

*Proto Oceanic *i, *qi, and *-ki*

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Hooper (1985) reconstructs POc *qi, a particle that occurred between an inalienably possessed noun and its nonspecific possessor. However, she notes some irregularities in the reflexes of this morpheme, as POc *q is sometimes reflected as if it were *k. Hooper also reconstructs a personal article *i that occurs in noun phrases where the possessor is a personal noun phrase, and alludes to the POc locative preposition *(q)i reconstructed by Pawley (1972:85). My examination of a range of functional and phonological evidence concludes that these morphemes and others cognate with them reflect four POc morphemes: a personal article *i; a nonspecific inalienable possessive marker *qi; a free-form derivative suffix *-ki; and a locative preposition *i.

1 Introduction¹

This short paper is an attempt to deal with a detail of Proto Oceanic (POc) morphology.² In a careful and well-argued paper, Hooper (1985) reconstructs POc *qi, a particle that occurred between an inalienably possessed noun and its nonspecific possessor in the construction exemplified in (1).³

¹ This paper is a by-product of a project on the reconstruction of Proto Oceanic adjectives, their morphosyntax and their history, which Byron Bender, in his role as editor of *Oceanic Linguistics*, encouraged me to write up as Ross (1998a) and Ross (1998b). It is a token of my gratitude for Byron's continuing encouragement, as well as for the contribution he makes to Oceanic linguistics through his proactive and committed administration of the field's flagship journal. With regard to the current paper, I am indebted to Andrew Pawley and John Lynch for their comments and for drawing my attention to data I would otherwise have missed, and I owe special thanks to Catriona Hyslop, whose North-East Ambae data first sparked my interest in unpossessed forms of inalienable nouns. Without the data she generously supplied, this paper would not exist.

² Abbreviations for person and number are formatted thus: 1 – first person, 2 – second person, 3 – third person, D – dual, E – exclusive, I – inclusive, P – plural, S – singular; D: – disjunctive (=free), S: – subject, and P: – possessor, are prefixed to possessor pronoun forms (e.g. D:3D – third person dual disjunctive pronoun). Other abbreviations used in glosses are: ART – article, CL – possessive classifier, FREE – free-form derivative suffix, LIG – ligature, NCL – numeral classifier, PREP – preposition.

³ Reconstructions are mine. In Ross (1998a) and in an earlier version of the present paper I reconstructed *qi as an enclitic. Although there is good reason to suppose a degree of phonological bondedness between the possessed noun and *qi, I have abandoned the enclitic interpretation for reasons given in Ross (1998b).

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- (1) POC
 *a qaqe qi boRok
 ART leg qi pig
 'a pig's leg, leg of pork'

She also remarks on the fact that there are some irregularities in the reflexes of this morpheme, as POC *q is sometimes reflected as if it were *k. This is true particularly of those North Vanuatu reflexes that appear to be suffixed to an inalienable noun to produce an unpossessed (= independent) form, such as North-East Ambae *vulu-ki* 'hair (possessor not mentioned)', *vulu-gu* 'my hair' (Catriona Hyslop, pers. comm.). Hooper also reconstructs a personal article *i that occurs in noun phrases where the possessor is a personal noun phrase (see below), and alludes to the POC locative preposition *(q)i reconstructed by Pawley (1972:85).

The question I am addressing here is: how many Proto Oceanic morphemes do these reflexes represent? I will attempt to answer this question by looking at both functional and phonological evidence.

2 The Proto Oceanic possession system

The construction in (1) contrasted with one in which the possessor was specific:

- (2) POC
 *a qaqe-ña tam^wata
 ART leg-P:3S man
 'a/the leg of a certain/the man'

We can be reasonably certain from the work of Lichtenberk (1985) and Hooper (1985) (and others before and since, including Pawley 1972, 1973; Pawley & Sayaba 1990; Lynch 1982, 1996a, 1996b) that the Proto Oceanic possessive system was as set out in Table 1.

As Table 1 shows, possession constructions in Proto Oceanic varied along two parameters. First, the possessed noun belonged to one of two morphological classes, inalienable or free. Members of the inalienable class were mostly kin terms and parts of wholes, but class membership appears to have been lexically determined: in modern Oceanic languages, one cannot predict with certainty from their semantics which nouns will be inalienable. The free class was the default: it contained all nouns not in the inalienable class.

The second parameter concerned the status of the possessor noun phrase. Table 1 shows a two-way distinction between a specific and a nonspecific possessor. A nonspecific noun denoted a class or a class member, but not a particular member that the speaker wished to refer to. Semantically, nonspecific 'possessors' were often not really possessors at all, but generic nouns used attributively, as (1) shows. A nonspecific possessor had by definition to be a noun.

Table 1: Proto Oceanic noun phrases with common noun phrase possessors*
(after Hooper 1985 and Lichtenberk 1985)

POSSESSOR	POSSESSED	
	INALIENABLE	FREE
SPECIFIC		
PERSONAL	ART D-ART R *a qaqe-i X ART leg-ART X 'X's leg'	ART D CL-ART R *a Rumaq na-i X ART house CL-ART X 'X's house'
PRONOMINAL	D-P: *a qaqe-gu ART leg-P:1S 'my leg'	D CL-P: *a na-gu Rumaq ART CL-P:1S house 'my house'
COMMON	D-P:R *a qaqe-ña tam ^w ata ART leg-P:3S man 'the man's leg'	D CL-P:R *a na-ña Rumaq tam ^w ata ART CL-P:3S house man 'the man's house'
NONSPECIFIC (COMMON)	D qi R *a natu qi boRok ART child qi pig 'a piglet' (lit. 'child of pig')	D ni R *a polo ni niuR ART liquid ni coconut 'coconut water'

* The abbreviations R and D are used here for the possessor and possessed noun phrases respectively.

Specific possessors are divided on formal grounds into personal, pronominal and common. If the possessor was pronominal, then its person and number were marked by a possessor suffix which was attached directly to an inalienable possessed noun or, if the possessed noun was free, to a possessive classifier, in this case the general classifier *na-⁴:

- (3) POC
- | | | | |
|------------|----------------|----------------|----------------------|
| *a qaqe-gu | 'my leg' | *a na-gu Rumaq | 'my house' |
| *a qaqe-mu | 'your (S) leg' | *a na-mu Rumaq | 'your (S) house' |
| *a qaqe-ña | 'her/his leg' | *a na-ña Rumaq | 'her/his house' etc. |

⁴ The possessive classifier *na-, the general or default classifier, is one of three reconstructed by Lichtenberk (1985); the others are *ka- 'food' and *ma- 'drink'. Questions about how many classifiers there were in POC and their forms and uses remain under discussion (see, for example, Lynch 1996b), but the details of their reconstruction have no bearing on the topic of this paper. It is possible that the default classifier (*na-) was not preceded by the article (indeed, historically it may have been the same morpheme) but that other classifiers were. I have not adopted this possibility in the reconstructions here.

When the specific possessor was a common noun phrase, this was simply appended to the phrase, as shown in Table 1.⁵ When, however, it was a personal noun phrase (one in which the head was a proper noun or perhaps a kin term), it appears that its personal article *i was cliticised directly to the possessed noun or classifier, as in:

- (4) POC
 *a qaqe=i X
 ART leg=ART X
 'X's leg'

Hooper (1985:157) suggests that the possessor suffix was also present with a personal possessor, as it was with a common possessor. That is, she would reconstruct (5) rather than (4):

- (5) POC
 *a qaqe-ña i X
 ART leg-P:3S ART X
 'X's leg'

Certainly there are languages where this structure is reflected. Hooper gives examples from a number of languages, but among these the sequence of possessor suffix and personal article occurs only in Tigak and Roviana (it is also found in Arosi). However, there are also widely distributed languages—widely distributed, that is, both geographically and genetically—which, like (6b), reflect the structure in (4).⁶

- (6) BOUMAA FIJIAN
- a. *a liŋa-gu*
 ART hand-P:1S
 'my hand'
 - b. *a liŋa-i Jone*
 ART hand-i John
 'John's hand'
 - c. *a liŋa-na a noneyalewa yai*
 ART hand-P:3S ART young.girl this
 'this young girl's hand'

Clearly, analogical regularisation has occurred in a good many daughter-languages. It has gone in one of two directions. If the reconstruction in Table 1 is correct and (4) was the Proto Oceanic structure, then in Tigak, Roviana, Arosi and many other languages apparently reflecting the personal possessor construction in (5), the personal possessor construction has been analogically 'infected' by the common. If, on the other hand, (5) is the correct reconstruction, then no analogical infection has occurred.

Again assuming the reconstructions in Table 1 to be correct, there are languages, among them Tolai, North-East Ambae and Anejoñ, where the infection has perhaps worked in the

⁵ For the free construction with a common noun phrase possessor, both *a na-ña Rumaq tam^wata and *a Rumaq na-ña tam^wata 'the man's house' are reconstructable. I suspect that, as in some modern Oceanic languages, the two orders coexisted, the difference between them being one of information structure.

⁶ My assumptions about Oceanic subgrouping for reconstructive purposes and the grounds for them are given in Ross (1998a).

opposite direction, and the common possessor construction seems to have been infected by the personal. In these languages, the reflex of *i has lost its general personal article function and occurs only in possession phrases. As a result it has been reinterpreted as a possessive connective. This has evidently started to happen in Boumaa Fijian, where (7) is an alternative to (6c) (Dixon 1988:123). This development is easier to explain if we assume that (4) was the Proto Oceanic structure.

- (7) BOUMAA FIJIAN
a lija-i ɲoneyalewa yai
 ART hand-P:3S young.girl this
 'this young girl's hand'

Happily, this issue is also not particularly important to the present discussion, and it is possible that (4) and (5) co-occurred in the protolanguage.

3 Distinguishing between *i 'personal article' and *qi 'nonspecific possessive particle'

Hooper discusses the possibility that *i in (4) or (5) was the same morpheme as her *qi in (1) and concludes that it was not. Her reasons are compelling and are encapsulated in Table 1: *i was selected by the (personal) possessor noun phrase, *qi by the possessed (inalienable) noun.

I concur with Hooper. If *i and *qi had been the same morpheme, then we would have to reconstruct a general possessive preposition *(q)i. We would then expect this *(q)i to occur not only with specific personal possessors and with nonspecific (common) possessors, but also with specific common possessors. But its absence from the specific common possessor cells in Table 1 is well founded. In Table 2 are tabulated, among other morphemes and interpretive information discussed below, reflexes of *i and *qi in selected Oceanic languages according to their occurrence in specific personal, specific common and (nonspecific) common possessor constructions. (I explain below why a form like *na* should count as a reflex of *qi.) In four widely separated languages, Tigak (Western Oceanic, Meso-Melanesian), Mota (North Vanuatu), Kwamera (South Vanuatu) and Bauan, and Boumaa Fijian (Central Pacific), we find a significant distribution: *i is reflected with a specific personal possessor, *qi with nonspecific possessor. In these languages, no morpheme reflecting either *i or *qi occurs in the specific common possessor construction. If the reflexes of *i and *qi were simply reflexes of a general possessive *(q)i, this would be a very strange distribution indeed. But if, as Hooper argues, we are dealing with two distinct morphemes, there is no problem.

Table 2 shows a number of languages where a reflex of *i or *qi does occur in the specific common possessor construction, but this is not surprising. As I noted above, in a number of languages *i has been reanalysed as a possessive connective and has extended (or is extending) its domain from specific personal to specific common possession. In Tamambo (North Vanuatu), the reflex of *qi has apparently extended its domain from nonspecific possession, which is by definition common, to specific common possession. In languages like North-East Ambae, where the three categories of possession are marked in the same way, it is probably vacuous to ask whether the morpheme in the specific common construction reflects *i, *qi or both.

Table 2: Reflexes of *i, *qi and *-ki in selected Oceanic languages

	Possessor morphemes		specific personal		specific common		nonspecific (common)		Classifier	Numeral	Free noun	Locative preposition
			inal	free	inal	free	inal	free				
POc	*k	*q	*i	–	*qi		*qi	*qi	*-ki	*i		
Yapese	ʔk, ʔ	ʔ	–	–	ɛ: *i		–	i:, ɛ: *i	-kʰ *ki	-y *i	–	–
Seimat	∅	∅	–	–	-i, -e		–	–	–	–	–	–
Kele	∅	k ∅-∅	–	–	–		–	–	-y	–	–	–
Takia	∅-∅k	∅-∅k	–	–	–		–	–	-k *ki, *qi	–	–	–
Tigak	k, ∅	k, ∅	i	–	–	ina	–	–	–	–	–	–
Nochi	k, ∅	k, ∅	ina	ina	ina	ina/in ¹	–	ina	–	–	–	–
Lihir	k, ∅	k, ∅	– -i	– -i	–		–	i	–	–	i	–
Ramoaina	k, ∅	k, ∅	–	–	–	na	–	na ² in ina	–	–	–	–
Tolai	k, ∅	k, ∅	-i	-i	–	na	–	na	–	–	–	–
Siar	k, ∅	k, ∅	–	–	in ³		–	–	–	–	–	–
Halia	k, ∅	∅	–	–	–		–	–	–	–	–	i
Taiof	k, ∅	∅	–	–	in̄		–	–	–	–	–	–
Bogotu	k, ʔ	ʔ, ∅	–	–	i	–	–	–	–	–	–	i *qi, *i

¹ *in* only in construction with the small class of adjectives (see text).

² There are three noun classes in Ramoaina. Membership is lexically determined, although members of the *in* and *ina* classes tend to be noncount.

³ Only in construction with adjectives (see text).

Table 2: (continued)

Kwaio	<i>k, ʔ</i>	<i>ʔ, ø</i>	–	–	–	<i>-ʔi, -ʔe</i> <i>*ki, *qi</i>	<i>-ʔe⁴</i> <i>*ki, *qi</i>	–	<i>i</i> <i>*qi, *i</i>
Kwara'ae	<i>k, ʔ</i>	<i>ʔ, ø</i>	<i>i⁵</i> <i>*qi, *i</i>	–	<i>ʔi</i> – <i>*ki, *qi</i>	<i>-ʔi, -ʔe</i> <i>*ki, *qi</i>	–	–	<i>i</i> <i>*qi, *i</i>
Sa'a	<i>k, ʔ</i>	<i>ʔ, ø</i>	–	–	<i>i</i> <i>*qi, *i</i>	<i>i</i> <i>*qi, *i</i>	–	–	<i>i</i> <i>*qi, *i</i>
Arosi	<i>k, ʔ</i>	<i>ʔ, ø</i>	<i>i</i> – <i>*qi, *i</i>	<i>i</i> – <i>*qi, *i</i>	<i>i</i> <i>*qi, *i</i>	<i>i</i> <i>*qi, *i</i>	–	–	<i>i</i> <i>*qi, *i</i>
Mota	<i>ʔ, w, ø</i>	<i>ø</i>	<i>i⁶</i>	–	<i>i</i>	–	–	<i>-i</i> <i>*ki⁷</i>	<i>i</i>
Mwotlap	<i>ʔ, w, ø</i>	<i>ø</i>	<i>i⁸</i>	–	–	–	<i>-ye⁹</i> <i>*ki</i>	<i>-ye</i> <i>*ki</i>	–
Mwerlav	<i>ʔ, w, ø</i>	<i>ø</i>	<i>i¹⁰</i>	–	–	–	–	<i>-[ʔ]i¹¹</i> <i>*ki</i>	<i>i</i>
N.E. Ambae	<i>k</i>	<i>ø</i>	<i>i, -i¹²</i>	<i>-i</i>	<i>-i</i>	–	–	<i>-ki¹³</i> <i>*ki</i>	–

⁴ In *akwale-ʔe* 'ten of', from *akwala* 'ten' (Keesing 1985:88).

⁵ Personal article used to indicate that the referent of the noun phrase is female.

⁶ Article with personal names and nouns used as names.

⁷ See text.

⁸ Article with personal names and nouns used as names.

⁹ See text.

¹⁰ As Mota, but also in possessive, e.g. *na ak i Wok^was* 'W's canoe'.

¹¹ Contrast between *na-sasa-k* 'my name', *sesei* 'a name' (indep) and *na sese tadun* 'a man's name'.

¹² *i* is the personal article, *-i* what Hyslop calls the "construct suffix" attached to any possessed noun whose possessor is a noun phrase other than a pronominal.

¹³ Codrington also records Volow (Saddle Island) *-ye*, Pak, Leon/Sasar, Mosin (all Vanua Lava) *-yi*.

Table 2: (continued)

Merei	∅	∅	i ¹⁴	–	–	–	–	–	–
Tamambo	k, x	∅	–	-i *qi, *i	-i *qi, *i	–	-i ¹⁵ *qi, *i	–	–
Paamese	∅	∅	–	–	-i-	–	–	–	–
Nguna	k	∅	–	ki *ki	–	–	–	–	e- *qi, *i
Kwamera	k, ∅	∅	-i	–	i	–	–	–	i-
Anejoñ	ɣ	∅	-i *qi, *i	-i *qi, *i	–	–	–	–	–
Wayan Fijian	k	∅	i, -i *qi, *i	–	-i- *qi, *i	–	–	–	i *qi, *i
Bauan Fijian	k	∅	-i *qi, *i	–	-i- *qi, *i	–	–	–	e *qi, *i
Tongan	k	ʔ	–	–	–	-ŋ *qi	–	–	i / ŋ *i / *qi
E. Futunan	k	ʔ	–	–	ŋ *qi	ŋ *qi	–	–	i *i
E. Uvean	k	ʔ	–	–	ŋ *qi	ŋ *qi	–	–	ŋ *qi
Samoa	ʔ	∅	–	–	–	-i / -ŋ ¹⁶ *i, *qi / *ki	–	–	i *qi, *i

¹⁴ Article with personal names and kin terms, also cliticised to a possessive classifier.

¹⁵ Only with certain quantifiers, for example, *tua-i tamaloxi* 'some of the people', *tua-ra* 'some of them'.

¹⁶ See text.

3.1 POc *i/*e ‘personal article’ outside possession phrases

Further support for the distinctness of *i and *qi is provided by the fact that each evidently served functions in Proto Oceanic outside possession phrases. Pawley (1972:32, 58) reconstructs *i as a Proto Eastern Oceanic article occurring with personal nominals. He records reflexes with this function in certain Southeast Solomonian and North Vanuatu languages. (Some of these are noted in Table 2.) In Merei (North Vanuatu), for example, *i* always occurs as an article before a personal name (e.g. *i Pita* ‘Peter’) or a kin term (e.g. *i rabui-na* ‘his mother’). It similarly occurs as a personal article in Wayan Fijian (Andrew Pawley, pers. comm.). Pawley finds more widespread reflexes of *i surviving only as a fossil prefix on independent pronouns and the word for ‘who?’ It seems very likely that Pawley’s Proto Eastern Oceanic *i shares its origin with the personal article *e* that occurs in many Meso-Melanesian languages and is perhaps also reflected (John Lynch, pers. comm.) as a fossil prefix in certain Anejoñ (South Vanuatu) kin terms: *etpo-* ‘grandparent’ (POc *tubu-), *etma-* ‘father’ (POc *tama-), *etwa-* ‘same-sex sibling’ (POc *tuqa- ‘older same-sex sibling’). Possibly *e was the phrase-initial form, *i phrase-internal.⁷

3.2 POc *qi in numeral classifiers

Although Pawley (1972) does not mention *qi as such, he does reconstruct two numeral classifiers, *pua-qi/*po-qi ‘spherical classifier’ and *mata-qi ‘individual unit in series or class’. These forms are reflected in the Cristobal-Malaitan group of Southeast Solomonian, in Fijian and in Polynesian languages, and Hooper provides copious examples of them. In Cristobal-Malaitan there are far more classifiers, and they obviously originate in the inalienable nonspecific possession construction with *qi. In Kwaio, for example, Keesing (1985:90) lists eleven classifiers, eight of which are recorded as nouns. They occur in phrases like (8), where *feʔe* (noun: *faʔi*) reflects POc *puaq + qi (‘fruit’ + *qi):

- (8) KWAIO
oru feʔe baʔu
 three fruit banana
 ‘three bananas’

Similar phrases occur in Kwara’ae: *faʔi* in (9a) is cognate with Kwaio *feʔe*. But here the *qi construction also remains productive, as in (9b). (Hooper’s examples are from Deck 1934.)

- (9) KWARA’AE
 a. *faʔi niu*
 NCL coconut
 ‘a coconut’
 b. *ʔae ʔi wae*
 leg ʔi man
 ‘human leg’

The reflexes of *qi in classifiers are listed in the column labelled Classifier in Table 2.

⁷ There is also evidence of another POc personal article *qa, with reflexes in southern New Britain, Southeast Solomonian and Polynesian. How this contrasted with *e/*i is unknown.

Examples like (8) imply a Proto Oceanic numeral construction like the one in (10). The details are orthogonal to the present argument, but there is reason to think that POc numerals functioned both as adjectival verbs and as nouns. In their prenominal position they were predicates: hence the subject prefix *i- in (10). Postnominally, they were attributes. Their nominal function is referred to below (Lynch, Ross & Crowley, forthcoming: ch. 4).

- (10) POC (?)
 *i-tolu puaq qi pudi
 S:3S-three fruit *qi banana
 'three bananas'

This receives indirect support from constructions in certain other Oceanic languages.⁸ There are a number of languages in which a reflex of *qi intervenes directly between a numeral and a noun. Such reflexes of *qi are listed in Table 2 under the heading Numeral. There are two possible sources of these constructions. First, in (11) the Kwaio numeral (*akwala* 'ten') is itself the head of an earlier nonspecific possession phrase ('two tens of things') in which it functioned as a noun:

- (11) KWAIO
 rua akwale-e ?ola
 two ten-?e thing⁹
 'twenty things'

Second, in some languages an earlier classifier either is now fossilised or has disappeared entirely. Putative early Oceanic reconstructions are given beside the examples below in order to avoid lengthy discussion of issues that are not directly relevant here. In Yapese, the numeral *dalip* 'three' may reflect POc *tolu 'three' + *puaq 'general classifier' (see Ross 1996:149), with the structure of (10):

- | | | |
|------|-----------------|----------------------------------|
| (12) | YAPESE | POC (?) |
| | <i>dalip</i> ε: | <i>ka:ro</i> : *i-tolu puaq qi X |
| | three ε: | car S:3S-three NCL qi X |
| | 'three cars' | 'three Xs' |

Mwotlap (North Vanuatu) has two numeral constructions: (13a) is the normal numeral construction, whilst *yo-ye* in (13b) functions like a dual marker with animate nouns and is one of a set which also includes *etel-ye* 'trial' and *i-ye* 'plural' (Crowley, forthcoming). In the

⁸ The presence of numeral classifiers in POc is attested by a scattering of languages with classifiers. As well as Cristobal-Malaitan and Polynesian, they include the Admiralties family, the Kilivila family, Sudest (Papuan Tip linkage), the North Bougainville linkage, the Nuclear Micronesian linkage and languages in New Caledonia. Reconstructable POc classifiers are *puaq 'default classifier, round object' = 'fruit', *kaiu 'wooden or elongated object' = 'tree' and *tau 'person'. There are also numeral classifiers in non-Oceanic Austronesian languages in Indonesia. However, the variety of classifier constructions reflected in these languages suggests that the reconstruction here was only one of several early Oceanic constructions in which numerals and classifiers occurred. We find, for example, fossils like Tigak *potul* in a construction that reflects an early Oceanic ordering different from the one reconstructed in the text:

Tigak		Proto Oceanic
<i>ta potul a nik</i>		*ta puaq tolu a/qi niuR
ART three LINKER coconut		ART CL three ART/*qi coconut
'three coconuts'		'three coconuts'

⁹ *akwale-?e* loses its glottal stop when followed by a work beginning with a glottal stop (Keesing 1985:88).

second the classifier has apparently been lost from the construction in (10), an inference supported by the presence of a classifier in the first, albeit with a rearrangement of constituents:

- | | | | |
|------|--------------------------------|--------------|-----------------------------------|
| (13) | MWOTLAP | | POC (?) |
| a. | <i>na-tm^wan</i> | <i>vo-yo</i> | *na tam ^w ane puaq rua |
| | ART-man | vo-two | ART man NCL two |
| | 'two men' | | 'two men' |
| b. | <i>yo-ye tam^wan</i> | | *rua qi tam ^w ane |
| | two-ye man | | two qi man |
| | 'two men' | | 'two men' |

Nochi and Tolai present us with a deletion of the classifier similar to (13b):

- | | | | |
|------|---|--|-----------------------|
| (14) | NOCHI (Western Oceanic, Meso-Melanesian, New Ireland) ¹⁰ | | |
| | <i>sajaul a kuk ina niu</i> | | |
| | ten ART one LIG coconut | | |
| | 'eleven coconuts' | | |
| (15) | TOLAI | | POC |
| | <i>a ivat na pal</i> | | *a pati qi pale |
| | ART four na house | | ART four *qi building |
| | 'four houses' | | 'four buildings' |

In Ross (1988:312–313) I showed that Maringe (Meso-Melanesian, New Ireland, Northwest Solomonic¹¹) reflects the same structure in, as in *glimai khoilo*, where the final *-i* of *glimai* represents the **i-* of **ina* and the initial *kh-* of *khoilo* reflects the coalescence of the *-na* of **ina* with the initial *k-* of the citation form *koilo*.

3.3 Formal riddles in the reflexes of *qi

Reflexes of **qi* in the modern languages are beset by two kinds of problem. The first concerns those reflexes in Table 2 which, on the face of it, do not look like reflexes of **qi* at all because they have the form *ina*, *in* or *na*. All of them occur in New Ireland languages. The second concerns the reflexes of the POC phoneme **q*.

I have discussed the first problem in Ross (1998b), and will only summarise that discussion here. The evidence suggests that in the language ancestral to the New Ireland linkage, the reflexes of **i* 'personal article' and **qi* fell together. Three events contributed to this. First, the personal article **i* was lost everywhere except in the possession constructions shown in the topmost cells of Table 1, and was thus reinterpreted as a possessive particle with a function similar to the function of **qi* with nonspecific (common) possessors. Second, the reflex of POC **qi* had extended its domain to include alienable possession, displacing **ni*¹² as it did in various other Oceanic languages. Third, POC **q* was lost, so that its reflex came to have the same form as the reflex of **i* 'personal article', in other words, both had the shape **i*. Thus putative early New Ireland structures were as follows:

¹⁰ The ligature is used in Nochi only if the numeral is compound, i.e. greater than ten.

¹¹ The Northwest Solomonic group is part of the New Ireland linkage.

¹² POC **ni* survives almost nowhere in northwest Melanesia.

(16) EARLY NEW IRELAND I:

	INALIENABLE	FREE
PERSONAL	*a ae=i X	*a Ruma na=i X
PRONOMINAL	*a ae-gu	*a na-gu Ruma
COMMON	*a ae-ñā tam ^w ata	*a na-ñā Ruma tam ^w ata
NONSPECIFIC	*a natu i boRok	*a polo i niuR

To the extent that this *i indicated a case relationship, it resembled a preposition. Now, early Oceanic had at least one preposition which took a possessive suffix indicating the person and number of its governee. This was *ta-, reconstructed by Pawley (1973) and Ross (1988:104–108), with some kind of locative, benefactive and possibly possessive function (Pawley 1973:148–149). Because of its usage, it was semantically close to early New Ireland *i, and in some New Ireland languages *ta- displaced the classifiers from free possessive constructions. However, reflexes of *ta- formed a paradigm. In Tigak, for example, the form with a personal noun phrase is *te* (from *ta- + *i ‘personal article’); with a common noun phrase it is *tana* (from *ta- + *-ñā ‘P:3S’), and there are also forms reflecting *ta-gu ‘1S’, *ta-mu ‘2S’ and so on. Thus Tigak has a personal:common pattern *te:tana*, reflecting earlier *tai:*taña. The pattern is matched in Tigak by two other prepositions—*pe:pana* ‘instrumental’ and *su:suna* ‘allative’—and the pattern appears to be quite old. For *i, however, the personal:common pattern was *i:*i, out of kilter with the other prepositions. This underwent analogical modification to *i:*ina. The fact that a cognate of Tigak *ina* occurs as far away as Taiof (north Bougainville), where *iñ* has exactly the same function, suggests that the pre-Tigak stage at which these things happened was in fact Proto New Ireland, the language ancestral to all languages of New Ireland and the northwest Solomons. The putative outcomes of these developments are depicted in (17):

(17) EARLY NEW IRELAND II:

	INALIENABLE	FREE
PERSONAL	*a ae=i X	*a Ruma na=i X *a Ruma tai X
PRONOMINAL	*a ae-gu	*a na-gu Ruma *a Ruma ta-gu
COMMON	*a ae-ñā tam ^w ata	*a na-ñā Ruma tam ^w ata *a Ruma ta-ñā tam ^w ata
NONSPECIFIC		
EARLIER	*a natu i boRok	*a polo i niuR
LATER	*a natu ina boRok	*a polo ina niuR

The distribution of reflexes of *i and *ina among the categories of possessive construction outlined in §2 varies from one New Ireland language to another, as Table 2 shows. In Tigak, we find the distribution predicted by the account in the foregoing paragraphs: *i* with specific personal possessors, *ina* with nonspecific common ones. Not surprisingly, the ‘gap’ that this leaves in the system has been filled in some languages, and in Nochi, Ramoaina¹³ and Tolai, for example, specific common possession is also marked by *i* or *ina*.

There is ample comparative evidence, presented in Ross (1998b), to show that Ramoaina and Tolai *na* reflect earlier New Ireland *ina. Reflexes of *ina have developed an important subfunction. Whilst their basic function is to link the possessed to the possessor in a

¹³ The language of the Duke of York Islands.

nonspecific possessive construction, as in (18a), they also link an attribute to its noun, as in (18b). Although (18b) is the default 'adjectival' construction in Tolai, such evidence as the language provides us with indicates that *mamat* is the head of (18b). This means that (18a) and (18b) have the same structure.

(18) TOLAI

- a. *a mapi na davai*
 ART leaf LIG tree
 'leaves of a tree'
- b. *a mamat na vat*
 ART heavy LIG stone
 'a heavy stone' (= 'a heavy one of a stone')

It also means that in Tolai and other South New Ireland languages *na* has an extended functional load, and has become paradigmatically divorced from other *i*-prepositional forms in the language. Because **ina* arose by analogy, it was probably always monomorphemic, and the loss of initial *i*- is possibly a consequence of the high frequency of its use in the constructions in (18).¹⁴

If this history is correct, then we may, I think, claim *ina*, *in* and *na* as containing reflexes of POC **qi*, even if by a rather complicated route.

The second formal riddle concerns the reflexes of POC **q*. Table 2 presents (i) the reflexes of the putative Proto Oceanic morphemes with which this paper is concerned, (ii) the sound correspondences relevant to their phonological interpretation,¹⁵ and (iii) the possible protoforms generated by applying the sound correspondences to each reflex. Reconstructions are shown as starred forms in cells beneath each morpheme. The possible Proto Oceanic forms from which the morphemes in the table are descended are **i*, **qi* and **ki*. Where the sound correspondences are such that a morpheme could reflect any of these three forms, the morpheme is not a witness for phonological reconstruction, and no starred italicised forms are given. This means that by casting one's eye down a given column, it is easy to see phonologically contradictory reflexes.

Note that Table 2 does not include reflexes of morphemes other than those I am seeking to disambiguate here. Thus, although reflexes of **qi* often alternate with those of **ni* in daughter languages, I have omitted the latter here. Nor have I recorded zero reflexes, as they tell us nothing useful.

We can see from Table 2 that the reflexes of POC **i* 'personal article' do not allow us to distinguish between **qi* and **i*. That is, the Proto Oceanic form may, on its Oceanic reflexes, have been **qi*. The reflexes of the possible alternant form **e* mentioned above also do not

¹⁴ The irregular deletion of a segment in a morpheme with high token frequency is not surprising. It is comparable to the irregular deletion of Latin *-t-* in the second person plural inflection of Spanish verbs (Latin *-atis* > *-ades* > *-ades* > *-áis*; Bybee 1994).

¹⁵ Sources of sound correspondences are, for Yapese, Ross (1996); for languages from Seimat to Halia, Ross (1988); for languages from Bugotu to Arosi, my own analysis; for languages from Mota to Nguna, Tryon (1976) as well as Jauncey (1997) for Tamambo; for Kwamera and Anejoñ, John Lynch (pers. comm.) and for Fijian and the Polynesian languages Geraghty (1986), as well as for Polynesian languages, Clark (1973). My interpretation of the reflexes of **q* in Cristobal-Malaitan languages (Kwaio, Kwara'ae, Sa'a, Arosi) differs somewhat from that of Lichtenberk (1988). Where he infers that POC **q* is always lost in these languages, I infer that it was occasionally retained throughout Southeast Solomonian, for example initially in reflexes of POC **quwe* 'rattan' and **qiri(s)* 'cut up' and medially in reflexes of **qaqe* 'leg'.

allow us to distinguish between *qe and *e. The only reflex which suggests something different is Nguna (Central Vanuatu) *ki*, reflecting earlier *ki. However, as this occurs only with specific common possessors (Schütz 1969:41–42), it is an unlikely reflex of POc *i. Moreover, it is clear from Ray (1926:217–218) that this is not a reflex of *qi but is cognate with the forms from which Pawley (1972:85) reconstructs the dative Proto Eastern Oceanic preposition *ki. I return to the form of POc *i below.

I assume on functional grounds that the columns labelled nonspecific, Classifier and Numeral in Table 2 all reflect the same POc morpheme *qi, as argued in §3.2. Examining the overall pattern of reflexes of *qi, we see that a majority of the criterial reflexes reflect *qi or *i, that Kwaio and Kwará'æ forms reflect *ki or *qi,¹⁶ and that the Tongan, East Futunan and East Uvean (all Polynesian) forms reflect *qi.¹⁷ This indicates that the Proto Oceanic form was indeed *qi.

There are three contrary voices. The first two have limited significance. They are Yapese, apparently reflecting *i, and the fossilised reflex in Mwotlap number markers (see (13) above). Discussion of Yapese is postponed until later (§6), and the Mwotlap reflex is discussed in association with the reflexes of the free noun morpheme in §4.

The third contrary voice is in Samoan, where there are two fossil reflexes—(expected) *-i* and (unpredicted) *-ā*, reflecting *qi and *ki, respectively. Neither is productive. Both occur in lexicalised compounds containing reflexes of Proto Polynesian *fua-qi- (from POc *puaq qi) and Proto Polynesian *mata-qi- (not reconstructable for Proto Oceanic). The suffix *-i* is found in, for example, *fuaiāpu* ‘sentence’ (*āpu* ‘word’), *fuaitau* ‘words or lines of a song’ (*tau* ‘count’ VERB), *fuaiala* ‘part of a village’ (*ala* ‘path’), *mataitōha* ‘most valuable fine mat (in a collection)’ (*tōha* ‘fine mat’), *mataitayata* ‘fine-looking man’ (*tayata* ‘man’). The suffix *-ā* is found in such forms as *fuaāfaā* ‘a single banana’ (*faā* ‘banana’), *fuaāvai* ‘a single water bottle’ (*vai* ‘coconut water bottle’), *mataāzoloa* ‘the best article among a lot of goods’ (*zoloa* ‘goods’), *mataāsiva* ‘best dancer in a night dance’ (*siva* ‘dance’ VERB) (Mosel & Hovdhaugen 1992:242). Mosel and Hovdhaugen gloss *fuai-* and *fuaā-* differently, the former as ‘a collection or group of identical objects’, the latter as ‘a single piece of a kind’, but this does not assist us in reconstructing the history. They gloss both *matai-* and *mataā-* as ‘typical or prominent representative of something’.

The most obvious explanation for the unpredicted form *-ā* is that it is a variant of *-i* with glottal stop epenthesis. This may seem unmotivated, but there is evidence elsewhere in Samoan of glottal stop epenthesis: the dual pronouns *tāāua* ‘D:1D’, *māāua* ‘D:1ED’ and *lāāua* ‘D:3D’ are reflexes of Proto Nuclear Polynesian *tāua, *māua and *lāua.¹⁸ If epenthesis occurred here, then it may have occurred in the forms *fuaā-* and *mataā-*.

Since, as Hooper (1985) has shown, POc *i ‘personal article’ and *qi ‘nonspecific possessive particle’ contrasted within the possessive system in POc, we have circumstantial—

¹⁶ There are Kwaio noun phrases like *taā i asi* ‘people of the sea’ and *aliola i ?Ale?ale* ‘Are’are canoes’ which appear superficially to reflect the POc nonspecific possessive construction with *qi, but, as Keesing (1985:100) points out, the attributes in these phrases are always locative, and *i* is the locative preposition, not a possessive marker.

¹⁷ I have decided to ignore Polynesian forms that reflect the Proto Polynesian classifiers *fuaa and *mataa (see Hooper 1985), on the grounds that these appear to be ancient alternants of *fua-qi and *mata-qi but were not derived from them and did not reflect POc *qi.

¹⁸ I am grateful to Andrew Pawley for drawing my attention to this.

but only circumstantial—evidence that, since the latter was clearly *qi, the former was probably *i, despite the ambiguity of its reflexes.

4 Distinguishing between *qi ‘nonspecific possessive particle’ and *-ki ‘free noun suffix’

Hooper attributes three functions to *qi, two of which are discussed thoroughly. The first is the possessive function described above in §2 and §3. The second is the classifier function discussed in §3.2. Hooper also refers briefly on two occasions to the suffix that in some northern Vanuatu languages forms a ‘free’ version of inalienable nouns. She writes (1985:156):

It is reasonable to assume that in North Vanuatu languages an inalienable possessive particle *qi ‘became attached to the noun as a suffix and was then reinterpreted, either as part of the noun base, or as a gender marker rather than a possessive’ (Pawley 1972:115).

I would like to suggest that in the light of now available data this assumption is not quite as reasonable as it seems. Semantically, it is perhaps plausible, but the phonological form of the reflexes in the Free noun column of Table 2 suggests that in fact Proto Oceanic had two morphemes, possessive *qi and free-form derivative *-ki¹⁹.

The relevant northern Vanuatu languages have a free-noun suffix with the forms Mwotlap -ye, Mwerlav, North-East Ambae -ki, unambiguously reflecting POc *-ki. The most crucial evidence comes from North-East Ambae (and has only recently become available), where there is a contrast between -i, marking possession with all three kinds of possessor, and -ki, the free-form derivative suffix that occupies the same slot as the pronominal possessor suffixes on inalienable nouns, giving contrasts like *vulu-gu* ‘my hair’ vs *vulu-ki* ‘hair (unpossessed)’. The contrast between -i and -ki is equally clear:

(19) NORTH-EAST AMBAE

- a. *Mo toka lo ulu-mu.*
 REALIS sit PREP above-P:2SG
 ‘She is sitting on top of you.’
- b. *Mo toka lo ulu-i gai.*
 REALIS sit PREP above-i tree
 ‘She is sitting on top of a tree.’
- c. *Mo toka lo ulu-ki.*
 REALIS sit PREP above-FREE
 ‘She is sitting on top.’

- (20) ... *mo tuli na vinu-ki ta lolo tahi.*
 REALIS throw ART skin-FREE PREP inside sea
 ‘...[Suqe] was throwing the skins into the sea.’

¹⁹ Pawley (1972:115) does reconstruct *ki, but as a Proto Eastern Oceanic possessive particle form that occurred “after nouns of ... edible gender ... when possessed by a personal name and possibly in certain other contexts”. I do not have appropriate evidence to reconstruct this particle in POc, and it would in any case be irrelevant to the present discussion, where inalienable nouns are under consideration.

Ale Takaro mo lehe na vinu-i ka-na mena ...
 so Takaro REALIS see ART skin-i CL-P:3S ripe
 'So Tagaro saw the skins of his ripe bananas ...'

The North Vanuatu language for which Codrington (1885) provides the most complete data is Mota. This happens to be the language where the free-form suffix is *-i*, in other words, it is apparently not distinguishable from the reflex of **qi*. However, a careful reading of Codrington (1885:261–262) suggests that they are distinct. There is a morphophonemic difference between *-i* 'nonspecific possessive' and *-i* 'free form suffix', as in *sase tanun* 'man's name' (where *sase* represents *sasa-* + *i* 'possessive') vs *sasa-i* 'name (free form)'. One may infer that *sase* reflects a development whereby POC **-a-qi* became **-ai*, then **-e*, whereas *sasai* reflects a later set of changes such that POC **-a-ki* became **-aʔi* and then *-ai*.

The reflexes of **-ki* 'free-form suffix' mentioned above are all from North Vanuatu languages, and these do not justify a Proto Oceanic reconstruction. There are two other reflexes of **-ki*, however, as well as a possible third. The two are in Takia (Western Oceanic, North New Guinea linkage) and in Kele (Admiralties). In Takia we find, for example, *nanu-g* 'my child', *nanu-n* 'her/his child', but *nanu-k* 'a child' (possessor unidentified); and in Kele *leme-m* 'your arm', but *leme-y* 'arm (free form)'. Unfortunately, the Takia and Kele forms provide no phonological disambiguation, as POC **k* and **q* both become Takia *-k* when they are reflected word-finally after the loss of a Proto Oceanic final vowel, and they are both deleted between vowels in Kele. However, their function indicates that they reflect the same morpheme as the North Vanuatu reflexes.

The other possible reflex of **-ki* is in Yapese, where Jensen (1977:143) reports *ʔaʔi:-y* 'my liver', *ʔaʔi:-m* 'your (s) liver', *ʔaʔi:-n* 'her/his liver', *ʔaʔi:-y* 'anyone's liver'. The suffix *-y* on the last item of the series is a free-form suffix, but it is not clear if it is a phonologically plausible reflex of POC **-ki* (see §6).

Free-form suffixes are also reported by Hollyman (1991) and Ozanne-Rivierre (1991) in the languages of north New Caledonia. However, the consonants of the ones that look as if they might be reflexes of **-ki*, namely Kumak *-t*, Nyâlâyu (Belep) *-t* and Nyâlâyu (Balade) *-r*, reflect POC **s* or **c*, not **k* (for which the regular reflexes are Kumak *-c*, Nyâlâyu *-∅* (Hollyman 1991:148–150)).

I noted above that Mwotlap *-ye*, an apparently fossilised reflex of **qi* attached to certain numerals, is phonologically irregular, reflecting POC **ki*. It appears that, since **qi* has no productive reflexes in Mwotlap, the reflex of **qi* has merged irregularly with that of **-ki*.

5 POC **i* 'locative preposition'

The rightmost column of Table 2 contains reflexes of POC locative preposition **i*, perhaps the only true preposition that occurred in Proto Oceanic (Ross 1988:104). All reconstructions to date have the form **(q)i* (Pawley 1972:85, 1973; Ross 1988:104), raising the question of whether this morpheme had an initial consonant. The evidence now available suggests that it did not. Moysse-Faurie (1993:178) reports a contrast in East Futunan between *i* 'locative preposition' and *ʔ* 'possessive relator'. The latter, in examples such as *kili ʔ manu* 'animal skin', is clearly a reflex of the nonspecific possessor function of POC **qi*. On this evidence, POC locative preposition **i* may be reconstructed in contrast with possessive **qi*.

The only contrary evidence occurs in Tongan, where both *i* and \bar{i} occur as reflexes of the locative preposition. Clark (1973:22–23) accounts for \bar{i} as the outcome of glottal stop prothesis in phrase-initial position.

6 A note on Yapese reflexes

I tabulate putative Yapese reflexes of POc *qi and *-ki in Table 2 simply because it is noteworthy that Yapese seems to reflect them. Two possible reflexes of the free-form suffix *-ki are noted. One of these, -y, was exemplified in §4 and is functionally a free-form suffix but is not an expected reflex of *-ki. The other, -k, is a phonologically adequate reflex,²⁰ but does not serve as a free-form suffix. Instead it replaces -n 'P:3S' on just two morphemes, the prepositions *ro:-* 'possessive'²¹ (*ro:-y* 'my', *ro:-m* 'your (S)', *ro:-k*² 'her/his', *riy* 'its') and *no:-* 'benefactive, directional' (*no:-y* 'to me', *no:-m* 'to you (S)', *no:-k*² 'to her/him', *na:y* 'to it'). However, the -k forms are clearly third person singular in function, not free forms. Both prepositions have a 'free form' in -y, used when the governed noun phrase is not mentioned (Jensen 1977:149–150, 190).

Perhaps as many as five layers of Austronesian lexical items can be identified in Yapese. The Yapese reflexes of POc *k and *q given in Table 2 are from what I call Set C (Ross 1996), the Oceanic set reflected in most Yapese grammatical morphemes (and a considerable part of the lexicon) and thought to be the earliest layer of the language. However, the putative Yapese reflexes of POc *qi and *-ki do not match the relevant sound correspondences. There are two possible reasons for this. First, historical research into Yapese is at an initial stage, and the analysis in Ross (1996) may be inadequate. Second, Yapese may on its own constitute a first-order subgroup of Oceanic. If so, it is possible, for example, that *qi did not acquire its *q- until after Yapese had separated from the rest of Oceanic. But this is speculation.

7 Conclusion

I conclude that the morphemes presented by Hooper (1985) and others cognate with them reflect four Proto Oceanic morphemes:

*i	personal article
*qi	nonspecific inalienable possessive marker
*-ki	free-form derivative suffix
*i	locative preposition

It is more difficult than one might expect to find non-Oceanic cognates of these morphemes in languages where initial Proto Austronesian *q- is reflected unambiguously.

Only Proto Austronesian *i 'locative preposition' can be reconstructed with certainty, as there are ample reflexes of it, and these include reflexes in the Formosan languages Thao, Amis and Paiwan, where *qi would be reflected differently from *i (see Blust 1995).

²⁰ *k*² does not occur among the Yapese reflexes recorded in Ross (1996) but glottalisation in Yapese is frequently the result of conditioning by an adjacent rounded vowel.

²¹ Possibly a reflex of POc preposition *ta-, but initial *r-* reflects POc *r-, not *t-.

Proto Austronesian *i 'personal article' is reconstructable with somewhat less certainty, because its would-be reflexes vary somewhat in function and it is unsafe to reconstruct a morpheme of such small phonological substance without functional correspondence.

There are no known potential cognates of *qi in Formosa, so if *qi is reconstructable at an interstage earlier than Proto Oceanic, it would not be Proto Austronesian. There are a number of plausible cognates, but all occur in Western Malayo–Polynesian languages where initial *q- is lost, and a majority co-occur only with personal possessors, suggesting that they are reflexes of *i 'personal article', which have undergone the same functional limitation to possessive phrases as we observed in various Oceanic languages above. Blust (1977, 1995) notes this problem.

As yet, I have found no non-Oceanic cognate of *-ki 'free-form derivative suffix'.

Apart from confirming Hooper's findings with regard to *i 'personal article' and *qi, the new contributions made by this paper are to reconstruct POc *-ki 'free-form derivative suffix' and to find that the Proto Oceanic locative preposition was *i rather than *qi, and therefore not the same morpheme as possessive *qi.

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