective. It follows, then, that *ka* in Mangaian may function as it does in Māori, as a non-specific aspect marker.

Finally, there is evidence of a somewhat ambiguous aspect marker *ka* in Mangarevan. According to Ena Manuireva (pers. comm. 2014), this *ka* can be used to express the future and perfective. For example, a form of saying ‘goodbye’ in Mangarevan is *ka no’o koe*, literally, ‘you (2S) should stay’ or ‘you (2S) will stay’. According to Mr. Manuireva, *ka* in this case can mean both imperative and future, and can be interchanged with the imperative marker *a* or the future marker *e*. The inexact value of *ka* may indicate that it has functions as a ‘non-specific’ aspect marker in Mangarevan as well.

This evidence of a *ka* aspect marker in Māori, Mangaian, and Mangarevan may indicate that a non-specific marker was a shared innovation in Māori, Mangaian, Mangarevan, and Old Rapa. Over time, Old Rapa replaced perfective *kua* with non-specific *ka*. Trace evidence of *kua* does exist in Old Rapa, however it has a slightly different semantic function from *ka*, as illustrated in (2a) and (2b).

- (2a) *kua*      *ngaro*  
 PFV    disappear  
 ‘It disappeared’.

<sup>9</sup> Unless otherwise noted, forms cited are taken from the following sources throughout this paper: Tahitian from Lemaître 1973; Maori from Williams 1971 (cited in Greenhill and Clark 2011); Rarotongan from Buse 1995; Mangarevan from Tregear 1899; Mangaian from the *Mangaian Dictionary*; Marquesan from Dordillon 1904; Hawaiian from Pukui & Elbert 1957; and the Tuamotuan dialects from Stimson & Marshall 1964.

<sup>10</sup> TAM = tense aspect mood

<sup>11</sup> I have added the interlinear gloss and free translation.

- (2b) *ka ngaro*  
 PFV disappear  
 'It just disappeared'.

This trace evidence further supports the replacement explanation in Old Rapa; had a phonological change occurred (\**kua* > *ka*), evidence of a *kua* form in the Old Rapa corpus would be unlikely.

4.2.2. *Adverbial tuai*

Another notable feature in Old Rapa is *tuai* 'absolutely, definitely' which demonstrates a semantic shift from PPN \**tuai* 'old', as well as a grammatical shift (becoming definitively adverbial). Reflexes for PPN \**tuai* are not found in any other EP language and similar shifts are not noted in only one other PN language - Niuean, a distantly related Tongic language. In Old Rapa, *tuai* functions as an adverb that carries perfective connotations in that it emphasizes that an action has indeed been carried out. In Niuean, *tuai* has a primarily perfective aspect function (Seiter 1980:2), but is syntactically adverbial. Niuean's placement of *tuai* is post-verbal, an atypical location for a Polynesian aspect marker, but the prototypical position of a Polynesian adverb.

- (3) *hau tuai e tehina haau.*  
 come PERF ABS brother your  
 'Your little brother has come'.

(taken from Seiter 1980:8)

According to Seiter (1980:8), the perfective in Niuean may be marked by a co-occurrence of the perfective aspect markers *kua* and *tuai*. This is, in fact, the most common way to mark perfective in Niuean.

- (4) *kua ligi tuai e au e kapini tī ma-au.*  
 PERF pour PERF ERG I ABS cup tea for-you  
 'I've poured a cup of tea for you'.

(taken from Seiter 1980:8)

There is nothing else by way of particular linguistic similarity that would point to a subgrouping relationship between Niuean and Rapa Iti, nor are these two identical changes likely to have arisen independently in both languages, so this single connection is more likely contact related. Strong evidence indicates similarities between Niuean and EP languages, which are typically attributed to borrowing through contact with the Cook Islands (Clark 1979; Marck 2000; Otsuka 2006). If EP features were borrowed into Niuean from contact with the Cooks, the existence of the adverbial functioning *tuai* in Old Rapa provides evidence that Rapa Iti was to some extent involved in this contact network.

4.2.3. *Adverbial ta'anga*

Most reflexes of PPN \**tafaŋa* 'naked, bare, clear' in EP languages retain the adjectival function and semantic value of 'naked, bare, clear': TAH *taha'a* 'naked' (Fare Vāna'a 1999); MAO *tahanga* 'naked, empty'; RAR *taa'aka* 'naked, bare, empty-handed, destitute'; MSQ *tahaka* 'clear, open, discovered'; HAW *kohana* 'naked'; HAW *kaahana* 'clearing (as in a forest)'; TUA *tahanga(hanga)* 'clear, naked, obvious'. In addition to the previously stated meaning and function, Maori and the Tuamotuan dialects also exhibit reflexes of \**tafaŋa* with adverbial function and extended meaning. Stimson and Marshall (1964) reported an adverbial reflex with a wide semantic range in some of the Tuamotuan dialects, *tahanga* 'for a little while, just a moment, a little, moderately, suddenly, surely,



certainly, positively'. For Maori, Williams (1971; cited in Greenhill and Clark 2011) also reported *taahanga* to have the meaning 'moderately, a little'.

Old Rapa also exhibits an adverbial reflex of PPN \*tafaŋa, and additionally appears to have undergone semantic change from the PPN meaning to 'only, simply, continuously'. The semantic and functional changes from PPN \*tafaŋa exhibited in Old Rapa are shared with Mangarevan (*ta'anga*, pers. comm. Mangarevan consultants 2015) and Rapanui *tahanga* 'simply, only, continuously'.<sup>12</sup> Based on this data, I would not suggest that the shared semantic and functional innovation in Old Rapa, Mangareva, and Rapanui signals a subgrouping relationship between these three languages; however, it may be evidence for some contact between them.

#### 4.2.4. Negative past *ki'ere*

Old Rapa's marker for negative past constructions is *ki'ere*. This form is not evidenced elsewhere in Polynesia. However, it appears to be a compounded reflex of PCE \*kihai 'negative' and PEP \*ŋere 'deprived of'. This would certainly be a unique construction for a Polynesian negative form, but is not improbable. This would mean that Old Rapa retained only the \*ki portion of PCE \*kihai, as *ki*, and compounded it with *ngere*, resulting in *ki-ngere*. At some later point, the velar nasal was reduced to glottal stop, under the influence of the Tahitian reflex of PPN \*ŋere, *'ere*. Old Rapa does borrow the nominal negative from Tahitian, *e 'ere*, which clearly incorporates the Tahitian reflex of PPN \*ŋere. It is not unlikely then that an older Old Rapa form of *ki-ngere* might have experienced a similar shift, resulting in *ki'ere*.

Māori and Ma'uke are the only other CEP languages that have retained PCE \*kihai. Based on evidence from Clark (1976:95) and Ma'uke linguist Sally Nicholas (pers. comm. 2014), both Māori and Ma'uke demonstrate a reflex of \*kihai (*kihai* and *ki'ai*, respectively) to mark the negative past, thus sharing Old Rapa's semantic value of the \*kihai reflex.

#### 4.2.5. Non-past negative *kāre*

Clark (1976:98–100) reconstructed PPN \*kole as a verb that indicated 'lacking' or 'non-existence'. However, he remarked that its presence as a negative marker was only apparent among EP languages. He wrote, "Outside of this subgroup, not only is it unknown as a form of NEG, but plausible cognates of any sort are hard to find" (1976:98). For this reason, I find it more suitable to reconstruct a verb of non-existence, \*kore (incorporating the merger of PPN \*r and \*l), only as far back as PEP. Among CEP languages, PEP \*kore "fused" with either PCE \*e 'future' or PCE \*ka 'non-future', which produced past, present, and future negative markers in EP languages (Clark 1976).<sup>13</sup>

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<sup>12</sup> Personal communication with a Rapa Nui speaker, August 2013; also evidenced in Churchill (1912:254) 'only, solely, alone, wholly, with- out stopping, always, quite, a sort of superlative'.

<sup>13</sup> It is important to note that Clark (1976:30–33) did not explicitly reconstruct PPN \*ka in his discussion of PPN tense-aspect markers. He does however reference this \*ka "tense-marker" to mean 'non-future' in his analysis of PPN \*kole and his treatment of CEP reflexes (p.99). Though he does not specify to what proto-language \*ka is reconstructable, I interpret from the data he provided that \*ka 'non-future' can be reconstructed for PCE.

Table 6: Reflexes of PCE \*ka/\*e + \*kore in some CEP languages (Clark 1976:99)

	Past	Present	Future
MAO	(kiihai)	kaahore	e kore
RAR	kaare	kaare	kaare
TAH	'aore	'aore	'e 'ore
MVA	e kore kakore	e kore kakore	e kore
MQS	'a'o'e	'a'o'e	'a'o'e
HAW	'a'ole	'a'ole	'a'ole

Clark (1976:100) additionally noted that in all CEP languages the tense + \*kore form emerges as a negative existential. Old Rapa's reflex of \*kore, *kāre* can also function in this way.

Old Rapa's non-past negative *kāre*, as Clark stated to be true for other CEP languages, likely derives from an earlier PCE \*ka + \*kore merger. The resulting form, \*kakore, then underwent a sporadic deletion of [k], followed by an assimilation of [o] to [a]. This assimilation resulted in geminate [a], thus producing an apparent long [ā] in Old Rapa:

PCE \*tense + \*kore > POR \*kakore > *kaore* > *kāre*

This identical series of sound changes appears to have also occurred in Rarotongan and Mangaian, which exhibit *kāre* to indicate some form of the negative. As shown in Table 6, Rarotongan uses this form for past, present, and future negative constructions. It can, of course, following Clark's observation for all CEP languages, also be used to mark the negative existential (see the Dictionary of Cook Islands Languages 2014). In Mangaian, due to lack of documentation, the function of *kāre* is not readily clear. However, the form does appear as a negative and seems to be derived from the same sound changes from PCE as in Old Rapa and Rarotongan (example (5)).

- (5) *kāre ra i ariki-'ia*.<sup>14</sup>  
 NEG DEIC PFV accept-PASS  
 '[He] was not accepte'.

#### 4.2.6. Definite *tō*

In Old Rapa, *tō* functions as a definite article that is heavily discourse driven. This particular form is not found in any other Central Eastern Polynesian language; however, I believe it is semantically related to PEP \**taua*, which is evidenced in several other CEP languages (Table 7). Thus, the Old Rapa form is presumably phonologically derived from PEP \**taua* through the following sound changes: a sporadic loss of final \*a, \*au > *ou*, and subsequent monophthongization *ou* > *ō*. This exact series of changes from PEP \**taua* is exhibited only in Rapa Iti among the CEP languages. However, it is very important to note that both Rapanui and Mangarevan exhibit the form *tou* as a reflex of PEP \**taua* (Langdon and Tryon 1983:23 for Rapa Nui; Tregear 1899:106 for Mangarevan). The Rapanui and Mangarevan forms appear to have possibly gone through the same first two sound changes as Old Rapa. Identical sporadic sound changes such as these can provide compelling evidence for historical relationships, and in this case further suggest certain prehistoric contact between Rapa Iti, Mangareva, and Rapa Nui.

<sup>14</sup> Text from Reilly 2007; interlinear gloss added.

Table 7: Reflexes of PEP \*taua in some CEP languages (taken from Greenhill and Clark 2011)

Language	Reflex	Description
HAW	<i>ua</i>	Refers to a previously mentioned noun
MOR	<i>wa</i>	'those'
MAO	<i>taua</i>	'that, aforementioned'
RAR	<i>taua</i>	Demonstrative and relative pronoun; 'that aforementioned'
TAH	<i>taua</i>	'aforementioned' (pers. comm. Jack Ward); 'this/that', when used with DEIC <i>ra</i> (Lemaitre 1973)
TUA	<i>taua</i>	'that, the aforesaid'
MIA	<i>taua</i>	'that/those aforementioned' (as demonstrated in Reilly 1993)

#### 4.3. Lexical innovations

Old Rapa exhibits a significant number of basic lexical items that cannot be reconstructed for Proto-Polynesian. My study is not the first to comment on these as unusual phenomena. In John F. G. Stokes's 1955 article "Language in Rapa," he noted several lexical items without cognates anywhere else in Polynesia. Kieviet and Kieviet (2006:6–10) also remarked on some of this unusual terminology and offered "parallels," otherwise known as cognates, in some other Polynesian languages. The list of Rapa innovations has expanded through my recent linguistic work on the island (Walworth 2015:186–189). Table 8 provides my current and complete list of Rapa lexical innovations. This table also indicates PPN reconstructions for the same gloss and provides other possibly related higher-level reconstructions. These innovations represent either unique forms or unique semantic shifts in Old Rapa.

Table 8: List of Rapa lexical innovations

Gloss	Rapa Innovation	Reconstructions in PPN (unless noted otherwise)	Related Forms (PPN, unless noted otherwise) <sup>15</sup>
advance, charge	<i>mātu</i>	*qoso	*oma 'be swift' + *atu 'directional - away from speaker'
armpit, tickle	<i>ketekete</i>	PCE *keke 'armpit'; PPN *ma-gene 'tickle'	
back	<i>moko</i>	*tuqa 'back'	
banana	<i>tautau</i>	PEP *m(a,e)ika	*tau 'hang, be suspended'
buttocks	<i>kōmi</i>	PCE *remu	
calm sea	<i>karamate</i>		*kale 'A wave that ripples or breaks, rather than a swell' + *mate 'die, dead'
canoe	<i>kāmi'a</i>	*waka	
change direction	<i>tīkoni</i>		*koni 'move around'
children	<i>puki</i>	*tamariki <sup>16</sup>	
<i>Cordyline terminalis</i>	<i>karokaro, kaukaro</i> <sup>17</sup>	*ti	*kalokalo 'flower species'; *kau stalk, stem'
<i>Corokia collenetei</i>	<i>raupata</i>		*laupata 'tree species'; *lau 'leaf'; PCE *naupata 'scaevola plant' <sup>18</sup>

<sup>15</sup> Proto-forms were taken from Greenhill and Clark 2011, unless otherwise noted.

<sup>16</sup> *Tamariki* is also used to mean 'children' in Old Rapa.

<sup>17</sup> These two terms are generally used as synonyms today; however, all of my elder consultants report that *karokaro* is the young leaf, curled in the center of the plant; *kaukaro* refers to the entire plant.

earth oven which is covered by volcanic stones	<i>ko'otu</i> <sup>19</sup>	*umu	
eel	<i>takaviri</i>	*pusi	PCE *takawiri 'turn, twist'
escape	<i>moka</i>	*sola	
eyebrow	<i>kene'u mata</i>	*tuke-mata	*mata 'eye'
family	<i>kōpū</i>	*saqa 'clan'	*koopuu 'gullet, stomach, belly, guts'
fire	<i>ngara'u</i>	*afi	*ŋarafu 'charcoal'
fire plow	<i>'ikā</i>		*sika 'make fire'
firewood	<i>rārā</i>	*fafie	*raqa-raqa 'small branch'
fishing net	<i>ngake</i>	*kupeŋa	
forest	<i>raro rākau</i>	PPN *wao; PCE *ŋasere	*lalo 'below, under' + *lakau 'tree'
fresh water	<i>kōta'e</i>	*wai	*tafe 'to flow, especially of a current'
fresh water source, waterfall	<i>kōringiringi</i>		*liŋi 'pour'
generation, divide	<i>kopanga</i>		
go	<i>naku</i>	*saqe	
hair of head	<i>rauka'a</i>	*lau-qulu	*lau 'leaf' + *kafa 'braided fibers'
high fort, fortified village	<i>pāre</i>		*pale 'defense'; *pa 'enclosure, fence'
immediate family	<i>puki'anga</i>		
indeed	<i>noti</i>	*foki	
large, numerous	<i>ngare</i>	*lasi	
learn	<i>'aikete</i>	*ako	*kai 'eat' + PEP *kite
learn	<i>āikete</i>	*ako	
make a path in the woods	<i>tāmoka</i>	*taa 'cut, chop, carve'	
man	<i>rua</i>	*taqane	*rua 'two'; *lua-ni 'associate, companion'
nose	<i>pitā'u</i>	*isu	
overflowing of river	<i>karea</i>		
parent	<i>karakua</i>	*matuqa	*koromatua 'elderly or wise person'
peel	<i>'oni</i>	*fore	*soni 'incise, cut into'
pretty	<i>mānea</i>		*mana-qia 'handsome lothario'; *maneqa 'play'
ridge	<i>taratika</i>	*tuqa-siwi	*tala 'pointed object'; PEP *tika 'straight'
river	<i>mangavai</i>	*wai-tahe	*maŋavai 'tributary'
river bank	<i>tupe</i>		
salt water, sea	<i>kara, kare</i>	*tahi; *miti	*kale 'a wave that ripples or breaks, rather than a swell'

<sup>18</sup> According to Tiffany Laitame (pers. comm. 2014), a biologist and member of the Rapa Iti community, *Scaevola* and *Corokia* are not biologically similar, nor do they have any surface similarities. Furthermore, *Scaevola* is not found on Rapa Iti.

<sup>19</sup> Stokes (1955) lists this as *kauatu*.

see	<i>noko</i>	*kite	
skinny	<i>mokōʻī</i>		
sleep	<i>komo</i>	*mohe	
small	<i>kakaio</i>	*riki	
small animals	<i>kororio</i>	*riki	
small sea cucumber	<i>'akaekae</i>	*loli <sup>20</sup>	
small taro bundles	<i>tīromi</i>		
south wind	<i>mākiki</i>	*toŋa	
speak	<i>'akaero</i> <sup>21</sup>	PEP *kii	*reo 'voice'
spider	<i>kopitoru</i>	*lewelewe	
split into equal parts	<i>panga'a</i>		
spoken word	<i>koai</i>	*kupu	
stone, rock	<i>koni'i</i>	PCE *po-fatu	
storm	<i>tonou; touno</i>	*afaa	
sweet (smell and taste)	<i>kakona</i>	*maŋalo	*kona 'satiated, satisfied'
taro	<i>mīkaka</i>	*talo	
taro leaf	<i>raupaka</i>		*laupata 'tree species'; *lau 'leaf'; *pata 'spotted'
taro species	<i>'ara'ara</i>		*farafara 'plant species'
tear (n)	<i>karavai</i>	*loqi-mata	*wai 'fresh water'; *kala 'sting'
valley	<i>tīkoko</i>		*kookoo 'hole'
weak	<i>mōkiki</i>	*ŋawari	
wet taro-bed	<i>roki</i>		*loki 'enclosed area' <sup>22</sup>
wild sugar cane	<i>tāmi'a</i>	*too	
wild taro	<i>matae</i>		
woman	<i>pē'ā</i>	*fafine	*pela 'mud, muddy, dirt, filth'
young taro	<i>kāvake</i>		*kawake 'moon, month'

#### 4.3.1. Social motivation for innovation

While some of the items on this list are entirely new forms, without any clear provenance (*pē'ā*, *karakua*, *kopanga*, *panga'a*, *mīkaka*, *akaekae*, *koni'i*, *pitā'u*, *moko*, *kōmi*, *āikete*, *koai*, *nākū*, *mātu*, *mokōʻī*, *kakaio*, *noko*, *komo*, *kororio*, *ko'otu*, *kāmi'a*, *karea*, *moka*, *tāmoka*, *tāmi'a*, *tīromi*, *ngare*, *ngake*, *kopitoru*, *matae*), the majority of Old Rapa's innovations appear to have been derived from other terms that likely already existed in the Old Rapa lexicon. The "other" reconstructed forms in column four in Table 8 offer the reconstructions for lexical items that may have had reflexes in Old Rapa, but have undergone unique semantic innovations.

Stokes (1955:320–321) remarked on his list that these innovations in Old Rapa were nearly all terms of "ordinary life," otherwise known as basic vocabulary items. This remains true of my more extensive list. Most of the aberrant vocabulary found in Old Rapa is "basic" in that it is vocabulary that relates to the everyday life, activities, and environment of Rapa Iti culture. These types of terms are the least likely to change so drastically from prototypical forms barring some significant social motivation. This is particularly the case among Polynesian languages where basic vocabulary tends to be conservatively retained.

<sup>20</sup> Old Rapa does have a reflex of PCP \*loli, *rori*, meaning 'larger sea cucumbers'.

<sup>21</sup> This looks like a metathesized form of *reo* with a fossilized causative prefix *'aka-*. *Ero* does not have any meaning alone.

<sup>22</sup> Hawaiian shares a semantic cognate, *lo'i*, for enclosed wet taro-bed.

So what was the motivation for deriving and inventing new forms for words that presumably already existed in the Old Rapa lexicon? Stokes (1955:319) suggested that the unique terms found in Rapa must be indicative of a “custom of word-changing.” While he admits not finding local confirmation of such a custom having existed in Rapa, he suggests that it is the only possible explanation for the changing of basic terminology. Stokes provided two main reasons for his hypothesis: (1) because many of the unique Old Rapa terms can be “derived from other terms” and (2) because relics of terms more consistent with Proto-Polynesian reflexes can be found in Old Rapa.<sup>23</sup> Stokes argued, then, that these terms represented “local word-coining” due to social pressure, or some sort of speech taboo.

Speech taboos were a common practice among Polynesians (see, for Tonga: Haugen and Philips 2010; Sāmoa: Duranti 1992; Tahiti: Ahnne 1926; Peltzer 1994), and were usually used to mark respect for the aristocracy or religious leaders. The most noted of these systems for lexical modification, as also described by Stokes (322–329), were the “chief’s language” in Sāmoa and the Tahitian *pi’i* system.<sup>24</sup> Both systems are practices for expressing respect for chiefs and gods. In Sāmoa, it was a system of deference, where certain terms and metaphoric expressions were coined for use only in reference to chiefs. This created a more formal speech register. For example, a chief is not “sick” (although perhaps seriously ill) but is “indisposed,” “weary,” “turned aside,” “wrapped in covering” and so forth...[a king] does not “wake” (*ala*) but does *maleifua*, perhaps “emits a cough” (Newell 1911:89, cited in Stokes 1955:322). In the Tahitian *pi’i*, certain words or sounds that were similar to the names of chiefs or gods were not allowed to be used by the general public. A term or even a syllable that was part of a chief’s name could be prohibited for use in regular speech or to refer to anything other than the chief himself. As a result, new words were coined (by the royal family) or borrowed from other nearby languages (Ahnne 1926; Stokes 1955:324) to replace the chiefly sounding terms and syllables throughout the language.

Stokes’s hypothesis was that there was “no doubt” a similar system of language restriction in Rapa Iti. Local oral traditions, however, do not support this idea. Stokes (1955:326) reported that the Rapa royals he spoke with denied such a system existing in Rapa Iti. I, too, was unable to confirm with any elder consultants that such a system ever existed in Rapa. I am nonetheless inclined to agree with Stokes’s hypothesis, due to Rapa Iti’s history of clan division (Hanson 1970; Hanson and Ghasarian 2007; Stokes 1930). Oral history (Stokes 1930; pers. comm. with Rapa Iti elders) indicates that there were at one time twelve different, and opposing, clans (*kōpū*) in Rapa Iti. Each of these clans had claim to a fort (*pāre*) and the valley land below the *pāre*. According to multiple legends, Rapa’s clans were in constant conflict, each trying to appropriate more land and resources from the others. Archaeological research also offers evidence of a warring culture in Rapa Iti. Anderson et al. (2012:253) wrote of clan warfare:

It first becomes apparent archaeologically with the establishment of the Noogorupe and Ruatara fortifications between AD 1300 and 1400, the new need for defensive architecture implying the beginning of stronger status rivalry between competing polities than existed at the time of initial colonisation or developed soon afterward. If it is accepted, as ethnographic data suggest, that the flat-topped towers at the centres of large forts were places of chiefly habitation, then competing chiefly polities existed on Rapa by the 18th century. *Pare* at that time tended to have more defensive features (e.g. Morongo Uta, Potaketake, Kapitanga), some of which cut through existing architecture, suggesting improvements to defensive structure. The higher elevation refugia sites (Ngapiri and Pukumia) also suggest increased warfare late in the Rapan sequence. The overall trend in fort construction, from two in the 14th century, gradual increases into the 17th century and an accelerated burst through the 18th century,

<sup>23</sup> While Stokes does not provide much evidence, he was correct in his assumption. I have found reflexes of some PPN basic vocabulary in place names and in people’s names in Rapa Iti indicating that these terms may have at one time been part of the lexicon, perhaps prior to the language innovations. Some examples are: *Tevaitau* lit. ‘the fresh-water fight’, where two clans supposedly fought over a claim to a fresh water source; *Teumukopuki* lit. ‘the oven place for children’, where (according to legend) a cannibalistic giant cooked children; and *va’ine*, used in the married names of some elder women.

<sup>24</sup> Stokes refers to the Tahitian system as *pi*, but the name is actually *pi’i*, meaning ‘to call’ in Tahitian.

suggests that conflict and the threat of war increased through the sequence. The most likely reasons for this increase were either direct population growth or indirect population pressure on resources, such as agricultural land.

The leaders of Rapa's multiple clans, in trying to assert authority and negotiate space on such a small and crowded island, may have used language restrictions to create socio-political boundaries and clan demarcations. Perhaps as the population became more unified, the unique vocabulary of the more powerful clans persisted.

#### 4.3.2. Evidence of Old Rapa's unique vocabulary in other PN languages

Regardless of why Rapa's innovative vocabulary may have been coined, its existence is important to investigate. Due to the divergence of Rapa's innovative vocabulary from Proto-Polynesian and Proto-Eastern Polynesian, attestations of similar forms in other Polynesian languages provide convincing evidence for pre-historic relationships with other island communities. The languages that share some of Rapa Iti's lexical or semantic innovations are the languages of Rapa Nui, the Southern Cook Islands, Mangareva, and Mangaia. Rapanui shows evidence of the semantic innovation of *kakona* 'sweet smelling', as well as the form innovations *matu* 'to advance', *poki* 'child', and *honi* 'peel' (Rapanui consultants).<sup>25</sup> Among the languages of the Cook Islands, Penryhn demonstrates three shared semantic innovations with Old Rapa: *kona* meaning 'sweet', *taha rua* 'person', and *kōpū tangata* 'family, relative'; Manihiki shows one semantic innovation *kōpu tangata* 'extended family'.<sup>26</sup> Rarotongan shows evidence of the following innovated terms: *ngake* 'a small scoop net with a handle'; *mokotua* 'back'; *mānea* 'beauty, agreeable to sight'; and *kōpū* 'family' (Buse 1995). Mangarevan shares several innovations: *koko* 'valley', *noti* 'indeed', *roupaka* 'small leaves of taro for eating', *matu* 'go follow'; *rua* 'spouse, partner in a couple' and *kami'a* 'canoe' or 'trunk hallowed out to make an outrigger'; and two possibly related innovations: *ko'otu* 'rocky extremity' and *tīkoni* 'clubfoot' (Mangarevan consultants, 2013 and 2015; Janeau 1908; Tregear 1899). The language of Mangaia has the greatest number of shared lexical innovations with Rapa Iti:<sup>27</sup>

**Table 9:** Mangaia's shared innovations with Rapa Iti

back	<i>moko</i>
canoe	<i>kami'a</i>
children	<i>puke'anga</i>
<i>Cordyline terminalis</i>	<i>karokaro</i>
family, clan	<i>kōpū</i> (Walter and Reilly 2010)
fire plow	<i>'ikā'ia</i>
forest	<i>raro rākau</i>
fresh water	<i>kota'e</i>
fresh water source	<i>koringiringi</i>
generation, divide	<i>kopanga</i>
immediate family; household	<i>puke'anga</i>
many	<i>ngare</i>
name of a wind	<i>makiki</i>
nose	<i>pita'u</i>
old person	<i>inaina</i>
oven	<i>kauatu</i>
parent	<i>karakua</i> <sup>28</sup>

<sup>25</sup> *Honi* (RN) and *'oni* (OR) appear to be retentions of PEP 'incise, cut into' and a subsequent semantic narrowing to 'peel' from PEP 'cut into'.

<sup>26</sup> Taken from *The Dictionary of the Cook Islands Languages*.

<sup>27</sup> All terms were taken from the Mangaian Dictionary Project's online database between Nov. 2013 and Jan. 2014, unless otherwise noted.

<sup>28</sup> *Karakua* appears only in the context of adoptive parents or in-laws.

pretty	<i>mānea</i>
skinny	<i>mokōī</i>
small	<i>kakaio</i>
small (for animal)	<i>kororio</i>
small fishing net	<i>ngake</i>
small taro bundles	<i>tīromi</i>
stone, rock	<i>koni'i</i> ('weapon of stone')
sweet-smelling	<i>kakona</i>
taro	<i>mikaka</i>
taro leaf	<i>paka</i>
taro species	<i>'ara'ara</i>
tickle	<i>ketekete</i>
to come and go	<i>naku</i>
to go	<i>matu</i>
to learn	<i>'aikete</i>
to lie down	<i>komo</i>
to see	<i>nokoia; nokoroa</i> <sup>29</sup>
tribe	<i>vaka</i> (Walter and Reilly 2010)
wet taro-bed	<i>roki</i>
wild taro	<i>matae</i>
woman	<i>pe'ā</i>

#### 4.4. Mangaian and Old Rapa

Sections 4.1–4.3 outlined some of Old Rapa's divergent features and showed the results of a typological investigation of similar phenomena in other Polynesian languages. The results of this investigation suggest a strong relationship between Mangaian and Old Rapa. Uniquely shared innovations as well as identical consonant reflexes from PEP indicate that these two languages may be more closely related to each other than to the rest of the languages in the EP group. Their identical sound correspondences alone signal shared development, but what is perhaps more convincing are their shared grammatical features and extensive shared basic vocabulary innovations. The nature of the shared features between Mangaian and Old Rapa points to an especially close relationship between the two languages.

The shared innovations between these two languages suggest that there may have been a direct settlement from one of these islands to the other. Recent archaeological dates for initial settlement of Rapa Iti are around 1200 AD (Kennett et al. 2006, 2012:196, 201), with a marked increase in population around 1400 AD (Kennett et al. 2012:201). Mangaia's settlement appears to be slightly earlier, between 1040 and 1220 (Walter and Reilly 2010). The periods of settlement for both islands overlap, meaning that it is very unlikely that there was direct settlement from one island to the other. Thus, the development of shared linguistic features is unlikely to have occurred out of a direct settlement scenario. This, however, does not discount the possibility that the two languages still may have shared an original source. Given the settlement dates, I propose that the shared features of the Rapa and Mangaian languages developed out of prolonged contact rather than through stationary isolation in a homeland and subsequent migration from that homeland. This kind of continued contact would have facilitated the development and sharing of linguistic features between the two speech communities. Continued contact into later periods of Rapa Iti's clan divisions and fort developments would also have allowed for innovations to have been exchanged between the two islands.

Further support for a close relationship between Mangaian and Old Rapa comes from lexical and historical attestations of similar, and unique, social structures. First, the terms *vaka* 'clan' and *kōpū* 'family' have undergone a significant semantic change in both languages. These changes are

<sup>29</sup> *Nokoia* is likely *noko'ia*, with a passive suffix. *Nokoroa* is likely *noko roa* 'to see far'. The base-word is thus the same as Rapa Iti's *nook* 'to see'.



significant as they represent how early Mangaian and Rapa Iti populations may have been organized under their *rangatira* 'chief', as well as how they were divided. The use of these terms in identical ways in both languages points to a shared system of clan division and social stratification. Additionally, both Mangaia and Rapa Iti have stories of women warriors, something unique in Polynesian history. High-ranking women and chiefly women were certainly not uncommon in many parts of Polynesia (Gunson 1987); however, warrior women are extremely rare. In both Rapa Iti and Mangaia, however, women warriors seem to have been commonplace, perhaps pointing to a shared social structure between the two island communities. On Rapa Iti, there are two large, erected slabs of rock at opposing ends of the large A'urei Bay. According to a local historian, the taller of the two was to measure boys for war. The second and shorter stone was to measure girls for war. In both cases, if a child's shoulders reached the height of the stone, he or she was ready for battle. This same local historian stated that Rapa had women warriors who were in charge of guarding their clan's taro beds. These women were called *irari*. Reilly (2001) describes women in Mangaia also fighting in lines of battle. He wrote, "Women were clearly capable fighters who worked in a complementary wartime partnership with their husbands" (2001:160).

### **5. A South Polynesian contact sphere**

Based on the linguistic evidence alone, the relationship between Old Rapa and Mangaian reflects both shared inheritance and maintained contact. Rapa Iti and Mangaia share an original source, and through continued waves of contact between the two speech communities, interaction was maintained to the point where these communities were participating in each other's political and social systems. A localized contact sphere persisted between these two islands. Additionally, based on the shared features between Old Rapa and other languages, I hypothesize that their local contact sphere was only one part of a larger contact network that stretched across southeast Polynesia, from the Southern Cooks to Rapa Nui, including Rapa Iti and Mangareva.

If Rapa Iti and Mangaia were involved in a two-way interaction sphere, it follows that people from Rapa Iti would have been voyaging to Mangaia. Due to the close proximity of the Southern Cooks, it is not unlikely that these groups were also interacting with people from Rapa Iti. Linguistically, this is demonstrated in the shared features between Old Rapa and other Southern Cooks languages. Rarotongan, for example, demonstrates identical consonant reflexes from PPN, and shares many of Old Rapa's grammatical innovations, as well as a handful of Old Rapa's lexical innovations. Other languages of the Southern Cooks are not well documented enough to investigate grammatical and lexical correlations. However, it is certain that consonant reflexes from PPN for at least Ma'uake and Aitutaki are also identical to those of Old Rapa. Furthermore, as discussed in section 4.2.2, Old Rapa shares the unique grammatical marker *tuai* with Niuean. Niue is not part of the Southern Cooks, but, as previously stated, Niuean borrowed extensively from EP languages via contact with the Southern Cooks languages. If Rapa Iti voyagers were regularly involved in a Southern Cooks contact sphere, they may have had contact with Niuean speakers as well, leading to the incorporation of this shared item into Old Rapa.

I have also noted shared linguistic features between Old Rapa and Rapanui, as well as Old Rapa and Mangarevan. These shared features are not as extensive as those between Old Rapa and Mangaian, but they cannot be ignored as evidence for at least some sort of isolated language contact, if not a period of shared development. Moreover, many of these shared features overlap and are shared between all three languages. Lexically, Rapanui, Mangareva, and Old Rapa do not show as compelling evidence for subgrouping as do Mangaian and Rapa Iti; however, the identical sound changes that occurred from PEP \*taua may lend credence to the idea of a period of shared development between these three languages as well.

### **6. Conclusions**

Old Rapa is a Central Eastern Polynesian language that demonstrates a very close affinity with Mangaian through sound correspondences, sporadic sound changes, shared grammatical innovations, and a number of shared lexical innovations. If the archaeological dates are accurate, the time-depth

from the settlement of Mangaia to the initial settlement of Rapa Iti was likely not great enough to have allowed for their complex shared developments to have occurred. Thus, it is unlikely that Rapa Iti was settled in one pulse from Mangaia. It is more likely that Mangaia and Rapa Iti share an original source, and that the shared linguistic features between the two languages spoken on these islands were developed within a micro-contact sphere. This contact network became part of a larger interaction network with the other Southern Cook Islands, Mangareva, and possibly even Rapa Nui, wherein linguistic features were exchanged and possibly developed. At some point, the smaller spheres of contact ceased to exist, and Rapa Iti remained isolated until Western contact in the nineteenth century. Support for this proposal of isolation comes from Old Rapa's truly distinctive features. These include the marker for past negative *ki'ere* and the use of *ka* as a perfective aspect marker. Perhaps contact stopped due to the aggressive in fighting on Rapa Iti, or perhaps there was simply less of a need to exchange with other islands as later generations became more settled. These reasons are entirely speculative, however, and there is no way of knowing why Rapa Iti's interaction with other islands ended.

There are two wider implications of this prehistoric contact scenario. First, a long-distance contact network in which linguistic features were developed argues against the traditional PCE subgroups, Marquesic and Tahitic. This is perhaps a more minor issue, as evidence for these subgroupings has been proved unsubstantial (see Walworth 2014). Second, a southern contact sphere in which Rapa Nui participated argues against the long-held theory that Rapa Nui was significantly isolated (Fischer 1992; Kirch and Green 2001, among others) during periods of long distance voyaging between all of the other east Polynesian islands. This is critical, as this long period of isolation accounts for the Rapa Nui language's conservative retentions from PEP, and lack of membership in the PCE subgroup. This problem requires a deeper investigation into the language of Rapa Nui, as well as other under-studied languages of south Polynesia. Further research on these languages will offer a clearer picture of historical relationships in the region.

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**JSEALS Special Publication No. 1**

**ISSUES IN AUSTRONESIAN  
HISTORICAL LINGUISTICS**



**Edited by Hsiu-chuan Liao**

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OPEN ACCESS – Semiannual with periodic special publications

E-ISSN: 1836-6821

<http://hdl.handle.net/10524/52405>



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