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THE STRUCTURE OF THE PENRHYN PHRASE

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By

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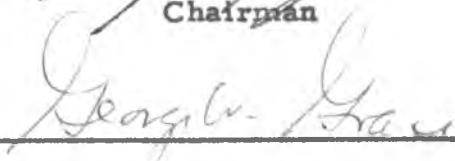
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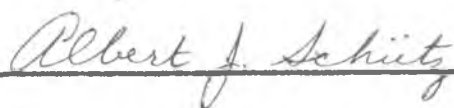
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## NOTATIONS AND ABBREVIATIONS

## Notations:

Illustrative texts are cited in phonemic transcription (see chapter

II) modified in the following points:

1. A capital letter marks initial /#/ , or the beginning of proper names (see section 3. 2. 1. 5 and section 3. 2. 1. 6).
2. A period marks final /#/ .
3. A comma marks // / .
4. A hyphen marks a morpheme boundary where there is no plus juncture.
5. A question mark marks an interrogative sentence.
6. An exclamation mark marks a vocative or a strong imperative sentence.
7. Plus juncture is marked by /+ / only between morphemes in an expanded base. (i. e. /+ / between morphemes indicates that at least one of them is a non-isolable or bound form.) Elsewhere it is indicated by space. Conversely, space implies plus juncture, and accordingly a word boundary.

**Abbreviations:**

**npl. : proper place name (see section 3. 2. 1. 5)**

**npn. : proper personal name (see section 3. 2. 1. 6)**

**p. of : part(s) of**

**k. of : a kind of, species of, a term for (including the term for the  
coconut of a certain stage).**

## CHAPTER I

## INTRODUCTION

## 1. 0. Geography

Penrhyn is a Polynesian language spoken on the atoll of Tongareva in the Northern Cook Islands. The atoll (lat. 9°00'S, long. 158°00'W), is the largest and farthest north of the lagoon islands in the Cook group (Great Britain Naval Intelligence Division 1943). The area of the island is 2,432 acres (Kennedy 1966), and its population as of September 1, 1966 was 591, representing 314 males and 277 females (Department of Island Territories 1967).

"Tongareva" (tonga 'south', reva 'float'), is the native name for this lagoon island. However, "Maangarongaro" is more commonly used by the natives to refer to their island and language. It is the name of the atoll on which the big "Chatham" was wrecked in 1853 (Buck 1932). Tongareva is also commonly known as Penrhyn since it was discovered by Lieut. Watts of the British ship "Lady Penrhyn," in August 1788 (Great Britain Naval Intelligence Division 1943). The natives call it Penireni. In this thesis, the name "Penrhyn" is chosen to designate the island and the language because this term is most commonly used in maps and other non-linguistic literature.

The Cook group is a New Zealand dependency, administered by the Department of Island Territories of the New Zealand Government through a Resident Commissioner at Rarotonga (Robson 1963).

### 1.1. Background of Research

The Polynesian languages are the best-known languages of Oceania. In particular, a number of good grammars and dictionaries of the major Polynesian languages have been published.

**Grammars:** Grezel (1878), Jaussen (1898), Tregear and Smith (1907), Dordillon (1931), Bataillon (1932), Fuentes (1960), Buse (1960-66), Biggs (1961), Morton (1962), Hohepa (1965), Carroll (1965), and Pawley (1966).

**Dictionaries:** Williams (1844), Grezel (1878), Violette (1879), Tregear (1883-95), Tregear and Smith (1907), Janeau (1908), Pratt (1911), Churchill (1912), Durrad (1913), Dordillon (1931), Bataillon (1932), Pukui and Elbert (1957, 1964), Churchward (1959), Fuentes (1960), Savage (1962), Stimson and Marshall (1964), and Milner (1966).

On the basis of the descriptions available, a considerable amount of comparative and typological work on Polynesian and closely related Oceanic languages has also been done.

**Comparative and Typological Studies:** Dempwolff (1934-38), Emory (1946), Elbert (1953), Grace (1959, 1961a, 1961b, 1964),

Capell (1962), Bergmann (1963), Chrétien (1965), Dyen (1965), Haudricourt (1965), Marshall (1965), Green (1966), Krupa (1966), Pawley (1966), and Walsh and Biggs (1966).

However, there are still important gaps in our knowledge of the Polynesian languages. The Northern Cook Islands form an area for which information is particularly deficient. Penrhyn is in the Northern Cooks and there is no grammar or dictionary of this language. It is considered by Dyen (1965:35) on the basis of a lexicostatistical count, to be the most different of the Cook Islands languages. He says, "...there are two main dialects within the Rarotongan language: Rarotonga, with its subdialects as above, (Mitiaro, Mauke, Atiu, Mangaia, Rarotonga, and Aitutaki) and Penrhyn ..."

The purpose of this thesis is, therefore, to discover and describe the structure of the Penrhyn phrase so that it will fill one of the existing gaps in our knowledge of the Polynesian languages and at the same time it will give an idea of the range of differentiation to be found within the Cook Islands.

## 1. 2. Method of Study

Penrhyn is an extremely isolated island visited only occasionally by small trading schooners. Fortunately, however, about 150-200 Penrhyn Islanders are now settled in New Zealand. There is even a colony of Penrhyn Islanders at Mangere in South Auckland grouped around employment in the steel works there and other related industries (Challis 1967). It was therefore proposed that seven months of field work (September 1966-March 1967) be spent in Auckland, N. Z. rather than attempt made to go to Penrhyn itself; this proposal had an added advantage because the work was done under the auspices of the University of Auckland, which is a center for research in Polynesian languages.

Most of the data were collected from (Mrs.) Maramaakura Taia (aged 57). She was born in Penrhyn and lived there for about fifty years. She is bilingual in Penrhyn and Rarotongan and speaks no English. Many simple sentences were collected by using Rarotongan words and sentences taken from Buse (1960-66), Walsh and Biggs (1966), and Moeka'a (1966). Text materials were collected by the monolingual approach. All utterances were transcribed or taped during a conversation or period of story telling. The English

translation was obtained from (Mr. and Mrs.) Toka and (Mr. and Mrs.) Teokatai. They all speak Penrhyn, Rarotongan and English. Several other informants supplied data.

### 1. 3. Treatment of Data

Penrhyn is known to be a Polynesian language. All recent descriptions of Polynesian languages have utilized what is essentially the same descriptive model.

A stretch of speech (which is variously called phrase, contour span, verbal or nominal piece, etc.), is known to consist of a nucleus (which itself may be simple or complex), flanked by preposed and postposed functional morphemes. Nucleus classes (i. e. full-words, bases, major morphemes, etc.) and functional morphemes (i. e. particles, minor morphemes, etc.) combine in various sequences which may be expressed by appropriate formulae.

Penrhyn is not only a Polynesian language, it is also a very close relative of Rarotongan, which has been described effectively by Buse (1960-66), using the model outlined above.

It was therefore assumed that Penrhyn would fit the same model that has proved effective for the other Polynesian languages.

CHAPTER II  
PHONOLOGY

2.0. Phoneme Inventory

In Penrhyn five vowel phonemes, ten consonant phonemes and three junctural phonemes are recognized.

Vowel Phonemes:	i	e	a	o	u					
Consonant Phonemes:	p	t	k	m	n	ng	r	v	s	h
Junctural Phonemes:	#	//	+							
Vowel length is phonemic:	ii	ee	aa	oo	uu	(see section 2.1.1.)				

Phoneme Inventory

2.1. Vowel Phonemes

As is generally the case for Polynesian languages, Penrhyn has five vowels. They contrast with one another as follows:

/i/	<u>tiki</u>	'image'
/e/	<u>teki</u>	'hop'
/a/	<u>taki</u>	'bring'
/o/	<u>toki</u>	'axe'
/u/	<u>tuki</u>	'beat'

The phonetic value and allophonic range for each phoneme are as follows:

/i/ is a high front unrounded vowel. It has higher allophones in the sequence /ii/ than elsewhere.

<u>vii</u>	'mango'
<u>kie</u>	'sail'
<u>tia</u>	'used corals'
<u>hiohio</u>	'small in size'
<u>niu</u>	'coconut'

/e/ is a mid front unrounded vowel as in:

<u>sei</u>	'necklet'
<u>keekee</u>	'armpit'
<u>kea</u>	'tonsils'
<u>keo</u>	'sharp point'
<u>keukeu</u>	'shake'

/a/ is a low back unrounded vowel. It has higher allophones in the sequence /ai/ and lower allophones in the sequence /aa/ than elsewhere.

<u>kai</u>	'food'
<u>pae</u>	'drift'
<u>raa</u>	'sun'
<u>maoa</u>	'cook'
<u>pau</u>	'consumed'

The sequence /ae/ in close transition (see section 2.3.) gives an impression of one long low front unrounded vowel [ǣ]<sup>1</sup> rather than two successive vowels [ae]. However, the phonemic interpretation of [ǣ] as /ae/ is based on the following evidence:

(1) There appear to be no restrictions on vowel sequences in one syllable except for the sequence \*/uo/ and the phonetic sequence \*[ae]. Interpreting phonetic [ǣ] as phonemic /ae/ results in a more general statement of vowel clustering, and avoids having to set up a sixth vowel phoneme.

(2) [ǣ] contrasts with [ā] which is interpreted as /aa/.

[mǣ·mǣ.]                    'dry'                    /maemae/

[mā·mā.]                    'light'                    /maamaa/

[vǣ·vǣ.]                    'leg'                    /vaevae/

[bā·bā.]                    'insect'                    /vaavaa/

(3) [ǣ] contrasts with [ē] which is interpreted as /ee/.

[p <sup>h</sup> æ.]	'drift'	/pae/
[pe.]	'rotten'	/pee/
[mæ.]	'dry'	/mae/
[me.]	'if'	/mee/

The following evidence, (4) and (5), based on comparative data, is consistent with the interpretation of Penrhyn [æ] as /ae/.

(4) Penrhyn [æ] corresponds with /ae/ or /aʔe/ in other Polynesian languages and in Proto-Polynesian. Following is a comparison of Penrhyn words with the Proto-Polynesian words taken from Walsh and Biggs (1966).

Penrhyn			Proto-Polynesian	
[p <sup>h</sup> æ.]	/pae/	'drift'	*/pae/	'be cast ashore'
[č <sup>h</sup> æ.]	/tae/	'reach'	*/tae/	'reach'
[sæ.ře]	/saere/	'walk'	*/sAʔele/	'go'
[tu.čæ.]	/tuutae/	'excrement'	*/taʔe/	'excrement'

#### Correspondence of /ae/

(5) All Polynesian languages described so far have five vowel systems. Thus, a sixth vowel phoneme seems unlikely for Penrhyn.

/o/ is a mid back rounded vowel. It has lower allophones in the sequence /oo/ than elsewhere.

<u>koi</u>	'go hurriedly, keen'
<u>poe</u>	'pearl'
<u>toa</u>	'brave'
<u>koo</u>	'husk'
<u>pou</u>	'post'

/u/ is a high back rounded vowel. The sequence \*/uo/ does not occur. /u/ is more rounded in the sequence /uu/ and less rounded in the sequences /ui/ and /ue/. In the sequence /ua/, /u/ sometimes sounds like a semivowel, especially in fast speech.

<u>tui</u>	'sew'
<u>rue</u>	'deliver a baby'
<u>tua</u>	'back'
<u>puu</u>	'trumpet'

### 2.1.1. Vowel Length

Vowel length is phonemic. There are contrasts between short vowels and long vowels as follows:

/i/	<u>ki</u>	'motion towards'	/ii/	<u>kii</u>	'covered'
/e/	<u>keke</u>	'saw'	/ee/	<u>kekee</u>	'foreign'
/a/	<u>marama</u>	'moon'	/aa/	<u>maarama</u>	'month'
/o/	<u>hou</u>	'sweat'	/oo/	<u>hoou</u>	'new'
/u/	<u>ruru</u>	'fishing torch'	/uu/	<u>ruuruu</u> <sup>2</sup>	'shake'

In this thesis, long vowels are treated as a sequence of two identical short vowels rather than by setting up a length phoneme.

This solution is chosen for the following reasons:

- (1) In Penrhyn all non-identical vowel pairs except \*uo occur. Hence it is reasonable to regard the long vowels as identical vowel pairs.
- (2) The sequence of two identical vowels behaves just like the sequence of two different vowels. For example, in the sequence of two different vowels, under largely definable conditions, either member may be phonetically more prominent. (see section 2.7)

<u>puaka</u>	[púaka ~ puáka]	'pig'
<u>tamaiti</u>	[tamáíči ~ tamaf̃či]	'child'

Similarly, in the sequence of two identical vowels, under the same conditions as above, either member may be phonetically more prominent.

<u>pooro</u>	[póoro ~ poóro]	'ball'
<u>tahaava</u>	[taháaba ~ tahaába]	'father'

In addition, some historical reasons, (3) and (4), as well as a practical reason (5) will support this phonemicization.

- (3) Historically, many long vowels have resulted from the loss of a consonant between two short vowels. Following are some examples of Penrhyn long vowels resulting from such a process:

Proto-Polynesian (Walsh and Biggs 1966)		Penrhyn	
<u>*faʔa</u>	'stalk'	<u>haa</u>	'stalk'
<u>*mamaʔo</u>	'distant'	<u>momoo</u>	'distant'
<u>*tuʔu</u>	'stand'	<u>tuu</u>	'stand'
<u>*foʔou</u>	'new'	<u>hoou</u>	'new'

Correspondence of Long Vowels

- (4) In many Polynesian languages, long vowels are phonemically treated as a sequence of two vowels. Also, it is interesting to note that in Maori, for example, the doubling of two identical vowel letters was innovated by scribes as early as 1850.<sup>3</sup>

<u>taane</u>	'man'	
<u>kiingi</u>	'king'	(< Eng. <u>king</u> )
<u>ruuri</u>	'survey'	(< Eng. <u>rule</u> )

The fact that Maori scribes themselves identified some long vowels as a sequence of two vowels may indicate native speakers' intuition. Especially in loanwords such as kiingi and ruuri which had not been introduced by the missionaries, the phonemicization must have been done according to their intuition. Most of the existing orthographies of Polynesian languages, however, fail to mark vowel length.

- (5) Double vowels are easier to write, type, and print than a diacritic such as a macron over each long vowel.

### 2.1.2. Devoicing of Vowels

A short vowel before final juncture (see section 2.3) is frequently devoiced in normal speech especially following a voiceless consonant.

[I] : Kua motu te rima o Riinaa ki te tipi.  
[... cipI#]

'Riinaa's hand was cut by the knife.'

[E] : E ika taa maatou e vete.  
[... vecE#]

'The fish we caught is a goatfish.'

[A] : Kaa sura te masanga o Hakatsusa.  
[... hakatsusA#]

'The taboo of Hakasusa will be removed.'

[O] : Hano mai kia hiri+hia to-o upoko.  
[... upokO#]

'Come here; I will braid your hair.'

[U] : Serethia mai to-ku rima ki te kaakahu.  
[... ka.kahU#]

'Tie my hand with the cloth.'

## 2. 2. Consonant Phonemes

The phonemic status of the ten consonants /p t k m n ng r v s h/ is established by the following minimal contrasts:

t	k	m	n	ng	r	v	s	h	
poo	poo	pua	paa	putu	pua	paa	poo	pua	p
too	koo	mua	naa	ngutu	rua	vaa	soo	hua	
	ata	ata	ata	taki	ata	ata	ata	ata	t
	aka	ama	ana	ngaki	ara	ava	asa	aha	
		aka	aka	kau	aka	aka	aka	aka	k
		ama	ana	ngau	ara	ava	asa	aha	
			ama	mau	ama	ama	ama	ama	m
			ana	ngau	ara	ava	asa	aha	
				nau	ana	ana	ana	ana	n
				ngau	ara	ava	asa	aha	
					ngau	ngaru	ngere	ngau	ng
					rau	varu	sere	hau	
						ara	ara	ara	r
						ava	asa	aha	
							ava	ava	v
							asa	aha	
								asa	s
								aha	

Minimal Contrasts of Consonants

<u>aha</u>	'what'	<u>aka</u>	'root'	<u>ama</u>	'float'
<u>ana</u>	'cave'	<u>ara</u>	'road'	<u>asa</u>	'dart'
<u>ata</u>	'right'	<u>ava</u>	'passage'	<u>hau</u>	'peace'
<u>hua</u>	'bear fruit'	<u>kau</u>	'swim'	<u>koo</u>	'husk'
<u>mau</u>	'lay hold of'	<u>mua</u>	'front'	<u>naa</u>	'cease'
<u>nau</u>	'go'	<u>ngaki</u>	'feed'	<u>ngaru</u>	'wave'
<u>ngau</u>	'eat'	<u>ngere</u>	'nothing'	<u>ngutu</u>	'mouth'
<u>paa</u>	'roast fish'	<u>poo</u>	'night'	<u>pua</u>	'bloom'
<u>putu</u>	'mix'	<u>rau</u>	'leaf'	<u>rua</u>	'two'
<u>sere</u>	'tie'	<u>soo</u>	'give'	<u>taki</u>	'bring'
<u>too</u>	'spear'	<u>vaa</u>	'interval'	<u>varu</u>	'grate'

The phonetic value and allophonic range for each consonant phoneme are as follows:

/p/ is a voiceless bilabial stop. It is more aspirated in an initial syllable. A heavy aspiration is noted especially preceding /æ/.

<u>piri</u>	'adhere'	<u>poke</u>	'mix'
<u>ripi</u>	'throw'	<u>kapo</u>	'catch'
<u>pese</u>	'chant'	<u>puku</u>	'swelling'
<u>rupe</u>	'pigeon'	<u>tapu</u>	'taboo'
<u>paku</u>	'dandruff'	<u>pae</u> [p <sup>h</sup> æ]	'drift'
<u>kapa</u>	'dance'		

/t/ is a voiceless alveolar stop. It is heavily palatalized in the environments stated in (1), (2), (3), and (4).

(1) /t/ followed by /i/ is palatalized.

<u>tira</u>	[čhi <sup>h</sup> ra]	'mast'
<u>hiti</u>	[hi <sup>h</sup> ci]	'rise'

(2) /t/ followed by /e/ except in a syllable between two junctural phonemes (see section 2.3) is palatalized.

<u>tere</u>	[t <sup>h</sup> he <sup>h</sup> re <sup>h</sup> t]	'sail'
<u>teitei</u>	[t <sup>h</sup> he <sup>h</sup> ie <sup>h</sup> čei <sup>h</sup> t]	'high'
<u>ngote</u>	[tngo <sup>h</sup> čet]	'suck'
<u>puutee</u>	[tpu <sup>h</sup> če <sup>h</sup> .t]	'sack'
<u>i te ika</u>	[ti <sup>h</sup> te <sup>h</sup> tika <sup>h</sup> ]	'the fish'
<u>tee ia puaka</u>	[//te <sup>h</sup> .tia <sup>h</sup> tpuaka <sup>h</sup> ]	'this pig'
<u>Tee peka+peka hua...</u>	[#te <sup>h</sup> .+peka <sup>h</sup> +peka <sup>h</sup> +hua <sup>h</sup> //]	'only fighting...'
<u>tei te kaainga</u>	[//tei <sup>h</sup> +te <sup>h</sup> +ka <sup>h</sup> .inga <sup>h</sup> //]	'at home'

(3) /t/ followed by /a/ plus a front vowel is palatalized.

<u>tai</u>	[č <sup>h</sup> hai]	'sea'
<u>tae</u>	[č <sup>h</sup> hæ.]	'reach'
<u>taime</u>	[č <sup>h</sup> haimē]	'time'
<u>tuutae</u>	[tu <sup>h</sup> .č <sup>h</sup> hæ.]	'excrement'

(4) /t/ followed by /a/ plus /h/ plus a front vowel is palatalized.

<u>tahi</u>	[č <sup>h</sup> ahi]	'one'
<u>tahe</u>	[č <sup>h</sup> ahe]	'flow'
<u>tahito</u>	[č <sup>h</sup> ahito]	'ancient'

/t/ is slightly palatalized before /u/, but not as much as before front vowels.

<u>tuku</u>	'allow'
<u>tupa</u>	'landcrab'
<u>kutu</u>	'louse'
<u>atu</u>	'towards hearer'

Aspiration increases with palatalization.

<u>tira</u>	'mast'	}	rather heavily aspirated
<u>ngote</u>	'suck'		
<u>tai</u>	'sea'		
<u>tahi</u>	'one'		
<u>tupa</u>	'landcrab'	}	slightly aspirated
<u>kutu</u>	'louse'		
<u>kata</u>	'laugh'	}	least aspirated
<u>taki</u>	'bring'		
<u>toka</u>	'rock'		
<u>moto</u>	'punch'		

**/k/ is a voiceless velar stop. It is front velar and more aspirated before front vowels, and back velar and less aspirated before back vowels.**

<u>kite</u>	'see'
<u>hoki</u>	'return'
<u>keri</u>	'dig'
<u>poke</u>	'mix'
<u>kake</u>	'climb'
<u>huka</u>	'foam'
<u>kohi</u>	'gather'
<u>tiko</u>	'sit'
<u>kumu</u>	'wring out'
<u>paku</u>	'dandruff'

All stops in stressed syllables (see section 2. 7) are more heavily aspirated than those in unstressed syllables.

**/m/ is a voiced bilabial nasal as in:**

<u>miri</u>	'rub oil on'
<u>kimi</u>	'seek'
<u>mei</u>	'approximal'
<u>kume</u>	'bring'
<u>masi</u>	'skin disease'
<u>rima</u>	'five'

<u>moe</u>	'sleep'
<u>kamo</u>	'wink'
<u>muri</u>	'back'
<u>umu</u>	'oven'

/n/ is a voiced alveolar nasal. It is palatalized before /i/.

<u>niho</u> [ŋiho]	'tooth'
<u>haamani</u> [ha-maŋi]	'make'
<u>neke</u>	'crawl'
<u>taane</u>	'male'
<u>nati</u>	'draw tight'
<u>pona</u>	'dress'
<u>noni</u>	'k. of tree'
<u>kino</u>	'bad'
<u>nuku</u>	'group'
<u>manu</u>	'bird'

/ng/ is a voiced velar nasal as in:

<u>ngiingii</u>	'snore'
<u>tangi</u>	'cry'
<u>ngere</u>	'nothing'
<u>pange</u>	'turn over'
<u>ngaro</u>	'lose'
<u>tonga</u>	'south'

<u>ngote</u>	'suck'
<u>ignoa</u>	'name'
<u>ngutu</u>	'mouth'
<u>ngunguru</u>	'grunt'

*/r/* is a voiced alveolar flap. It seems to vary freely between stop quality and lateral quality. Sometimes the tongue touches the alveolar ridge so completely that no air can escape. Other times the tongue tip remains up, touching the alveolar ridge, but the sides of the tongue are down far enough to let the air pass through. The former pronunciation may be most appropriately transcribed as [ṛ] and the latter as [ĩ]. The range of variation between [ṛ] and [ĩ] varies from speaker to speaker.

<u>rima</u>	[ṛima~lima]	'five'
<u>piri</u>	[piĩri~pili]	'adhere to'
<u>reo</u>	[ṛeo~leo]	'voice'
<u>tere</u>	[čeṛe~čele]	'sail'
<u>rava</u>	[ṛaba~laba]	'enough'
<u>tara</u>	[taṛa~tala]	'fins, barb'
<u>rongo</u>	[ṛongo~longo]	'hear'
<u>horo</u>	[hoṛo~holo]	'run'
<u>rua</u>	[ṛua~lua]	'two'
<u>ngaru</u>	[ngaṛu~ngalu]	'wave'

*/v/* is a voiced labial fricative, varying between labio-dental and bilabial position. Preceding */i/*, */e/*, */o/*, and */ae/*, it is labiodental and preceding */a/* (except */ae/*) it is mostly bilabial. However, the range of allophones [*v ~ b ~ w*] varies from speaker to speaker. The sequence */vu/* does not occur.

<u>viri</u>	[vi <sup>̃</sup> ri]	'drill'
<u>kivi</u>	[kivi]	'k. of bird'
<u>vero</u>	[ve <sup>̃</sup> ro]	'pierce'
<u>kave</u>	[kave]	'take'
<u>voo-raakau</u>	[vo.ɾa.kaw]	'woods'
<u>vivo</u>	[vivo]	'blow with mouth'
<u>vaevae</u>	[væ.væ.]	'foot'
<u>vaavaa</u>	[va.va.~ba.ba.~wa.wa.]	'insect'
<u>vaka</u>	[vaka~baka~waka]	'canoe'
<u>seva</u>	[ševa~šeba~šewa]	'cry'

*/s/* is a voiceless alveopalatal fricative. It is heavily palatalized before front vowels (i. e. */i/* and */e/*) and also before the sequence */ae/*. It is slightly palatalized before */u/*.

<u>sika</u>	[šika]	'action of fire making'
<u>piši</u>	[piši]	'slash'
<u>seva</u>	[šeba]	'cry'
<u>pese</u>	[peše]	'chant'

<u>saere</u>	[šæ.ře]	'walk'
<u>sape</u>	[sape]	'crooked'
<u>masa</u>	[masa]	'dry'
<u>songi</u>	[songi]	'press noses'
<u>kasotkaso</u>	[kasotkaso]	'finger nails'
<u>sunu</u>	[šunu]	'grease'
<u>isu</u>	[išu]	'nose'

/h/ indicates a voiceless breathing as in:

<u>hitu</u>	'seven'
<u>vahine</u>	'woman'
<u>henua</u>	'land'
<u>tahe</u>	'flow'
<u>hano</u>	'go'
<u>vaha</u>	'out'
<u>hoki</u>	'return'
<u>noho</u>	'stay'
<u>huru</u>	'wash'
<u>pahu</u>	'drum'

### 2.3. Junctural Phonemes

There are three junctural phonemes in Penrhyn: final juncture /#/ , non-final juncture ///, and plus juncture /+/. Penrhyn utterances are divided by the occurrence of /#/ or ///, into short stretches of speech called phonological phrases. The phonological phrase before /#/ is called final phrase and all others are called non-final phrases. (see section 2.7). The phonological phrase is further divided into smaller units by the occurrence of plus juncture.

/#/ , final juncture, is marked by a pause, which is identified by falling pitch and decreasing loudness and in most cases by the devoicing of the preceding vowel(s). /#/ is also used to mark silence in the beginning of an utterance.

Oro-oro+hia mai to-ku rima. 'Rub my hand.'  
 [#oro·ro+thya+may+toku+rima#]

///, non-final juncture, is marked by a momentary pause which is identified by rising or retention of pitch and loudness, and by retention of voicing in the final vowel.

Ka hinangaro au, kia hoko mai. 'I want to buy it.'  
 [#ka+hinangaro+aw // kia+hoko+mai#]

/+/, plus juncture, marks the point of possible pause between vowels or between a vowel and a consonant. The pause may not be actualized in normal speech.

- (1) Plus juncture between vowels is called open transition, which is in phonemic contrast with close transition. Biggs (1961:12) reports his acoustic experiment on Maori as:

Where two vowels are in open transition there is a very brief decrescendo followed by a renewal of volume, often but not necessarily on a different pitch. The slight hiatus between the vowels appears on a spectrogram as a slight disturbance of the harmonics, and as a narrow trough, or as a step down, or up, on the amplitude display. The second of two vowels in open transition is not conditioned by the first, and is similar in quality to the same vowel in initial position.

This is impressionistically true in Penrhyn, too. There is an audible difference between vowels in open transition and the same vowel in close transition.

When two different vowels are in close transition the second is conditioned by the first so that it is raised, lowered, fronted, or backed in the direction of the first vowel while in open transition the second is not conditioned by the first so that it remains the quality of the single vowel.

When two identical vowels are in close transition they are heard as long vowels with no pulse while in open transition the second vowel is re-articulated. In case of two /a/'s in open transition, even a high front glide [y] is sometimes heard between two /a/'s.

(1) Different vowels:	
/a + e/ (open transition)	/ae/ (close transition)
<u>te tangata e te ariki</u> [te+tangata+e+te+a <sup>h</sup> riki] 'The man (was hit) by the chief'	<u>kua tae mai te pahii</u> [kua+t <sup>h</sup> æ+may+te+pahi·] 'the ship arrived'
/i + a/ (open transition)	/ia/ (close transition)
<u>ki muri ake</u> [ki+mu <sup>h</sup> ri+ake] 'right behind'	<u>maariake</u> [ma· <sup>h</sup> riake] 'be of assistance'
(2) Identical vowels:	
/a + a/ (open transition)	/aa/ (close transition)
<u>kaa asu</u> [ka·yasu] 'will scoop'	<u>maari</u> [ma· <sup>h</sup> ri] 'slow'
/u + u/ (open transition)	/uu/ (close transition)
<u>ta-ku umu</u> [takutumu] 'my oven'	<u>kuumara</u> [ku·ma <sup>h</sup> ra] 'sweet potato'

## Open Transition and Close Transition

- (2) It is difficult to find any phonetic realization for plus juncture between a vowel and a following consonant except when the consonant is /t/; /t/ followed by /e/ in a syllable between two junctural phonemes is never palatalized while /t/ followed by /e/ in other positions is always palatalized (see section 2. 2:/t/).

ki te kiore

[ki+te+kiore]

'to the rat'

kite+kite

[kiče+kiče]

'pay attention'

Kua ngaŕo Viŕiamu ma te vaka. Kua mate.

[#kua+ngaro+viriamu+ma+te+vaka# kua+mače#]

'William and the canoe were missing. (He) died.'

However, it is convenient to assume plus juncture in certain positions of certain words in order to predict stress (see section 2. 7).

Te mea mua, kave mai taaua i te uto.

[#te+méa+múa // káve+máy+tá·uá+i+te+úto#]

'First, we get some coconuts.'

## 2.4. Syllable Structure

Syllables are either long or short. A short syllable has the shape (C)V. A long syllable has the shape (C)VV. Syllable boundaries occur before every juncture, before every consonant, and after every second vowel in a sequence of vowels, starting from the beginning of an utterance.

		<u>Syllable structure</u>
<u>arero</u>	'tongue'	a-re-ro
<u>rarahi</u>	'many'	ra-ra-hi
<u>aave</u>	'not clear'	aa-ve
<u>kakii</u>	'neck'	ka-kii
<u>taeake</u>	'friend'	tae-a-ke
<u>kaainga</u>	'home'	kaa-i-nga
<u>kooura</u>	'crayfish'	koo-u-ra
<u>raaua</u>	'they, dual'	raa-ua

## 2.5. Phoneme Distribution

All vowels occur syllable initially, medially and finally. All possible vowel pairs occur except \*/uo/. As many as four vowels may occur in close transition.

<u>apinga</u>	'thing'
<u>hiohio</u>	'small in size'
<u>taeake</u>	'friend'
<u>maaua</u>	'we, dual'

Consonants occur only syllable initially. All possible consonant and vowel combinations occur except \*/vu/. There are no consonant clusters.

## 2.6. Phoneme Frequency

The relative frequencies of the segmental phonemes in Penrhyn were calculated from a sample text of 2,000 phonemes of 44 sentences selected at random. The results are as follows:

frequency order	phoneme	percentage
1	a	28.6%
2	i	10.7%
3	t	8.3%
4	o	7.8%
5	u	7.55%
6	e	7.05%
7	k	6.4%
8	r	5.85%
9	m	4.75%
10	n	4.65%
11	h	3.6%
12	p	2.25%
13	ng	1.15%
14	s	0.8%
15	v	0.55%

Phoneme Frequency

## 2.7. Stress

Although stress is not phonemic, considerable variation in the loudness of syllables is to be heard. This is predictable in terms of two stress features: (1) phrase stress and (2) syllable stress.

### (1) Phrase stress: [V]

The domain of phrase stress is the phonological phrase. (see section 2.3). One and only one phrase stress [V] will occur in each phonological phrase.

- (i) In non-final phrases, phrase stress occurs on the penultimate syllable if the last syllable is short; on the last syllable if it is long.

Kia tae ki te tuaatau i hoki ai,...

[#kia+<sup>˩</sup>çæ+tki+te+tuaatau+i+hoki+<sup>˩</sup>ai//]

'When the time to return comes,....'

Kua noho ia ki te taane,...

[#kua+noho+ia+ki+te+<sup>˩</sup>taane//]

'She has been married to the man,....'

- (ii) In final phrases, phrase stress occurs on the penultimate voiced syllable if the last voiced syllable is short; on the last voiced syllable if it is long. A short vowel before final juncture is frequently devoiced. (see section 2.1.2).

Kua hano mai tahi tangata.

[#kua+hano+mai+<sup>∇</sup>cahi+tangatA#]

'A man came.'

Kaa hano ia, ka maataki i to-na matua.

[#ka·thanotia<sup>∇</sup> // ka+ma·taki+i+tona+matua<sup>∇</sup>#]

'She will go and visit her mother.'

Kua hoko mai Taia i hanu matau sii-sii ika maa-na.

[#kua+hoko+mai+<sup>∇</sup>caia+i+hanu+matau+si·si·tika+maanA#]

- (iii) Phrase stress occurring in positions other than those described above indicates contrastive emphasis on the morpheme concerned.

Kua haka+turi tee ia vahine.

[#kua+haka+turi+<sup>∇</sup>te·tia+<sup>∇</sup>vahinE#]

'This woman did flirt.'

## (2) Syllable Stress:

All syllables are said to be stressed or unstressed. Every short syllable before any juncture is unstressed. All other syllables are stressed. Some stressed syllables are, however, heard as louder [´] than others [˘] in terms of the following facts:

- (i) Other things being equal, a long syllable is more prominent than a short syllable.

Kua tuku tee ia taane i to-na vahine, kia hano.

[#kua+tuku+tee+<sup>∇</sup>tia+<sup>∇</sup>taane+i+tona+vahine // kia+hanO#]

'This man told his wife to go.'

(ii) Other things being equal, the vowel /a/ is more prominent than the vowel /i/ or /u/. The vowels /e/ and /o/ have an intermediate degree of prominence. Jakobson, Fant, and Halle (1967:28) say, "...the compact phonemes display a higher "phonetic power" than the diffuse phonemes, ceteris paribus." They recognize [a], as the most compact and [i] and [u], as the most diffuse of the vowels. Penrhyn vowels are consistent with the above statements.

Kua tiipuu+hia te raakau,...

[#kuà+čílpuù+híà+te+rāakāw //]

'The stick was cut,....'

Although stress is marked over a long syllable, a relative prominence within a long syllable is heard under largely definable conditions as follows:

(i) In fast speech, the first member of a long syllable is heard as louder than the second member if it is the penultimate syllable before juncture.

tamaiti

[+ta-māy-čit+]

'child'

paa-pooro

[+pa.-pó.-řot+]

'cricket'

- (ii) In slow speech, the second member of a long syllable is heard as louder than the first member if it is the penultimate syllable before juncture.

tamaiti

[+ta-maí-çi+]

'child'

paa-pooro

[+pa.-poó-řo+]

'cricket'

## 2. 8. Intonation

Intonation is phonemically contrastive for morpheme sequences. It differentiates interrogative sentences and imperative sentences from declarative sentences. Certain types of interrogatives are distinguished from declaratives only by intonation.

Kaa hoki mai ia i te maarama.

[#ka·+hoki+mai+ia+i+te+ma·ramA#]



'He will come tomorrow.'

[#ka·+hoki+mai+ia+i+te+ma·ramA#]



'Will he come tomorrow?'

However, the pitch patterns have not been subjected to exhaustive analysis.

## NOTES

<sup>1</sup>For phonetic transcription, Smalley (1964) is followed.

<sup>2</sup>ruru 'fishing torch' and ruuruu 'shake' are not a minimal pair in a strict sense.

<sup>3</sup>The examples are taken from Maori manuscripts dated 1852 and 1882.

CHAPTER III  
MORPHOLOGY-SYNTAX<sup>1</sup>

3. 0. Introductory Summary

As we saw in Chapter II, Penrhyn utterances are divided, by the occurrence of final or non-final juncture, into short stretches of speech called phonological phrases. On morphological criteria utterances are divided into morphological phrases which, in slow, careful speech, coincide in most cases with phonological phrases. The application of the following rules will determine the boundary of every morphological phrase.

- (1) The occurrence of final or non-final juncture in normal speech marks the beginning of a new morphological phrase.

I nanahi, | hano atu maaua ma Taia ki te hare pure.  
#i+nanahi // hano+atu+maaua+ma+Taia+ki+te+hare+pure#

'Yesterday Taia and I went to Church.'

- (2) The occurrence of any preposed minor morpheme (see section 3. 1. 1) immediately following a word not classed as a preposed minor morpheme of a higher number (see section 3. 1. 1) marks the beginning of a new morphological phrase.

I nanahi,	hano atu maaua	ma Taia	ki te hare pure.
		7.11	7.8 5.3

- (3) The occurrence of any base classed as P or Lz (see section 3.2) immediately following a word not classed as a preposed minor morpheme marks the beginning of a new morphological phrase.

I nanahi,	hano atu	maaua	ma Taia	ki te hare pure.
		P		

Although non-final or final junctures do not necessarily occur at every morphological phrase boundary, in no case do they occur at points which are not indicated on morphological criteria, as being phrase boundaries. From this point on the term "phrase" is to be taken as meaning "morphological phrase".

Each phrase is conveniently regarded as containing three positional slots called the preposed peripheral, the nuclear, and the postposed peripheral slots. In every phrase the nuclear slot must contain lexical material; the preposed and postposed peripheral slots may be full or empty.

I	nanahi	hano	atu	maaua	ma	Taia	ki te	hare pure.
pre.	nuc.	nuc.	post.	nuc.	pre.	nuc.	pre.	nuc.

pre. : preposed peripheral slot  
 post. : postposed peripheral slot  
 nuc. : nuclear slot

Each slot filler consists of one or more words. Word boundaries are determined by the occurrence of plus juncture and on morphological criteria. (see Notations and Abbreviations). A word boundary is indicated by space. Some words are mono-morphemic and others are poly-morphemic. Penrhyn morphemes are defined by the usual techniques of morphemic analysis and on the basis of the simplicity and economy of the total pattern of the language. (e. g. p. 93).

Thus all utterances are cut unambiguously into morphemes. All morphemes are divided into three classes: interjections, bases, and minor morphemes.

Interjections are few in number and have no combinatorial possibilities with other morphemes. They are discussed in section 3. 3.

Bases are numerous, and are divided into six classes according to their combinatorial possibilities with certain minor morphemes. They are discussed in section 3. 2.

Minor morphemes, some of which are called particles; others, affixes, are relatively few in number, and are divided into those which occur in the preposed slot, and those which occur in the postposed slot. They are further subdivided into those which occur in the nuclear slot of the phrase and those which occur in the peripheral slot of the phrase. Finally they are classified into position classes according to their positions and their combinatorial possibilities with respect to the base(s) in the nucleus. Minor morphemes are discussed in section 3.1.

The following table summarizes the differences between bases and minor morphemes.

	Bases	Minor Morphemes
1. Able to fill nucleus	+	-
2. Able to stand alone as a phrase	(+)	-
3. Able to take affixation	(+)	-
4. Able to be reduplicated	(+)	-
5. Definable by listing	-	+
6. Carry lexical meaning	+	(-)
7. Carry grammatical meaning	(-)	(+)
8. Consist of a single syllable	(-)	(+)

+ : always, (+) : usually, - : never, (-) : rarely.

Differences between Bases and Minor Morphemes

Acceptable nuclei may be generated by substituting appropriate bases according to their combinatorial possibilities with nuclear minor morphemes. A simple nucleus consists of a single base. A complex nucleus consists of a single base and at least one nuclear minor morpheme. A compound nucleus consists of two or more bases with or without nuclear minor morphemes. The structure of nuclei are discussed in section 3.4.

Further, acceptable phrases may be generated by substituting appropriate nuclei according to their combinatorial possibilities with peripheral minor morphemes, which are summarized in formulae presented in section 3.5. These formulae are also intended to rule out a high proportion of phrases which are ungrammatical in the language. All phrases are classified into two types: nominal phrases and verbal phrases.

The study of possible arrangements of different phrases (i. e. sentence syntax) would complete the grammatical analysis of the language. However, in the present thesis only the internal structure of the phrase is discussed.

### 3.1. Minor Morphemes

Morphemes which cannot fill the nucleus of a phrase but have combinatorial possibilities with other morphemes within a phrase are classified as minor morphemes.

All minor morphemes fall into two mutually exclusive position classes: those which precede a base in the same phrase, called preposed minor morphemes, and those which follow the base, called postposed minor morphemes. The order of morphemes within a phrase is fixed. Some minor morphemes are mutually incompatible (i. e. they cannot occur in the same phrase). Some mutually incompatible minor morphemes share a paradigmatic relationship (i. e. they may substitute one for another in all, or most environments).

In view of these features it is convenient to order all minor morphemes in position classes which are ranked numerically outwards from the base. The preposed minor morphemes are numbered Class 8. - 1.; the postposed minor morphemes are numbered Class 21. - 29. They are further subdivided into those which occur in the nuclear slot of the phrase and those which occur in the peripheral slot of the phrase. The preposed peripheral minor morphemes are numbered Class 8. - 4.; the preposed nuclear minor morphemes are numbered Class 3. - 1.; the

postposed nuclear minor morphemes are numbered Class 21. - 22.; the postposed peripheral minor morphemes are numbered Class 23. - 29.

Also, all minor morphemes are divided into particles and affixes. Non-isolable morphemes (i. e. any morpheme linked by close transition to another morpheme), and all nuclear minor morphemes are called affixes. All other minor morphemes are called particles.

### 3.1.1. Inventory of Minor Morphemes

Following is an exhaustive list of minor morphemes. Each is assigned a gloss and allotted a decimal number within the position class. The numbering within the class is entirely arbitrary, except that consecutive numbers indicate that the morphemes so numbered share a paradigmatic relationship. The position class whose members share a similar meaning or function is labeled accordingly. All affixes are indicated by hyphens. Morphemes which have two or more allomorphs are written partially or completely in capital letters. Each minor morpheme is discussed in detail on the page indicated.

## Proposed Peripheral Minor Morphemes

Class 8.	Verbal Particles	Page
8.1. kua	perfective .....	45
8.2. E	non-past .....	46
8.3. kA	inceptive .....	47
8.4. i	past.....	49
8.5. tee	continuative.....	49
8.6. kia	desiderative .....	50
8.7. mee	prescriptive .....	51
8.8. mei	'almost, nearly'.....	52
 Class 7.		
7.1. e	nominal predicate .....	53
7.3. ei	future position .....	54
7.5. tei	present position.....	55
7.6. mAi	'from, since, like' .....	56
7.7. i	direct comment.....	57
7.8. ki	indirect comment .....	59
7.9. ko	focus .....	61
7.11. mA	additive .....	62
7.13. ee	vocative .....	64
7.14. E	agentive .....	65
7.16. A	dominant possession, 'of' .....	66
7.17. O	subordinate possession, 'of'.....	67
7.19. maa	dominant possession, unrealized.....	68
7.20. moo	subordinate possession, unrealized ...	69
7.22. naa	dominant possession, realized.....	69
7.24. noo	subordinate possession, realized.....	70
 Class 6.		
6.1. tA	dominant possession.....	72
6.3. tO	subordinate possession .....	74
6.5. A	dominant possession, plural.....	76
6.6. O	subordinate possession, plural .....	77
6.8. tee	demonstrative .....	78
6.9. ee	demonstrative, plural .....	78

## Class 5.

5.1.	A	personal-locational article .....	79
5.3.	tE	definite article .....	82
5.5.	naa	definite article, small plural .....	84
5.7.	uA	specifying article .....	85
5.9.	unaa	specifying article, small plural .....	86
5.11.	tahi	indefinite article .....	87
5.13.	hanu	indefinite article, small plural .....	87
5.15.	taua	retrospective article .....	88
5.17.	ia	near speaker .....	89
5.18.	naa	near hearer .....	89
5.19.	raa	distant .....	90
5.21.	ku	1st person, sg. ....	91
5.22.	U	2nd person, sg. ....	91
5.23.	na	3rd person, sg. ....	92
5.24.	taaua	1st person, dual, incl. ....	93
5.25.	maaua	1st person, dual, excl. ....	93
5.26.	koorua	2nd person, dual .....	93
5.27.	raaua	3rd person, dual .....	93
5.28.	taatou	1st person, pl. incl. ....	93
5.29.	maatou	1st person, pl. excl. ....	93
5.30.	koutou	2nd person, pl. ....	93
5.31.	raatou	3rd person, pl. ....	93

## Class 4.

4.1.	au	plural .....	95
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## Proposed Nuclear Minor Morphemes

## Class 3. Numeral Prefixes

3.1.	toko-	human prefix .....	96
3.2.	tuu	non-human prefix .....	96
3.3.	taki-	distributive prefix .....	97

## Class 2.

2.1.	HAKA-	causative prefix .....	97
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<b>Class 1.</b>	<b>Reduplication</b>	
1.1. cvcv-	type 1. ....	100
1.3. cv-	type 2. ....	101
1.4. cvv-	type 3. ....	103
1.5. cvvcv-	type 4. ....	103

### Postposed Nuclear Minor Morphemes

#### Class 21.

21.1. HANGA	nominalizing suffix .....	104
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#### Class 22.

22.1. -HIA	passive suffix .....	107
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### Postposed Peripheral Minor Morphemes

#### Class 23.

23.1. hua	'only, just' .....	109
23.2. roa	'immediately' .....	110
23.3. tikaai	'really' .....	111

#### Class 24. Direction Particles

24.1. atu	away from speaker .....	113
24.2. mai	towards speaker .....	114
24.3. ake	above speaker .....	115
24.4. iho	below speaker .....	116

#### Class 25. Adverbial Particles

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**3.1.2. Examination of Minor Morphemes**

This section proceeds to a detailed examination of each minor morpheme. In the illustrative texts, the phrase which contains the minor morpheme under discussion is enclosed within parentheses if it is a verbal phrase; brackets, if it is a nominal phrase. All and only minor morphemes in the phrase under discussion are indexed. Every base is given an English gloss. However, in the gloss, parentheses enclose a gloss which is to be taken as a meaning for the hyphenated words, the plus-junctured words, or the whole nuclei. A free translation is given below between single quotation marks. In the translation, parentheses enclose elements unnecessary or inappropriate in English but suggested by Penrhyn; brackets enclose elements which gloss no Penrhyn form but make the translation clearer or more appropriate.

The compatibilities of minor morphemes with nucleus classes (see section 3.2 and 3.4) are stated in an appropriate section.

Most selection restrictions stated in this section are structural ones. However, some may result from semantic limitations or be due to the limited corpus.

### 3.1.2.1. Preposed Peripheral Minor Morphemes: Class 8, 7, 6, 5, and 4.

#### Class 8. Verbal Particles

This class has eight members. They occur only in verbal phrases (see section 3.5.2). Conversely, they occur in sequence with a nucleus of Class V, A, and G, only. They are mutually exclusive with members of Class 7, 6, 5, and 4.

#### 8.1. kua perfective

kua indicates that an action is completed or a state is attained. An appropriate English translation will usually be a present, past, or present perfect tense.

(Kua hano Soko+au), (kua haaraavei) i to-na matua.					
8.1	go	(npn.)	8.1	meet	parent

'Sokoau has gone and met her parent.'

(Kua aroha ana) au i a Ayako ki te sei pooreho.  
 8.1 love 25.2 I npn. lei shell

'I [have shown my] love to Ayako with a shell lei.'

(Kua vaasi sakari ana) maaua ma Taia i nanahi.  
 8.1 split k. of coconut 25.2 we npn. yesterday

'Taia and I split coconuts yesterday.'

(Kua ruuhau) to-ku tupuna.  
 8.1 old grandparent

'My grandmother is old.'

## 8.2. E non-past

E indicates that an action is taking place in the present or future, but not in the past. E has two allomorphs: /ee/ and /e/. The former occurs before a nucleus of one syllable or two short syllables. The latter occurs elsewhere. (see section 3.4).

I Maangaro+ngaro (ee saka ana) te tangata i te taa-reka+reka.  
 (npl.) 8.2 dance 25.2 people (festival)

'In Penrhyn the people dance during the festivals.'

(Ee rahi) taa maatou ika i rauka mai i te ia raa.  
 8.2 many fish obtained day

'We have a lot of fish today.'

Ko te niu koovari, (ee kore)<sup>3</sup> (e hinangaro+hia) moo te  
 k. of coconut 8.2 not 8.2 desire 22.1

koopara.  
 copra

'The niu-koovari is not desirable for [making] copra.'

I Maangaro+ngaro, (ee rua oohire) (e noho+hia) e te tangata.  
 (npl.) 8.2 two village 8.2 live 22.1 man

'In Penrhyn, there are two villages [which are] inhabited.'

Ei aha<sup>4</sup> koe (e haka+maatau) i a Riinaa i te siki.  
 what you 8.2 2.1 habit npn. lift

'Don't make a habit of rocking Riinaa.'

(E haki+haki mai) koe i hanu nii+mata i runga i tee naa  
 8.2 (pick) 24.2 you k. of coconut top

kaahui rooroo.  
 bunch coconut arm

'Pick up some coconuts from the coconut bunch there (by you).'

### 8.3. kA inceptive

kA indicates the onset of an action or the change of an action.

kA has two allomorphs: /kaa/ and /ka/. The former occurs before a nucleus of one syllable or two short syllables. The latter occurs elsewhere. (see section 3.4)

Ko te muko+muko, (kaa kore)<sup>5</sup> e vare+vare i roto.  
 k. of coconut 8.3 not slimy in

'As for the mukomuko, there is no slimy [substance] inside.'

(Kaa hano) te vahine (ka ko-koti) i te rau hara.  
 8.3 go woman 1.3 1.3 cut leaf pandanus

'The woman goes and cuts the pandanus leaves.'

(Ka patu+hia) te tamaiti e te tangata.  
 8.3 beat 22.1 child man

'The child will be beaten by the man.'

Ko te sakari keret+kere, (ka vaa-vaasi) taaua i rera,  
 k. of coconut (black) 8.3 1.3 split we that

(kaa hora) ki te raa.  
 8.3 spread sun

'As for the mature coconut, we split it and spread [it] in the sun.'

(Kaa patu) te tangata i te tamaiti.  
 8.3 beat man child

'The man will beat the child.'

(Ka natu+natu) taaua i te haraoa.  
 8.3 1.1 knead we bread

'We knead the bread.'

(Kaa pure) maatou ki te atua, (kaa moe ai) maatou.  
 8.3 pray we god 8.3 sleep 25.1 we

'We pray to the god and then we sleep.'

Kia maarama, (kaa sura) te masanga o Hakatsusa.  
 tomorrow 8.3 turn law of closure (npl.)

'Tomorrow, the taboo of Hakasusa will be removed.'

#### 8.4. i past

i indicates simple past.

I nanahi au (i hano ai) ki Mangere.  
 yesterday 8.4 go 25.1 npl.

'Yesterday I went to Mangere.'

To-na tahi hua (i hano mai).  
 one 8.4 go 24.2

'He came all by himself.'

Ei kore<sup>6</sup> koe (i kave mai) i tahi pona moo-ku.  
 not you 8.4 bring 24.2 dress me

'You didn't bring me a dress.'

#### 8.5. tee continuative

tee indicates the continuation of an action. An appropriate English translation will usually be the progressive form in -ing. tee is always accompanied by one of the Class 26 particles: nei (26.1), Vna (26.2), or Vra (26.3).

(Tee noho nei) te koopuu tangata i roto i te hare.  
8.5 stay 26.1 group man in house

'The family is staying in the house.'

(Tee tuu una) hoki ia i runga i te poohatu.  
8.5 stand 26.2 he top rock

'He is also standing there [by you] on the rock.'

I tahi poopongi (tee hana ara) ia i te moa.  
morning 8.5 shoot 26.3 he fowl

'One morning he was shooting wild fowls (with bow and arrow).'

#### 8.6. kia desiderative

It is difficult to isolate a constant meaning for kia. In most cases sentence initially, kia indicates desiderative; it also indicates a subordinate construction especially sentence medially.

(Kia tae mai) te pahii i te maarama.  
8.6 arrive 24.2 ship tomorrow

'[I want] the ship to arrive tomorrow.'

(Kia patu+hia) te tamaiti e te tangata.  
8.6 beat 22.1 child man

'The child should be beaten by the man.'

(Ho-hora mai) koe i te moe-nga, (kia noho) maaua ki runga  
spread you sleep 8.6 sit on we top

i te moe-nga.

'Spread the mat so that we can sit on it.'

Kua mama ana to-ku maamaa ruuhau i te kai (kia kai) au.  
 chew mother old food 8.6 eat I

'My grandmother used to chew food so that I could eat.'

### 8.7. mee prescriptive

mee indicates a prescriptive construction. An appropriate English translation will usually contain, 'if, when, since, as, suppose, etc.'

I Maangaro+ngaro (mee tae) te tuaatau namu, apinga  
 (npl.) 8.7 arrive season mosquito thing

tikaai te namu.  
 mosquito

'In Penrhyn, when the mosquito season comes, the mosquitoes are really something.'

(Mee moe kino) au i te poo, kua nanu+nanu au i roto i  
 8.7 sleep bad I night murmur I in

to-ku moe+hanga.  
 sleep

'When I cannot sleep well at night, I talk in my sleep.'

(Mee patu+hia) te tamaiti e te tangata.  
 8.7 beat 22.1 child man

'Suppose the child is beaten by the man...'

Unlike the rest of the particles in Class 8, mee may co-occur with kua (8.1), but not with other verbal particles.

(Mee kua hano mai) ta-ku tamaiti i tee ia pahii.  
8.7 8.1 go 24.2 child ship

'[I wonder] if my son came on this ship.'

Naani, taa-suka+hia ta-ku kapu tii, tongi koe i rera  
npn. add sugar cup tea taste you that

(mee kua kona).  
8.7 8.1 satiated

'Put some sugar in my cup of tea and see if it tastes good.'

8.8. mei 'almost, nearly'

mei indicates that an action is nearly completed.

(Mei patu+hia) te tamaiti e te tangata.  
8.8 hit 22.1 child man

'The child was nearly hit by the man.'

(Mei topa) au ki raro.  
8.8 fall I down

'I almost fell down.'

(Mei puta) au i te poohatu.  
8.8 crack I stone

'I was almost hit by the stone.'

## Class 7.

This class has sixteen members. They occur only in nominal phrases (see section 3.5.1).

7.1. e nominal predicate

e marks a nominal predicate phrase. e occurs in sequence with a nucleus of Class A, G, or N. e is not compatible with members of Class 5 unless e is followed by a member of Class 6.

[E pese] teetia noo te inu+hanga ki te roro.  
7.1 song (this) drink coconut milk

'This is a song about drinking coconut milk.'

[E tangata kumu kava maangaro] a Taia.  
7.1 man wring wine k. of coconut npn.

'Taia is an expert [at] wringing out coconut milk.'

[E aha] koe i hano mai ai?  
7.1 what you come

'Why did you come here?'

Kua kite ana au i a Rarotonga [e henua mato].  
know I npl. 7.1 land deep valley

'I know that Rarotonga is a land of deep valleys.'

7.3. ei future position

ei occurs in sequence with a nucleus of Class A, G, N, or L, indicating future position. ei is not compatible with members of Class 5 unless ei is followed by a member of Class 6.

[Ei muri ake] tee ia aronga.

7.3 behind 24.3 group

'This group will [follow] behind.'

Kua taaviri au i te roro sakari [ei taaroro]  
 wring I coconut milk k. of coconut 7.3 make sauce

i taa maatou poke maika.  
 our pudding banana

'I wrung out coconut milk to make some sauce to put in our banana pudding.'

[Ei tee raa tuutee mai] Kaarepa e moto ai.

7.3 6.8 5.19 Tuesday 24.2 npn. punch

'Next Tuesday, Kaarepa will fight.'

7.5. tei present position7.6. mai 'from, since, like'7.7. i direct comment7.8. ki indirect comment7.9. ko focus

7.5 - 7.9 form a paradigmatic set. They occur in sequence with a nucleus of Class A, G, N, L, or P.

tei indicates present position.

E paasua [tei runga] i te au toka.  
clam 7.5 top rock

'There are clams on the rocks.'

[Tei Puue atu raai] raatou.  
7.5 npl. 24.1 27.4 they

'They are still at Puue.'

[Tei te kaainga] to ika.  
7.5 5.3 home fish

'The fish is at home.'

E kai [tei reira]?  
food 7.5 there

'(Is there) any food there?'

[Tei hea] te puka?  
7.5 which book

'Where is the book?'

It is difficult to isolate a constant meaning for mAi (7.6). An appropriate English translation would be 'from, since, like, etc.', depending upon the context. mAi has two allomorphs: /mai/ and /mei/. They are in free variation.

[Mei Puka+puka mai] raaua.  
7.6 (npl.)          24.2    they

'They are from Pukapuka.'

[Mai koo      mai] ki konei ee tahi haanere iaati te momoo.  
7.6    yonder    24.2          here          one hundred          distance

'It is 100 yards distance from there to here.'

E rauka      mai ana te poe      [mai roto]      i te pipi.  
obtained                                  pearl    7.6    inside                  oyster shell

'The pearls are obtained from the oyster shell.'

[Mei te rua raa] i te horathanga, kua tari      akathoou mai  
7.6    5.3    two day                  dry                                  convey                  new

taaua i te rau hara.  
we          leaf      pandanus

'[After] two days of drying, we have brought back the pandanus leaves.'

[Mei te rima raa] kua maroo.  
7.6    5.3    five day                  dry

'It got dry [in] five days.'

[Mai te neeneva raai] koe.  
7.6 5.3 idiot 27.4 you

'You are just like an idiot.'

[Mai te popaa raai] koe.  
7.6 5.3 white man 27.4 you

'You look like a white man.'

i indicates a direct or close connection between an action and the goal as opposed to ki (7.8) which indicates an indirect or distant connection between an action and the goal.

Kua hata taaua [i te moe-nga].  
plait we 7.7 5.3 sleep 21.1

'We have plaited the mat.'

Kaa hata koe [i a Riinaa] ki hea?  
carry you 7.7 5.1 npn. which

'Where are you going to carry Riinaa?'

Ko Te+kasi, kaa kore e tangata [i reira].  
(npl.) not man 7.7 there

'[In] Tekasi, there is no inhabitant.'

Ko te sakari keretkere ka vaa-vaasi taaua [i rera].  
k. of coconut (black) split we 7.7 that

'As for the mature coconut, we split it.'

Asuthia mai tahi kapu vai [i roto] [i te pakete].  
 scoop cup water 7.7 inside 7.7 5.3 bucket

'Scoop a cup of water from the bucket.'

[I te poopongi ake] [i te puretoru], hano atu au ki  
 7.7 5.3 morning 24.3 7.7 5.3 Wednesday go I

te tapa+tapa [i tai].  
 edge 7.7 seaward

'On Wednesday morning, I went to the beach.'

[I tee ia au raa nei] kua mahana.  
 7.7 6.8 5.17 4.1 day 26.1 warm

'These days, it has been warm.'

Kua motu te kaso o Marama [i te tipi].  
 cut finger npn. 7.7 5.3 knife

'Marama's finger was cut by the knife.'

Tee pae-paenu ura naa puru sakari [i raro]  
 float husk k. of coconut 7.7 bottom

[i te tai].  
 7.7 5.3 sea

'Some coconut husks are floating in (the bottom of) the sea.'

Ee soo koe kia rahi taa-na [i taa-ku].  
 give you many him 7.7 6.1 me

'You give him more than me.'

E hohonu ake tee ia tai roto [i tee+naa].  
 deep sea inside 7.7 (that)

'This lagoon is deeper than that [lagoon].'

Kua keta to-ku rima [i roto] i [te huirā] o te paasikara.  
 clench hand 7.7 inside 7.7 5.3 wheel bicycle

'I have had my hand caught in the wheel of the bicycle.'

Kua tari mai taaua [i te uto] ki te aaatea  
 carry we 7.7 5.3 k. of coconut side

[i te umu].  
 7.7 5.3 oven

'We put the sprouting coconut to the side of the oven.'

ki indicates an indirect or distant connection between an action and the goal as opposed to i (7.7) which indicates a direct or close connection between an action and the goal.

Kua hano Toomu [ki hea]?  
 gone npn. 7.8 which

'Where has Tom gone?'

Kua kave au i te ika [ki aa ia].  
 take I fish 7.8 5.1 him

'I have taken the fish to him.'

Kua uru te tangata [ki vaha].  
 go man 7.8 out

'The man has gone out.'

Kua haka+ipo+ipo Soko+au [ki te taane].  
 (marry) (npl.) 7.8 5.3 man

'Sokoau has married the man.'

Kaa reva mai Tiare+taaporo [ki Niusilreni nei] i te poopongi.  
 float (name of ship) 7.8 npl. 26.1 morning

i te maarama mei Rarotonga mai.  
 tomorrow npl.

'Tomorrow morning the Tiare-Taaporo will sail to New Zealand from Rarotonga.'

Sere+hia mai te taura [ki runga] i te noho+anga kia mau.  
 tie rope 7.8 top hold

'Tie the rope on top of the chair to hold [it].'

Kua tanu [ki te one] te umu.  
 covered 7.8 5.3 soil oven

'The oven was covered with the soil.'

Ka vaa-vaasi taaua i te sakari kaa hora [ki te raa].  
 split we k. of coconut dry 7.8 5.3 sun

'We split the sakari and dry it in the sun.'

Haka+hip+hio [ki te toru].  
 (small) 7.8 5.3 three

'Divide by three.'

The phoneme /i/ in the particles: ei (7.3), tei (7.5), ma*i* (7.6), i (7.7), and ki (7.8), might be supposed to be a meaningful unit. However, cutting the forms into two morphemes does not help to reduce the total number of morphemes and it is simpler to regard them as single morphemes.

ko indicates that the subject or object is emphasized.

[Ko koe] tee+raa i runga i te vaka.  
 7.9 you (that) top canoe

'That [person over there] in the canoe is YOU!'

[Ko ta-ku tamaiti] tee kaa hano.  
 7.9 6.1 5.21 child go

'It is my child who will go.'

[Ko too koutou hare] tee+ia?  
 7.9 6.3 5.30 house (this)

'Is this YOUR HOUSE?'

[Ko Penireni] te ingoa o te pahii.  
 7.9 npl. name ship

'PENRHYN is the name of the ship.'

[Ko ua tangata ana] te-i patu ana i te tamaiti.  
 7.9 5.7 man 26.2 hit child

'It is that man who hit the child.'

7.11. mA additive

mA occurs in sequence with a nucleus of Class A, G, N, L, or P. An appropriate English translation will often be, 'and, with, including, also, accompanied by, etc.' mA never occurs sentence initially. mA has two morphologically conditioned allomorphs: /maa/ and /ma/. Preceding numerals (i. e. Ax-bases) /maa/ occurs. Elsewhere, /ma/ occurs.

Kua tupu te peka+peka i roto i te koopuu tangata o Tioni  
 occur trouble inside group man npn.

raaua [ma Timi].  
 they 7.11 npn.  
 (dual)

'The trouble occurred [between] John's family and Jim's [family].'

Kua kai maatou i te ika [ma te miti] i tee ia raa.  
 eat we fish 7.11 5.3 sauce day

'We ate fish with coconut sauce today.'

Ko maaua [ma Marama] i hano ai.  
 we 7.11 npn. go  
 (dual)

'Marama [and I] went.'

Kia maarama kaa tari naa noho+anga [ma naa toofa<sup>7</sup> nei]  
 tomorrow convey sit 7.11 5.5 sofa 26.1

ki roto i te kiitini.  
 inside kitchen

'Tomorrow, chairs and sofas will be carried into the kitchen.'

Kua hoe ana maaua [ma Taia] naa runga i te vaka  
 paddle we 7.11 npn. top canoe  
 (dual)

ki Te+tautua.  
 (npl.)

'Taia and I paddled the canoe to Tetautua.'

Ee rua rau [maa rima tekau] te kaatoatoa o te rau  
 two two-hundred 7.11 five twenty (all) leaf

hara.  
 pandanus

'There are five hundred pandanus leaves in all.'

I te matahiti e tahi tauatini e iva haanere e haa ngahuru  
 year one thousand nine hundred four ten

[maa rua], kua tae mai te pahii.  
 7.11 two arrive ship

'In the year 1942, the ship arrived.'

7.13. ee vocative

7.14. E agentive

7.13 - 7.14 occur in sequence with a nucleus of Class A, N,  
or P.

ee indicates a vocative phrase.

[Ee Tetanai+kura]!  
7.13 (npn.)

'Hey, Teanaikura!'

Hano mai [ee ua tamaiti ira]!  
come 7.13 5.7 child 26.3

'Come here, kid (over there)!'

[Ee mea]!  
7.13 thing

'Hey, you!'

[Ee toko+rua ara]!  
7.13 3.1 two 26.3

'Hey, you two (over there)!'

E indicates the agent of an action in a passive construction.

E never occurs sentence initially. E always co-occurs with a passive suffix -HIA (22.1). E has two allomorphs: /ee/ and /e/. There is free variation of /ee/ and /e/ preceding a word of one syllable or two short syllables before final juncture<sup>8</sup>; elsewhere /e/ occurs.

Kua kata+hia te ariki [ee koe].  
 laugh chief 7.14 you

'The chief was laughed at by you.'

Kua kata+hia te ariki [e vai]?  
 laugh chief 7.14 who

'By whom was the chief laughed at?'

I Maangaro+ngaro, ee rua oohire e noho+hia [e te tangata].  
 (npl.) two village live 7.14 5.3 man

'In Penrhyn, there are two villages [which are] inhabited.'

Kua hoko+hia mai [e au] te pare.  
 buy 7.14 me hat

'The hat was bought by me.'

Kua surathia te taahuhu o te hare [e te matangi].  
 turn over ridge pole house 7.14 5.3 wind

'The ridge pole of the house was turned by the wind.'

7.16. A dominant possession, 'of'

7.17. O subordinate possession, 'of'

7.16 - 7.17 occur in sequence with a nucleus of Class A, G, N, or L. A (7.16) indicates dominant possession, as opposed to O, (7.17) which indicates subordinate possession. (see section 3.2.1.4). An appropriate translation would usually be 'of, \_\_\_'s.' A and O never occur sentence initially. A has two allomorphs: /aa/ and /a/, and O has /oo/ and /o/. There is free variation of /aa/ and /a/, and of /oo/ and /o/ preceding a word of one syllable or two short syllables before final juncture<sup>9</sup>; elsewhere /a/ or /o/ occurs.

Oono atu au i te matira [a Taia] kua sape.  
 look I fishing rod 7.16 npn. crooked

'I saw Taia's fishing rod; it had been made crooked.'

So-sorethia mai te maika [aa Sei].  
 peel banana 7.16 npn.

'Peel Sei's banana.'

E suumaaringa te puaka [a te ariki].  
 good pig 7.16 5.3 chief

'The chief's pig is good.'

Teetia tahi angatanga [o te rau hara].  
 (this) (work) 7.17 5.3 leaf pandanus

'This is a piece of work [made] of pandanus leaves.'

Ee hitu tapu+ae te roa ee ono tapu+ae te kakano  
 seven (foot) long six (foot) wide

[o te moe-nga].  
 7.17 5.3 sleep 2l.1

'The length of the mat is seven feet and the width of the mat is six feet.'

E suumaaringa te hare [oo Toka].  
 beautiful house 7.17 npn.

'Toka's house is beautiful.'

Ko te au motu i te takapini+hanga [o Maangaro+ngaro], kaa  
 island surround 7.17 (npl.)

kore e tangata i reira.  
 not man there

'[On] the islands in the surroundings of Penrhyn, there are no people.'

7.19. maa dominant possession, unrealized

7.20. moo subordinate possession, unrealized

7.19 - 7.20 occur in sequence with a nucleus of Class N or P. maa indicates unrealized dominant possession, as opposed to moo which indicates unrealized subordinate possession. 'For' is an appropriate English translation.

It is possible to regard maa as a bi-morphemic word, consisting of \*m- 'unrealized', and \*aa 'dominant possession'. However, as /aa/ in maa and A (7.16) do not share the same privilege of occurrence, it is simpler to regard maa as a single morpheme. For the same reason, moo (7.20), naa (7.22), noo (7.24), tA (6.1), tO (6.3) are all regarded as single morphemes. The statement of distribution of /aa/ and /a/, and /oo/ and /o/ would be very complicated if they were considered as allomorphs of one morpheme A or O.

Haamani mai koe i tahi tuu-rua kapu tii [maa maaua].  
 make            you                            two cup tea 7.19    us

'Make two cups of tea for us.'

Kua varu sakari ana au ei haamani miti kai  
 scrape k. of coconut            I                            make    sauce food

[maa maatou].  
 7.19    us

'I scraped the sakari in order to make coconut sauce for us.'

Kua hoko mai Taia i hanu matau sii-sii ika [maa-na].  
 buy                            npn.                            hook                            to fish fish 7.19 him

'Taia has bought some fishing hooks for himself.'

Ko te niu rakita ee kore e hinangarothia [moo te koopara].  
 k. of coconut not desire 5.3 copra

'The niu-rakita is not desirable for [making] copra.'

Ei kore koe i kave mai i tahi pona [moo-ku].  
 not you bring dress 7.20 me

'You didn't bring me a dress.'

Kaa hoko mai au i te piripou [moo vai]?  
 bring trousers 7.20 who

'For whom shall I buy [a pair of] trousers?'

#### 7.22. naa dominant possession, realized

naa occurs in sequence with a nucleus of Class N, L, or P.

It is difficult to isolate a constant meaning for naa. When naa co-occurs with L bases or N bases denoting places, it implies 'by way of, along, about.' Otherwise naa indicates realized dominant possession, or simply the subject.

Kua mama mai te ua [naa runga] i te taahuhu o te hare.  
 leak rain 7.22 top ridge pole house

'The rain leaked by way of the ridge pole of the house.'

Hano atu au [naa te puruumu], kua horo mai tahi kurii.  
 go I 7.22 5.3 road run dog

'When I went along the road, a dog ran towards me.'

[Naa Toka] tee raa tamaiti.  
7.22 npn. child

'That child is Toka's.'

[Naa vai] tee naa hohonga?  
7.22 who picture

'Who owns that picture?'

E mona+mona taa koutou [naa te popaa] i soo mai.  
(lollipops) you 7.22 5.3 whiteman give

'You have some lollipops [that] the white man gave you.'

Ee ngere [naa-ku] i soo atu to-o sei.  
not 7.22 I give lei

'I didn't give [you the] lei.'

[Naa-u] i hoko mai te pare.  
7.22 you buy hat

'You bought the hat.'

7.24. noo subordinate possession, realized

noo occurs in sequence with a nucleus of Class A, G, N, L, or P. It is difficult to isolate a constant meaning for noo. It implies the reason, location or realized subordinate possession.

Kua maki+hia Riinaa [noo te kai kino].  
 sick npn. 7.24 5.3 food bad

'Riinaa got sick because of the bad food.'

[Noo reira] i rauka mai ai te ingoa Maangaro+ngaro.  
 7.24 there obtained name (npl.)

'That's how [we've got] the name "Maangarongaro".'

Mee riri au ki ta-ku tamaiti [noo te kanga], kua  
 angry I child 7.24 5.3 play

moto+moto au i rera.  
 hit I that

'When I got angry with my child because of his mischief, I spanked him.'

[Noo roto raai] ia i te huaanga tautai.  
 7.24 inside 27.4 he breed fisherman

'He has a fisherman descendant.'

Kua rauka mai ana i a Te+oko+tahi te roroa  
 found (npl.) k. of fish

[noo runga mai] i te poti sii-sii ika.  
 7.24 top 24.2 boat to fish fish

'Teokatahi found the roroa fish on top of the fishing boat.'

[Noo tee raa tua] au.  
 7.24 6.8 5.19 side I

'I am on that side.'

[Noo vai] tee naa hohonga?  
7.24 who picture

'Whose picture is that?' (= 'Who is it a picture of?')

#### Class 6.

This class has six members. They occur only in nominal phrases. All of them are regarded as single morphemes. (see p. 36).

##### 6.1. tA dominant possession

tA occurs in sequence with a nucleus of Class A, G, N, or P, indicating dominant possession. tA has two morphologically conditioned allomorphs: /taa/ and /ta/. Before the following particles: -ku (5.21), -U (5.22), -na (5.23), /ta/ occurs. Elsewhere, /taa/ occurs (including before the following pronoun bases: -ku 'me', -u 'you', and -na 'him, it'). (see section 3.2.1.6).

Kua tahu ana au [i ta-ku ota+ota].  
burn 7.7 6.1 5.21 (rubbish)

'I burned my rubbish.'

Te+okotahi, kua sape [ta-u raakau].  
(npn.) crooked 6.1 5.22 timber

'Teokotahi, your timber is not straight.'

I nanahi, kua tanu Te+oko+tahi [i ta-na huri remeene].  
 yesterday plant (npn.) 7.7 6.1 5.23 shoot lemon

'Yesterday, Teokotahi planted his lemon tree.'

I nanahi, kua pau [taa maatou suka].  
 yesterday consumed 7.7 5.29 sugar

'Yesterday, our sugar was consumed.'

E puaka suumaaringa [taa te ariki].  
 pig fine 6.1 5.3 chief

'The chief has a fine pig.'

E maiaa+moa [taa Te+oko+tahi].  
 (hen) 6.1 (npn.)

'Teokotahi has a hen.'

E kai mata [taa maatou] ei kore i tunu+hia.  
 food raw 6.1 us not cook

'We have raw food, [which was] not cooked.'

E rii [taa-ku] i hoko mai noo roto i te toa.  
 handkerchief 6.1 me buy inside store

'I have a handkerchief [which] I bought [from] the store.'

E puaka suumaaringa [taa-u].  
 pig fine 6.1 you

'You have a fine pig.'

E kautamo tikaai [taa-na] kia sapai.  
 (litter) 6.1 him carry

'He has a real litter to carry.' (= He can carry really heavy things.)

### 6.3. tO subordinate possession

tO occurs in sequence with a nucleus of Class A, G, N, L, or P, indicating subordinate possession. tO has two morphologically conditioned allomorphs: /too/ and /to/. Before the following particles: -ku (5.21), -u (5.22), -na (5.23), /to/ occurs. Elsewhere, /too/ occurs (including before the following pronoun bases: -ku 'me', -u 'you', and -na 'him, it'). (see section 3.2.1.6).

Kua ruuhau [to-ku tupuna].  
 old 6.3 5.21 grandmother

'My grandmother is old.'

Riinaa, kaa patu au [i to-o tumu]  
 npn. hit I 7.7 6.3 5.22 buttocks

'Riinaa, I will hit your bottom.'

Kua ora [to-na maki].  
 recovered 6.3 5.23 sick

'Her sickness is past.'

Kua tupu te ngaangaahere i roto [i too maatou kaaua].  
 grow weeds inside 7.7 6.3 5.29 pen

'The weeds have grown inside our pen.'

[I too maaua paa-pooro+hanga] ma Naani, ko Naani  
 7.7 6.3 5.25 (play ball) 21.1 npn. npn.

[to-ku peka].  
 6.3 5.21 mate

'In my ball playing game with Naani, Naani is my mate.'

Kua songi maaua [noo too maaua haaraavei+hanga].  
 press nose we 7.24 6.3 5.25 meet 21.1

'We kiss each other because of our meeting.'

I te tuaatau heetene, e maro hua [too te tangata].  
 7.7 5.3 time ancient loin cloth 6.3 5.3 man

'In ancient times, a man [wore] only a loin cloth.'

E pita mimi [too Riinaa].  
 pot urine 6.3 npn.

'Riinaa has a toilet pot.'

Moohina pii [too-ku] noo Tahiti mai.  
 bottle sprinkle 6.3 me npl.

'I've got a bottle of perfume from Tahiti.'

E hare suumaaringa [too-u].  
house fine 6.3 you

'You have a beautiful house.'

E karisi hua [too-na].  
p. of coconut 6.3 it

'There is only the karisi [left].'

Ko te niimata e vare+vare [too roto] i te niimata.  
k. of coconut slimy 6.3 inside k. of coconut

'As for the young coconut, there is a slimy [substance] inside.'

6. 5. A dominant possession, plural

6. 6. O subordinate possession, plural

6. 5 - 6. 6 occur in sequence with a nucleus of Class N only, and indicate that the referents are plural unlike 6. 1 - 6. 3 which do not specify whether the referents are singular or plural. A 'dominant possession' has two morphologically conditioned allomorphs: /aa/ and /a/. O, 'subordinate possession' has two morphologically conditioned allomorphs: /oo/ and /o/. Before the following particles: -ku (5. 21), -U (5. 22), and -na (5. 23), /a/ or /o/ occurs. Elsewhere /aa/ or /oo/ occurs. (i. e. before 5. 24 - 5. 31). 6. 5 - 6. 6 always co-occur with 5. 21 - 5. 31. The referents of A or O are always in the same phrase.

Kia maarama, kaa tari au [i a-ku apinga] i te hare  
 tomorrow convey I 7.7 6.5 5.21 things house

o Toka.  
 npn.

'Tomorrow, I will bring my things to Toka's house.'

Ee Raaira, tunuthia mai [aa taatou sunu puaka].  
 npn. cook 6.5 5.28 grease pig

'Raaira, heat our pig fat.'

Kua poa-poathia [o-ku rima].  
 smelly 6.6 5.21 hand

'My hands have got a strong smell.'

E aha [o-o mata] i kapi+kapi ai?  
 what 6.6 5.22 eye (look strained)

'What made your eyes look so strained?'

Kaa kuku au [i oo koutou kakii]?  
 wring I 7.7 6.6 5.30 neck

'I will wring your necks.'

6.8. tee demonstrative

6.9. ee demonstrative, plural

6.8 - 6.9 occurs only before the following particles: ia (5.17), naa (5.18), raa (5.19) and tahi (5.11), and in sequence with a nucleus of Class A, G, or N.

ee always indicates that the referents are plural as opposed to tee which does not specify numbers.

E hiro                    te marama [i   tee ia   poo].  
 second night            moon    7.7 6.8 5.17 night

'It is the second night (of a lunar cycle) tonight.'

Ei kore i piri [tee naa tuu-rua raakau].  
 not    stick    6.8   5.18 3.2 two    wood

'Those two timbers did not stick together.'

Peehea te momoo mai konei atu [ki tee raa maunga]?  
 how            distance            here            7.8 6.8 5.19 mountain

'How far is it from here to that mountain?'

Kia tae [ki tee tahi tuaatau] kua roa [tee ia tamaahine]  
 reach 7.8 6.8 5.11 time            long 6.8 5.17 woman

a Soko+au i te noho+hanga i taha i ta-na taane.  
 (npr.)            live                    side                    husband

'[A long time ago], this woman called Sokoau lived with her husband.'

[ee raa puaka].  
 6.10 5.19 pig

'Those pigs over there.'

The combination of tee (6.8) or ee (6.9), and the following particles of Class 5: ia (5.17), naa (5.18), or raa (5.19), occurs also in the nuclear slot. The resulting forms in the nuclear slots are regarded as bases of Class L. (see section 3.2.1.5).

#### Class 5.

This class has twenty-two members. They occur only in nominal phrases (see section 3.5.1).

##### 5.1. A personal-locational article

A occurs in sequence with a nucleus of Class L or P.

The possibilities of occurrence of A (5.1) in Penrhyn differ in certain respects from the description in other Polynesian languages. It is therefore desirable to discuss the distribution of Penrhyn A (5.1) in some detail although this will require some ad hoc definition of syntax.

(1) Whenever a P-class nucleus is preposed by tei (7.5), mAi (7.6), i (7.7), or ki (7.8), A (5.1) must also occur.

A has two allomorphs: /aa/ and /a/. Before a P-class nucleus of one syllable or two short syllables and after a particle of Class 7, /aa/ occurs. Elsewhere /a/ occurs.

- (2) When an Lx-class nucleus is the subject of a sentence, it is preceded by A (5.1). (always /a/).
- (3) Whenever a personal name (= Py-class nucleus) is the subject of a nominal predicate, i. e. a phrase beginning with e (7.1), it is preposed by A (5.1) (always /a/); but a personal name (= Py) which is the subject of other phrases is not preposed by A (5.1).
- (4) When a personal name (= Py) is the nucleus of a phrase which stands in apposition to the preceding phrase, it takes A (5.1). (always /a/).
- (5) When an Ly-class nucleus is preposed by i (7.7), it takes A (5.1) (always /a/), if it is the direct object of a verbal phrase, but not if it is simply indicating a location per se.

Kua kave koe i te ika [ki aa vai]?  
 take you fish 7.7 5.1 who (=Px)

'Whom did you take the fish to?'

Kua soo au i tahi aahata aanani [ki aa Here].  
 give I one box orange 7.8 5.1 npn. (=Py)

'I gave a case of oranges to Here.'

Kaa hata koe [i a Riinaa] ki hea?  
take you 7.7 5.1 npn. (= Py) which

'Where are you going to take Riinaa?'

Kaa patu au [i aa koe].  
hit I 7.7 5.1 you (= Pz)

'I will hit you.'

Kua vari+vari roa [a vaha] i too maatou hare  
muddy 5.1 outside (= Lx) house

noo te ua.  
rain

'The outside of our house was very muddy because of the rain.'

E rearea tikaai [a raro] i te moana.  
clear 5.1 bottom (= Lx) ocean

'The bottom of the ocean is really clear.'

E tangata tahunga maki [a Sooromona] i Maangaro+ngaro.  
man expert sick 5.1 npn. (= Py) npl.

'Sooromona is a witch doctor in Penrhyn.'

E tangata toa maerohi+rohi tikaai [a Kaarepa].  
 man brave (strong) 5.1 npn. (= Py)

'Kaarepa is a brave, strong fellow.'

Kua hano tee ia tamaahine nei [a Soko+au].  
 go woman 5.1 (npn.) (= Py)

'This woman (about whom I am talking now), called Sokoau, went.'

Kua kite koe [i a Rarotonga] e henua mataora.  
 know you 7.7 5.1 npl. (= Ly) land pleasure

'You know that Rarotonga is a land of pleasure.'

### 5.3. tE definite article

tE occurs in sequence with a nucleus of Class A, G, or N. tE takes singular bases as well as plural bases.

Tee+ia [te peeni].  
 (this) 5.3 pencil

'This (one here) is a pencil.'

Kia oti te koo, kua tahu taaua [i te umu].  
 finish 5.3 husk light we 7.7 5.3 oven

'When the husking was finished, we lit the oven.'

Peehea [te poria]?

how 5.3 big

'How big is it?'

[Ko te au motu] [i te takapini+hanga] o Maangaro+ngaro,

7.9 5.3 4.1 island 7.7 5.3 surround 21.1 (npl.)

kaa kore e tangata i reira.

not man there

'On the islands in the surroundings of Penrhyn, there are no people (there).'

tE (5.3) may also occur out of position preceding a verbal particle: kA (8.3) 'inceptive' or i (8.4) 'past'. In this case it introduces a subordinate construction which may be appropriately translated to 'which, or who' clause in English.

tE in this position has two allomorphs: /tee/ and /te/. /tee/ occurs before kA (8.3) and /te/ occurs before i (8.4).

Ko ua tangata ana te-i patu ana i te tamaiti.

7.9 5.7 man 26.2 5.3 8.4 hit 25.2 7.7 5.3 child

'That is the man who hit the child.'

Ko vai te-i haka+tupu i te peka+peka?

7.9 who 5.3 8.4 2.1 grow 7.7 5.3 (trouble)

'Who is the one that caused the trouble?'

Ko te tamaiti tee ka patu+hia e te tangata.  
 7.9 5.3 child 5.3 8.3 hit 22.1 7.14 5.3 man

'It is the child who is going to be hit by the man.'

Ko ta-ku tamaiti tee kaa hano.  
 7.9 6.1 5.21 child 5.3 8.3 go

'It is my child who will go.'

### 5.5. naa definite article, small plural

naa occurs in sequence with a nucleus of Class G or N

indicating a definite article of small plural.

Teetia [naa peeni].  
 (these) 5.5 pencil

'These (ones here by me) are pencils.'

Kua koti+koti taaua [i naa rau hara].  
 cut we 7.7 5.5 leaf pandanus

'We cut some pandanus leaves.'

Kua huti+hia [naa kie] o Tiare+taaporo ki runga.  
 pull 5.5 sail name of ship top

'The sails of the Tiare-Taaporo were unfurled.'

Kua matara [naa hiri].  
 loose 5.5 braid

'The braided [hair] became loose.'

### 5.7. uA specifying article

uA always co-occurs with one of the particles of Class 26 (i. e. nei (26.1), Vna (26.2) or Vra (26.3)) and in sequence with a nucleus of Class A, G, or N. uA has two allomorphs: /uaa/ and /ua/. Before a nucleus of one syllable or two short syllables, /uaa/ occurs. Elsewhere, /ua/ occurs. (see section 3.4)

Kaa hano au ki Otahuhu [uaa vasa nei].  
 go I npl. 5.7 interval 26.1

'I will go to Otahuhu immediately.'

Kaa hano taaua [uaa poo nei], ruru ika.  
 go we 5.7 night 26.1 torch fish

'We will go fishing by torch tonight.'

[Ee ua vahine ena]!  
 7.13 5.7 woman 26.2

'Hey, that woman there!'

[Ko ua tangata ana] te-i patu ana i te tamaiti.  
 7.9 5.7 man 26.2 hit child

'It is that man who hit the child.'

[Ua toko+rua ara]!

5.7 3.1 two 26.3

'Hey, the two [of you] over there!'

Ayako, tango+hia atu [ua teepu ura].

hold 5.7 tape 26.3

'Ayako, hold that tape (there).'

### 5.9. unaa specifying article, small plural

unaa always co-occurs with one of the particles of Class 26:

nei (26.1), Vna (26.2), or Vra (26.3), and in sequence with a

nucleus of Class G, or N. unaa indicates small plural as opposed

to uA which does not indicate number. The phonemic sequence

/naa/ of unaa and the particle naa (5.5) 'definite article, small

plural' may be regarded as the same morpheme, but it is simpler

to regard unaa and naa as separate morphemes.

Kua riri Tere noo te kino [o unaa vahine nei] ki aa ia.

angry npn. bad 7.17 5.9 woman 26.1 him

'Tere got angry because these women were terrible to him.'

[Unaa vahine ena]!

5.9 woman 26.2

'Hey, those women there!'

[Unaa toko-toru ura]!

5.9 3.1 three 26.3

'Hey, those three [people] over there!'

5.11. tahi indefinite article

tahi occurs in sequence with a nucleus of Class A, G, or N.

'(A) certain, one, (an)other, etc.' are often appropriate translations.

Kua kave au [i tahi tuu-rua teepu].  
bring I 7.7 5.11 3.2 two tape

'I brought (certain) two tapes.'

[I tahi raa] kua tere ana te poti oo Pita.  
7.7 5.11 day float boat Peter

'One day Peter's boat floated.'

Tee noho nei au i too maatou hare, hano mai Tetanaitkura  
stay I house come (npn.)

oretoke mai [i tahi moni] maa-na.  
ask 7.7 5.11 money her

'When I was staying in our house, Teanaikura came to ask for a certain [amount of] money (for her to use).'

5.13. hanu indefinite article, small plural

hanu occurs in sequence with a nucleus of Class N or G,

indicating an indefinite article, small plural as opposed to tahi,

which does not specify number. 'Some, other, certain, etc.'

are often appropriate translations.

Ee soo mai koe [i hanu mereeni] maa maaua.  
 give you 7.7 5.13 melon us

'Give us some melons.'

E haki+haki mai koe [i hanu niimata] i runga i tee naa  
 pick you 7.7 5.13 k. of coconut top

kaahui rooroo.  
 bunch coconut arm

'Pick up some coconuts from the bunch in front of you.'

Kua tari mai Taia [i hanu poohatu karatea] e tahu  
 convey npn. 7.7 5.13 stone (k. of coral) set fire

unu naika.  
 (k. of oven

'Taia collected some corals to make an oven.'

#### 5.15. taua retrospective article

taua indicates the past time. It occurs in sequence with a nucleus of Class A, G, N, or L, but only selects nuclei which denote time. taua may be regarded as a bi-morphemic word, consisting of tE (5.3) and ua (5.7). But it is simpler to regard taua as a single morpheme.

[i taua taime raai]  
7.7 5.15 time 27.4

'at that time'

[i taua noema raai]  
7.7 5.15 November 27.4

'in that November'

[i taua au taime raai]  
7.7 5.15 4.1 time 27.4

'in those years'

5.17. ia 'near speaker'

5.18. naa 'near hearer'

5.19. raa 'distant'

The following morphemes: ia (5.17), naa (5.18), and raa (5.19) always co-occur with tee (6.8) or ee (6.9)

5.17 - 5.19 occur in sequence with a nucleus of Class A, G, or N.

Kua piri to-ku reo noo te maania  
close voice (shout to make quiet)

[ki tee ia au tamariki] i too maatou hare nei.  
7.8 6.8 5.17 4.1 children house

'I lost my voice because of shouting at these children to be quiet in our house.'

Ei kore i piri [tee naa tuu-rua raakau].  
not adhere 6.8 5.18 3.2 two timber

'Those two timbers did not adhere together.'

Peehea te momoo mai konei atu [ki tee raa maunga]?  
 how distant here 7.8 6.8 5.19 mountain

'How far is it from here to that mountain over there?'

ia, naa, and raa might be regarded as allomorphs of morphemes nei (26.1) 'near speaker', Vna (26.2) 'near hearer', and Vra (26.3) 'distant', respectively. However, because of the different combinatorial possibilities (the former are preposed particles, whereas the latter are postposed particles), they are considered as separate morphemes. They even co-occur in the same phrase:

Kua hano [tee ia tamaahine nei] a Soko+au, kua maataki  
 go 6.8 5.17 woman 26.1 (npn.) visit

i to-na matua.  
 parent

'This woman (whom I am talking about now), called Sokoau, went, and visited her mother.'

The combination of 6.8 - 6.9 and 5.17 - 5.19 occurs in the nuclear slot. The resulting forms are regarded as bases of L Class (see section 3.2.1.5).

5.21. -ku 'first person singular'

5.22. -U 'second person singular'

5.23. -na 'third person singular'

5.21 - 5.23 always co-occur with one of the following particles:

6.1 - 6.6, to form possessive pronouns. 5.21 - 5.23 always take allomorph of a short syllable of these particles. 5.21 - 5.23 occur in sequence with a nucleus of Class A, G, or N.

-ku indicates the first person singular. The only possible combinations are:  $\frac{\text{ta-ku}}{6.1 \ 5.21}$ ,  $\frac{\text{to-ku}}{6.3 \ 5.21}$ ,  $\frac{\text{a-ku}}{6.5 \ 5.21}$ , and  $\frac{\text{o-ku}}{6.6 \ 5.21}$ .

Kua toro            naa aka    [o ta-ku puu niu]  
spread out            sprout    7.17 6.1 5.21 tree coconut

i tanu ai.  
plant

'The sprout of my coconut tree (which was planted) is growing.'

/ku/ 'first person singular' occurs in the nucleus, which is regarded as a Pz-base. (see section 3.2.1.6). The base -ku always takes the allomorph of a long syllable of the particles of Class 6.

-U indicates the second person singular. -U has two phonologically conditioned allomorphs: /-u/ and /-o/. /-u/ always occurs following /a/, and /-o/ occurs following /o/. Therefore, the only possible combinations are:  $\frac{\text{ta-u}}{6.1 \ 5.22}$ ,  $\frac{\text{to-o}}{6.3 \ 5.22}$ ,  $\frac{\text{a-u}}{6.5 \ 5.22}$

and  $\frac{\text{o-o}}{6.6 \ 5.22}$

E aha koe i sae-sae ai [i to-o pona]?  
 what you tear 7.7 6.3 5.22 dress

'Why did you tear your dress?'

The same form as the allomorph /-u/ occurs in the nucleus, which is regarded as a Pz-base. (see section 3. 2. 1. 6). The base -u always takes the allomorph of a long syllable of the particles of Class 6.

-na indicates the third person singular. The only possible combinations are: ta-na, to-na, a-na, and o-na.  
                   6.1 5.23 6.3 5.23 6.5 5.23           6.6 5.23

Kua vero Kaarepa [i ta-na pooro].  
 thrust npn. 7.7 6.1 5.23 ball

'Kaarepa punctured his ball.'

/na/ 'third person singular' occurs in the nucleus, which is regarded as a Pz-base. (see section 3. 2. 1. 6). The base -na always takes the allomorph of a long syllable of the particles of Class 6.

- 5. 24. taaua first person dual, inclusive
- 5. 25. maaua first person dual, exclusive
- 5. 26. koorua second person, dual
- 5. 27. raaua third person, dual
- 5. 28. taatou first person plural, inclusive

5.29. maatou first person plural, exclusive

5.30. koutou second person, plural

5.31. raatou third person plural

Although 5.24 - 5.31 might be regarded as bi-morphemic words consisting of the following elements: \*taa- 'inclusive', \*maa- 'exclusive', \*koor-~kou- 'second person, non-singular', \*raa- 'third person, non-singular', \*-ua 'dual', \*-tou 'plural', all of them (5.24 - 5.31) are here considered as single morphemes because of the following reasons:

- (1) Cutting the forms into two units would not decrease the total number of morphemes markedly.
- (2) The resulting forms would be bound and non-productive, which is unusual in Penrhyn.
- (3) They belong to the same paradigm as 5.21 - 5.23 (i. e. -ku, -U and -na, all of which are single morphemes).
- (4) Most morphemes in Penrhyn are separated by plus juncture which does not occur between the forms under discussion.

5.24 - 5.31 always co-occur with one of the following particles:

6.1 - 6.6, to form possessive pronouns. 5.24 - 5.31 always take the allomorph of a long syllable of these particles.

5. 24 - 5. 31 occur in sequence with a nucleus of Class A, G,  
and N.

Aka+ura+hia mai [too taatou morii].  
light 6.3 5.28 lamp

'Light our lamp.'

Kua taahana au [i taa maatou toengaa+kai] ki roto  
heat I 7.7 6.1 5.29 (left over food) inside

i te umu.  
oven

'I heated our left-overs in the oven.'

[I too maaua paa-pooro+hanga] ma Naani, ko Naani to-ku peka.  
7.7 6.3 5.25 play ball 21.1 npn. npn. mate

'In my ball playing game with Naani, Naani is my mate.'

5. 24 - 5. 31 occur in the nuclear slot. However, these  
morphemes in the nuclear slots are regarded as bases of Class Pz  
(see section 3. 2. 1. 6).

E mona+mona [taa koutou] naa te popaa i soo mai.  
(lollipops) 6.1 you white man give

'You have some lollipops [that] the white man gave you.'

E kapa aahata [taa maatou] i kapa ana.  
dance box 6.1 we dance

'We were (box)-dancing.'

## Class 4.

This class has only one member.

4.1. au plural

au occurs in sequence with a nucleus of Class A, G, or N, and pluralizes the nucleus. au must be preposed by one or more preposed particles of Class 7, 6, and/or 5.

Ee rahi [te au puu niu] i Maangaro+ngaro.  
 many 5.3 4.1 tree coconut (npl.)

'There are many coconut trees in Penrhyn.'

E apinga tikaai te paasua i runga [i te au toka].  
 thing clam top 7.7 5.3 4.1 rock

'[There are so many] clams on the rocks.'

Noo Maangaro+ngaro mai [tee ia au poe].  
 (npl.) 6.8 5.17 4.1 oyster shell

'These oyster shells [came] from Penrhyn.'

[E au kai suumaaringa hua].  
 7.1 4.1 food nice 23.1

'[They are] all nice food.'

### 3.1.2.2. Preposed Nuclear Minor Morphemes: Class 3, 2, and 1

#### Class 3. Numeral Prefixes

This class has three members. They select only Ax bases  
(i. e. numerals.)

#### 3.1. toko- human

toko- indicates the number of people.

[Ee ua toko+toru vahine era]!  
7.13 5.7 3.1 three woman 26.3

'Hey, those three women over there!'

[Ee ua toko+rua ana]!  
7.13 5.7 3.1 two 26.2

'Hey, those two [people] there!'

E aha mota [too ua toko+rua ara]?  
what talk 6.3 5.7 3.1 two 26.3

'What are you (two) speaking?'

#### 3.2. tuu- non-human

tuu- indicates the number of things.

Ei kore i piri [tee naa tuu-rua raakau].  
not adhere 6.8 5.18 3.2 two timber

'Those two timbers did not adhere together.'

Haamani mai koe [i tahi tuu-rua kapu tii] maa maaua.  
 make you 7.7 5.11 3.2 two cup tea us

'Make two cups of tea for us.'

### 3.3. taki- distributive

taki- indicates the distributed number of people or things.

Kua raaranga [taki+rua vahine] i runga i te moe-nga e tahi  
 weave 3.3 two woman top sleep one

i te raaranga+hanga.  
 weave

'Two women have [worked together] in weaving one mat.'

Kua taakai [taki+rima rau hara] i te taakai e tahi.  
 rolled 3.3 five leaf pandanus bundle one

'Five pandanus leaves are rolled in each (one) bundle.'

## Class 2.

This class has only one member.

### 2.1. HAKA-

HAKA- occurs in sequence with bases or transformed bases (see section 3.2.2) of Class V, A, G, or N. The resulting nucleus is always a member of Class G. HAKA- has two allomorphs: /haka-/ and /aka-/. They are in free variation. /haka-/ is more frequently used than /aka-/.

[E puku] to-na maki.  
7.1 swell disease

'Her disease is a boil.'

(Kua haka+puku) a raro i te keekee o Te+anait+kura.  
8.1 2.1 swell bottom armpit (npn.)

'The underneath of the armpit of Teanaikura became swollen.'

Kua inu ana au i te miti i nanahi, (Kua heke)  
drink I epsom salts yesterday 8.1 descend

au [i te aka+heke+hanga] ki te miti.  
I 7.7 5.3 2.1 descend 21.1 epsom salts

'I drank the epsom salts yesterday. I discharged from the bowels by the [use of] the epsom salts.'

(Kua rongu) au i aa koe i te haka+iti+hanga ki a Taia.  
8.1 hear I you (speak) npn.

'I heard you talking to Taia.'

(Kua haka+rongo+hia) koe i te haka+iti+hanga ki a Taia.  
8.1 2.1 hear 22.1 you (speak) npn.

'You were heard talking to Taia.'

Mee matangi, (kua kino) te moana.  
wind 8.1 bad ocean

'When it is windy, the sea gets rough.'

(Kua haka+kino+hia) te hare e te matangi.  
 8.1 2.1 bad 22.1 house wind

'The house was damaged by the wind.'

In some cases, the HAKA- form is recognized by the occurrence of plus juncture. However, unless the base (or root) occurs as a free form in Penrhyn, the HAKA- form is not considered as a bi-morphemic word. In such a case, the English gloss is given in parentheses, which means that the plus-junctured word is a single morpheme.

(Kua haka+ipo+tipo) Soko+au ki te taane.  
 8.1 (marry) (npn.) man

'Sokoau has married the man.'

Neither \*ipo nor \*ipo+tipo occurs as a free form in Penrhyn.

#### Class 1. Reduplication

This class has four members, each showing a different form. Generalization of meaning is rather difficult, and it has not been possible to treat it exhaustively here. Even if the form is recognized as a re-duplicated form by the occurrence of plus juncture, it is not treated as a nucleus consisting of a reduplicating affix and a base unless the base occurs as a free form.

1.1. cvcv- type 1

Type 1 is the repetition of the entire phonemic sequence of the base. It occurs in sequence with bases of Class V, A, G, or N, indicating 'frequentative, diminutive, or intensive.'

<u>horo+horo</u>	'run back and forth'	<u>horo</u>	'run'
<u>kai-kai</u>	'food'	<u>kai</u>	'eat'
<u>kata+kata</u>	'laugh hard'	<u>kata</u>	'laugh'
<u>moe-moe</u>	'sleep soundly, or long'	<u>moe</u>	'sleep'
<u>rahi+rahi</u>	'numerous'	<u>rahi</u>	'many'
<u>saere+saere</u>	'walk about'	<u>saere</u>	'walk'
<u>kite+kite</u>	'pay attention'	<u>kite</u>	'see'
<u>rere+rere</u>	'jump about'	<u>rere</u>	'leap'
<u>ngote+ngote</u>	'suck intensively'	<u>ngote</u>	'suck'
<u>ngaru+ngaru</u>	'wave strongly'	<u>ngaru</u>	'wave'
<u>motu+motu</u>	'islands'	<u>motu</u>	'island'
<u>sii-sii</u>	'fishing'	<u>sii</u>	'to fish with line'

(Kua ngote+ngote) Kaarepa i to-na kaso.  
8.1 1.1 suck npn. finger

'Kaarepa was sucking his finger intensively.'

(Kua ngaru+ngaru) te tai.  
8.1 1.1 wave sea

'The sea is becoming rougher and rougher.'

I Maangaro+ngaro, ee rahi [te au motu+motu henua] i reira.  
(npn.) 5.3 4.1 1.1 island land there

'In Penrhyn, there are many islands (there).'

[E aho sii-sii ika] taa Te+oko+tahi.  
7.1 line 1.1 to fish fish (npn.)

'Teokotahi has a fishing line.'

### 1.3. cv- type 2

Type 2 is the repetition of the first consonant and the first vowel of the base, or sometimes the second vowel as well when the second vowel is the same vowel as the first one or when the vowel sequence is /ae/.

Type 2 occurs in sequence with bases of Class V, A, or G, usually indicating that the subjects are dual or small plural, or that the action is reciprocal.

<u>ho-horo</u>	'(two or more subjects) run'	<u>horo</u>	'run'
<u>ki-kite</u>	'(two or more subjects) see'	<u>kite</u>	'see'
<u>ka-kata</u>	'(two or more subjects) laugh'	<u>kata</u>	'laugh'
<u>no-noho</u>	'(two or more subjects) sit'	<u>noho</u>	'sit'
<u>mo-moe</u>	'(two or more subjects) sleep'	<u>moe</u>	'sleep'
<u>pae-paenu</u>	'(two or more subjects) float'	<u>paenu</u>	'float'
<u>ka-kai</u>	'(two or more subjects) eat'	<u>kai</u>	'eat'
<u>sae-saere</u>	'(two or more subjects) walk'	<u>saere</u>	'walk'
<u>so-songi</u>	'kiss each other'	<u>songi</u>	'kiss'
<u>vaa-vaasi</u>	'split into several pieces'	<u>vaasi</u>	'split'

(Tee pae-paenu ura) naa puru sakari i raro i te tai.  
 8.5 1.3 float 26.3 husk coconut bottom sea

'Some coconut husks are floating in the sea.'

Hano mai, kaa hano taaua, (sae-saere).  
 come go we 1.3 walk

'Come on, let us go for a walk (you and me).'

Ee toko+rua tamariki, (ho-horo)!  
 two children 1.3 run

'Hey, you two children! Run!'

(Ka ka-kai) taaua.  
 8.3 1.3 eat we

'Let us (you and me) eat.'

1.4. cvv- type 3

Type 3 is the repetition of the first consonant and the lengthening of the first vowel of the base. Type 3 occurs in sequence with bases of Class V, A or G, indicating that the subjects are non-singular or that the action is repeated several times. Type 3 occurs less frequently than Type 1 or 2.

<u>hoo-horo</u>	'(two or more subjects) run back and forth'	<u>horo</u>	'run'
<u>kaa-kai</u>	'(two or more subjects) eat together'	<u>kai</u>	'eat'
<u>kii-kite</u>	'(two or more subjects) watch'	<u>kite</u>	'sea'
<u>kaa-kata</u>	'(two or more subjects) laugh'	<u>kata</u>	'laugh'
<u>haa-hati</u>	'to break something several times'	<u>hati</u>	'break'

(Ka hoo-horo) raaua.  
5.3 1.4 run they

'They will run back and forth.'

1.5. cvvcv- type 4

Type 4 is the combination of Type 2 and 3. Type 4 occurs in sequence with bases of Class V, A, or G, usually indicating that the subjects are numerous or that the action is emphasized. Type 4 occurs less frequently than type 1 or 2.

<u>hooho+horo</u>	'(many subjects) run about'	<u>horo</u>	'run'
<u>moomo+moe</u>	'(many subjects) sleep'	<u>moe</u>	'sleep'
<u>haaha+hati</u>	'(many subjects) break'	<u>hati</u>	'break'
<u>noono+noho</u>	'(many subjects) stay'	<u>noho</u>	'stay'
<u>maama+mate</u>	'(many subjects) die, DIE (emphatic)'	<u>mate</u>	'die'

(I hooho+horo atu ana) te au tamariki.  
8.4 1.5 run 24.1 25.2 children

'Many children were running.'

(Kua maama+mate) naa matua.  
8.1 1.5 die parent

'Both parents have DIED.'

### 3.1.2.3. Postposed Nuclear Minor Morphemes: Class 21 and 22

#### Class 21.

This class has only one member.

#### 21.1. -HANGA nominalizing suffix

-HANGA occurs in sequence with bases or transformed bases (see section 3.2.2) of Class V, A, or G. The resulting nucleus is regarded as a nucleus of N class. -HANGA has three morphologically conditioned allomorphs: /-hanga/, /-anga/, and /-nga/. /-hanga/ is most frequently used while /-anga/ and /-nga/ are restricted to certain bases.

Kua roa tee ia tamaahine a Soko+au [i te noho+hanga]  
 long woman (npn.) 7.7 5.3 live 2l.1

i taha i ta-na taane.  
 side husband

'This woman, called Sokoau, lived with her husband.'

Taahi [i te noho+hanga], saapaithia mai.  
 get 7.7 5.3 sit 2l.1 bring

'Get the chair and bring [it] here.'

E raaranga tapakau ana au maa maatou [ei noho+noho+hanga].  
 weave k. of mat I 7.3 1.1 sit 2l.1

'I am weaving a tapakau mat for us (all) to sit on.'

Kua nanu+nanu au i roto [i to-ku moe+hanga].  
 murmur I inside 7.7 6.1 5.2l sleep 2l.1

'I was talking in my sleep.'

E haariki ana au i too maatou piha [ki te moe-nga].  
 spread I room 7.8 5.3 sleep 2l.1

'I [lay the mat in our room].'

E pese teetia [noo te inu+hanga] ki te roro.  
 song (this) 7.24 5.3 drink 2l.1 coconut milk

'This is a song about drinking coconut milk.'

Kua haariki [te ngaahi kai-kai+hanga].  
 spread 5,3 place 1,1 eat 21,1

'The eating place was spread.' (= The meal is ready.)

Kua sara [ta-u haka+iti+iti+hanga] i te vaananga o te  
 wrong 6,1 5,22 (speak) 21,1 word

"sara".  
 wrong

'Your speech is wrong in the word "sara".'

Ko te au motu [i te takapini+hanga] o Maangaro+ngaro,  
 island 7,7 5,3 surround 21,1 (npl.)

kaa kore e tangata i reira.  
 not man there

'[On] the islands in the surroundings of Penrhyn, there are no people (there).'

Kua sara [ta-ku sokathanga].  
 wrong 6,1 5,21 count 21,1

'I made a mistake in (my) counting.'

## Class 22.

This class has only one member.

22.1. -HIA passive suffix

-HIA occurs in sequence with bases or transformed bases (see section 3.2.2), of G Class only. -HIA has five allomorphs: /-hia/, /-a/, /-ahia/, /-nahia/, and /-ngahia/. /-hia/ is most productive; the other four allomorphs are restricted to certain bases.

(Haka+taka+hia mai) te pooro.  
2.1 roll 22.1 24.2 ball

'Roll the ball towards me.'

I te saapati (kua haka+tapu+hia) e te tangata.  
Sunday 8.1 2.1 taboo 22.1 man

'On Sunday, [it was] made taboo by the men.' (- Sunday is a holy day.)

Ei aha (e varu+varu+hia ai) ki te tuai?  
what 8.2 1.1 scrape 22.1 25.1 handgrater

'Don't scrape it with the hand-grater.'

Hano mai (kia soe-hia) to-o upoko (kia hirithia).  
come 8.6 comb 22.1 head 8.6 braid 22.1

'Come on, [so that I can] comb your hair and braid [it].'

(Kave+hia atu)!

carry 22.1 24.1

'Carry [it] away.'

Kua oti a vaha i too maatou hare [i te kaaua+hia].  
 finish outside house 7.7 5.3 fence 22.1

'The outside of our house was finished (making fence).'

(Sii-hia) tahi ika.

fish 22.1 fish

'Catch fish (with a line).'

(Patu-a)!

beat 22.1

'Beat him!'

(Sei-a mai) to-o sei rauru.

tie 22.1 24.2 lei hair

'Tie on your hair lei.'

(Patu-ahia)!

beat 22.1

'Beat him!'

(Tunu-ahia) te kai.

cook 22.1 food

'Cook the food.'

(Tahu+nahia) naa ota+ota kia pau.  
 burn 22.1 (rubbish) finish

'Burn the rubbish [till it is] all gone.'

(Kai-ngahia) te kai.  
 eat 22.1 food

'Eat the food.'

### 3.1.2.4. Postposed Peripheral Minor Morphemes:

Class 23, 24, 25, 26, 27, 28, and 29.

#### Class 23.

This class has three members. They occur in sequence with all the nucleus classes. (i. e. they occur both in nominal and verbal phrases.) (see section 3.5).

#### 23.1. hua 'only, just'

hua indicates some restriction. An appropriate English translation would usually be 'only, just, mere, alone, etc.'

(Kua maakave+kave hua) te huru+huru upoko o Naani.  
 8.1 (tangled) 23.1 hair head npn.

'Naani's hair is just so messy.'

Mee tupu kino te koopapa o te tamariki, (kua ngaavaritvari hua)  
 grow bad body children 8.1 (weak) 23.1

te koopapa.  
 body

'If the children grow badly, the body has become (only) weak.'

(Tee suumaaringa hua ara) a runga.  
 8.1 good 23.1 26.3 top

'The top is just good.'

[Ko ia hua]?  
 7.9 he 23.1

'Is he all by himself?'

[E karisi hua] too-na.  
 7.1 p. of coconut 23.1 it

'[There is] only the karisi [left].'

[E ika vare-nga hua] te paraoa.  
 7.1 fish tame 21.1 23.1 k. of fish

'The paraoa is a tame fish.'

23.2. roa 'immediately, very'

roa indicates an immediate or precise action or state. An appropriate English translation would usually be 'immediately, definitely, absolutely, very, etc.'

Kua patu ana Taia i a Kaarepa, (kua mamae roa) Kaarepa.  
 hit npn. npn. 8.1 pain 23.2 npn.

'Taia hit Kaarepa and Kaarepa felt pain immediately.'

(Mate roa) au i te onge i nanahi.  
 die 23.2 I hunger yesterday

'I felt very hungry yesterday.'

[E reka roa atu] taa maatou.  
 7.1 nice 23.2 24.1 we

'Ours is the best.'

[E au rata riki+riki roa] tei runga i tee ia maati.  
 7.1 4.1 letter (small) 23.2 top match box

'The letters on this match box are very small.'

Ei kore paha [i te manako maitaki roa].  
 not 7.7 5.3 idea good 23.2

'Perhaps it's not a very good idea.'

### 23.3. tikaai 'really'

tikaai emphasizes the preceding nucleus. An appropriate translation would usually be 'indeed, really, truly, etc.' tikaai is one of the few particles that have three syllables. However, it is considered as a single morpheme rather than two morphemes consisting of \*tika and \*ai. There is no plus juncture between /tika/ and /ai/ in tikaai.

(Ee reka tikaai) taa maatou hiimene.  
8.2 nice 23.3 song

'Our song is really nice.'

Hano atu au ki te hare oo Toka. (Ee maa tikaai) to-na hare.  
go I house npn. 8.2 clean 23.3 house

'I went to Toka's house; his house is so clean.'

[Te ingoa tikaai] ko Tongareva.  
5.3 name 23.3 npl.

'The real name is Tongareva.'

I Maangaro+ngaro, mee tae te tuaatau namu,  
(npl.) arrive time mosquito

[apinga tikaai] te namu.  
thing 23.3 mosquito

'In Penrhyn, when the mosquito season comes, the mosquitoes are really something.'

[E tangata tautai tikaai] a Maru.  
7.1 man fisherman 23.3 npn.

'Maru is a very good fisherman.'

[Noo-ku tikaai hoki] tee ia hare.  
7.24 me 23.3 28.1 house

'This house also (really) belongs to me.'

**Class 24. Direction Particles**

This class has four members. They share a constant of direction, and occur in sequence with all nucleus classes.

**24.1. atu away from speaker**

atu indicates that the movement is away from the speaker in time and space.

Ayako, (patu+hia atu) Riinaa kua kanga i ta-u teepu.  
 npn. hit 21.1 24.1 npn. play tape recorder

'Ayako, hit Riinaa because she has played around with your tape recorder.'

(Hano atu) maaua ma Naani ki te hare toa, kua topa  
 go 24.1 we npn. house store fall

mai te ua.  
 rain

'When [Naani and I] went to the store, it started raining.'

[Tei Puue atu raai] raatou.  
 7.5 npl. 24.1 27.4 they

'They are still at Puue.'

Peehea te momoo [mai konei atu] ki tee raa maunga.  
 how distant 7.6 here 24.1 mountain

'How far is it from here to that mountain over there?'

24.2. mai towards speaker

mai indicates that the movement is towards the speaker in time and space.

I napoo, (kua topa mai) te ua.  
last night 8.1 fall 24.2 rain

'Last night it rained.'

Noo reira (i rauka mai ai) te ingoa Maangaro+ngaro.  
there 8.4 obtained 24.2 25.1 name (npl.)

'That's how [we got] the name Maangarongaro.'

(Kua uru mai) te marama.  
8.1 climb 24.2 moon

'The moon has risen.'

Kaa reva mai Tiare+taaporo ki Niusiireni nei  
sail (name of ship) npl.

[mei Rarotonga mai].  
7.7 npl. 24.2

'The Tiare-Taaporo will sail from Rarotonga to New Zealand.'

[Noo roto mai] i te puka tapu tee ia vaananga.  
7.24 inside 24.2 book taboo word

'This word is [taken] from the Bible.'

[Mai te koosaki mai] koutou?  
7.6 5.3 dance 24.2 you

'[Did you come back] from the dance?'

24.3 ake above speaker

It is difficult to isolate any meaning for ake. It usually indicates towards or closeness to the present.

(Oi ake) kia hano atu au.  
move 24.3 go I

'Move away [so that] I [can] go through.'

Kua tae mai te pahii i tee ia paraparau  
arrive ship Thursday

[i topa ake nei].  
8.4 fall 24.3 26.1

'The ship arrived [last] Thursday.'

[Ko au hua ake] ia.  
7.9 I 23.1 24.3 he

'[I wish] I were him.'

[I te poopongi ake] i te saapati, hano atu au ki te  
7.7 5.3 morning 24.3 Sunday go I

hare pure.  
house pray

'Last Sunday morning I went to church.'

24.4. iho below speaker

iho indicates downwards.

(Noho iho) koorua, kaa hano au.  
 stay 24.4 you go I

'You stay (down) there; I will go.'

(Kua vaa-vaasi iho ora) ia i te aahata.  
 8.1 1.3 split 24.4 26.3 he box

'He has broken the box.'

(Pookia iho ai) au, te peka o te atua.  
 overwhelmed 24.4 25.1 I mate good

'I, the companion of the god, am overwhelmed.'

(Tuu-tuu iho)!  
 1.1 stand 24.4

'Stand (down) there.'

## Class 25. Adverbial Particles

This class has two members. They occur only in verbal phrases, i. e. they occur only in sequence with a nucleus of Class V, A, or G. (see section 3.5.2).

25.1. ai resultative

ai indicates that the action or state is referred to the time, place, or reason mentioned earlier in the sentence.

I nanahi au (i hano ai) ki Haka+susa.  
yesterday I 8.4 go 25.1 (npl.)

'[It was] yesterday [that] I went to Hakasusa.'

Kia tae ki te tuaatau (i hoki ai) Soko+au ki te taane.  
reach time 8.4 return 25.1 (npn.) husband

'The time came [when] Sokoau went back to her husband.'

Kua hano ana a-ku mokopuna ki vaha i te hare,  
go grandchild outside house

(rere+rere ai).  
1.1 fly 25.1

'My grandchildren went out of the house and played with a swing (there).'

Kua oti te ara o te tamariki (ee hano ai) ki te haapi.  
finish path children 8.2 go 25.1 school

'The path has been completed (by way of which) the children go to school.'

Noo reira (i rauka mai ai) te ingoa Maangaro+ngaro.  
there 8.4 obtained 24.2 25.1 name (npl.)

'That's how [we got] the name Maangarongaro.'

25.2. ana continuity

ana indicates that the action continues over a period.

Ko te poe pipi (e ruku+hia ana) i roto i te  
 pearl oyster shell 8.2 dive 22.1 25.2 inside

tai roto.  
 sea inside

'Small pearl oyster shells are dived for in the lagoon.'

(E haariki ana) au i too maatou piha ki te moe-nga.  
 8.2 spread 25.2 I room sleep

'I [lay the mat in our room].'

(I haka+itititi vaananga ana) taaua i nanahi.  
 8.4 (speak) word 25.2 we yesterday

'We were talking about words yesterday.'

I nanahi, (hano ana) maatou i te kupenga ika.  
 yesterday go 25.2 we net fish

'Yesterday we went fishing [all day].'

(Kua varu sakari ana) au i tee ia poopongi.  
 8.1 scrape k. of coconut 25.2 I morning

'I was scraping the sakari this morning.'

(Kua ua ana) i nanahi, I tee ia raa kua naa te ua.  
 8.1 rain 25.2 yesterday day stop rain

'It was raining yesterday. Today the rain stopped.'

## Class 26. Location Particles

This class has three members. They share a constant of location in time and space. They occur in sequence with all the nucleus classes. They frequently co-occur with the particles, tee (8.5), and uA (5.7).

### 26.1. nei near speaker

nei indicates near speaker in time and space.

(Tee noho nei) te koopuu tangata i roto i te hare.  
 8.5 stay 26.1 group man inside house

'The family is staying in the house.'

Apinga tikaai te roa, (e totoro haere hua nei)  
 thing ant 8.2 creep enter 23.1 26.1

i roto i too maatou hare.  
 inside house

'The ants are really something; they just creep around in our house.'

Kua mahana [uaa raa nei].  
 warm 5.7 day 26.1

'It is warm today.'

Kua kite ana au i te poohatu more+more suumaaringa tikaai  
 see I stone (smooth) fine

[ki Niusiireni nei].

7.8 npl. 26.1

'I saw so many smooth and fine stones here in New Zealand.'

26.2. Vna near hearer

26.3. Vra distant

Vna and Vra have five phonologically conditioned allomorphs each:

Vna : /ana/, /ena/, /ina/, /ona/, /una/

Vra : /ara/, /era/, /ira/, /ora/, /ura/

/ana/ and /ara/ occur following the word which ends in /a/, and /ena/ and /era/ occur following the word which ends in /e/ and so forth. Conversely, these two morphemes, Vna and Vra, lengthen the last vowel of the preceding word.

E aha koe (e haharo mai ai ina), kaa patu au i aa koe.  
 what you 8.2 peep 24.2 25.1 26.2 hit I you

'Why are you peeping there? I'll spank you.'

(Tee tuu una hoki) ia i runga i te poohatu.  
 8.5 stand 26.2 28.1 he top stone

'He is standing there (by you) on the rock.'

[Ee ua vahine ena]!

7.13 5.7 woman 26.2

'Hey, Miss!'

[Ko ua tamaiti ina] te-i patu+hia ana e te tangata.

7.9 8.7 child 26.2 beat man

'It is that child who was beaten by the man.'

I tahi poopongi, (tee hana ara) ia i te moa.

morning 8.5 shoot 26.3 he fowl

'One morning he was shooting wild fowls (with bow and arrow).'

(Tee pahu ura) au i te pahu i nanahi.

8.5 beat 26.3 I drum yesterday

'I was playing the drum yesterday.'

Ei kore i patu aka+hoou+hia [ua tamaiti ira]

not hit new 5.7 child 26.3

[e ua tangata ara].

7.14 5.7 man 26.3

'That child was no longer beaten by that man.'

(Tee pae-paenu ura) naa puru sakari i raro

8.5 1.3 float 26.3 husk k. of coconut bottom

i te tai.

sea

'Some coconut husks were floating in the sea.'

## Class 27.

This class has four members. They occur in sequence with all the nucleus classes.

27.1. paha uncertainty

paha indicates uncertainty. An appropriate English translation would usually be 'perhaps, maybe, may, etc.'

(Ee kore paha) au e hano atu ki Otahuhu.  
8.2 not 27.1 I go npl.

'Maybe, I am not going to Otahuhu.'

(Kaa hoki mai paha,) (mee kore paha).  
8.3 return 24.2 27.1 8.7 not 27.1

'I may come back, I may not.'

[E manu paha].  
7.1 bird 27.1

'That may be a bird.'

[Naa raatou paha] tee raa oro+henua.  
7.22 they 27.1 (horse)

'That horse may be theirs.'

27.2. raa contrastive

raa indicates contrastive state of affairs. An appropriate English translation would usually be 'but, however, while, on the other hand, etc.'

<u>E kaahui hara</u>	<u>taa-ku i ngau ai,</u>	<u>(kua here</u>	<u>raa hoki)</u>
bunch pandanus	I feed	8.1 over-ripe	27.2 28.1

te hara.  
pandanus

'I was feeding a bunch of pandanus but the pandanus was really over-ripe.'

(Ee hano raa).  
8.2 go 27.2

(Ee noho raa).  
8.2 stay 27.2

'Good-by (to the person who goes.)'      'Good-by (to the person who stays.)'

<u>(Hano mai raa,)</u>	<u>kaa hano taaua</u>	<u>ka sae-saere.</u>
come 24.2 27.2	go we	walk

'Come on, we will go for a walk.'

<u>Kua tae</u>	<u>maitaki mai</u>	<u>raaua</u>	<u>[ko te</u>	<u>apinga raa]</u>	<u>kua ngahaa.</u>
arrive	good	they	7.9 5.3	thing 27.2	smashed

'They have arrived safely, but the things are smashed.'

<u>Kua oro</u>	<u>maatou i te</u>	<u>tahua</u>	<u>[ko raatou raa]</u>	<u>tei te peeni hare.</u>
scrub	we	floor 7.9	they 27.2	paint house

'We scrubbed the floor while they were painting the house.'

27.3. ia 'then'

(Kaa hano ia) taaua.  
8.3 go 27.3 we

'Then, we will go.'

Kia maarama [ko tee raa mua ia] o te matahiti hou.  
tomorrow 7.9 6.8 5.19 first 27.3 year new

'Tomorrow will be the first day of the New Year, then.'

27.4. raai 'quite, still'

An appropriate English translation for raai would usually be

'quite, still, exactly, certainly, absolutely, etc.'

(Kaa kai raai) te karisi.  
8.3 eaten 27.4 p. of coconut

'The karisi will be still eaten.'

[Tuukee raai,] e mea rika+rika tikaai.  
strangeness 27.4 thing (scare)

'Very strange, [it is] really terrifying.'

[Ko naa tangata hopena raai] tee+ia.  
7.9 5.5 man last 27.4 (these)

'These are absolutely the last men.'

Ee, [tei te kaainga raai].  
 yes 7.5 5.3 home 27.4

'Yes, [it is] still at home.'

[Mei te moa rari vai raai] koe.  
 7.6 5.3 fowl wet water 27.4 you

'You are just like a wet chicken.' (= You are lazy.)

### Class 28.

This class has only one member. It occurs in sequence with all the nucleus classes.

#### 28.1. hoki addition, emphasis

hoki indicates addition or additional emphasis. An appropriate English translation would usually be 'also, besides, just, on top of that, etc.'

(Kua ranga ana hoki) maaua i aa ia.  
 8.1 seek 25.2 28.1 we her

'We've been LOOKING for her.'

(I tae mai ana hoki) te pahii.  
 8.4 reach 24.2 25.2 28.1 ship

'The ship ARRIVED yesterday.'

Kua taahi te taane i te koopapa o ta-na vahine, kua hiri  
 take husband body woman braid

[i naa huru+huru hoki].

7.7 5.5 hair 28.1

'The husband took the hair of his wife and (besides) braided it.'

### Class 29.

This class has only one member. It occurs in sequence with all the nucleus classes.

#### 29.1. ee conjunction

ee connects two sentences. Non-final juncture always occurs following ee.

(Karanga mai ee), mei koo mai ia.  
 answer 24.2 29.1 yonder he

'[He] said that he came from there.'

(Ee ngere ee), ko ta-ku tamaiti tee kaa hano.  
 8.2 not 29.1 child go

'No, (but) it is my child who will go.'

### 3.2. Bases

All morphemes which can fill the nucleus of a phrase and have combinatorial possibilities with other morphemes within a phrase are called bases.

All bases are classified into six base classes: V, A, G, N, L, and P. The class of a given base is determined as follows:<sup>10</sup>

The diagnostic frames are given below.

- (1) Any base that can occur in Frame 1 but not in other frames is a V-class base.
- (2) Any base that can occur in Frame 1 and Frame 2 but not in other frames is an A-class base.
- (3) Any base that can occur in Frame 3 is a G-class base.
- (4) Any base that can occur in Frame 2 but not in other frames is an N-class base.
- (5) Any base that can occur in Frame 4 is an L-class base.
- (6) Any base that cannot occur in any of the frames is a P-class base.

Frame 1: kua (8.1) \_\_\_\_\_

The environment immediately following kua (8.1) 'perfective'. This frame implies compatibility with all, or most verbal particles. (i. e. Class 8.)

Frame 2: tE (5.3) \_\_\_\_\_

The environment immediately following tE (5.3) 'definite article'. This frame implies compatibility with many of the particles of Class 5.

Frame 3: \_\_\_\_\_ -HIA (22.1)

The environment immediately preceding -HIA (22.1) 'passive suffix.'

Frame 4: i (7.7)\_\_\_\_\_

The environment immediately following i (7.7) 'direct comment'. This frame implies that the base can occur, in most cases, immediately following the particles, 7.5 - 7.8.

### 3.2.1. Examination of Bases

This section proceeds to a detailed examination of each base class.

#### 3.2.1.1. V-class Bases

V-bases are comparatively small class. Examples are:

rauka 'available, obtained'

mataku 'be afraid of'

moe 'sleep'

hano 'go, come'

tuu 'stand'

hoki 'return'

saere 'walk'

(Kua rauka mai ana) i a Te+oko+tahi te roroa.  
8.1 available 24.2 25.2 (npn.) k. of fish

'Teokotahi found the roroa fish.'

(Kua mataku) Kaarepa i te popaa.  
8.1 afraid npn. white man

'Kaarepa was afraid of the white man.'

(Kaa moe ai) maatou.  
8.3 sleep 25.1 we

'Then, we will sleep.'

(Kua hano) Taia ki te toa.  
8.1 go npn. store

'Taia went to the store.'

### 3.2.1.2. A-class Bases

A-bases are a large class with an open membership. There are two subclasses of A-bases: Ax and Ay. Ax consists of numerals. All other A-bases are classified as Ay.

The following is believed to be an exhaustive list of Ax-bases:

<u>tahi</u>	'one'	<u>ono</u>	'six'
<u>rua</u>	'two'	<u>hitu</u>	'seven'
<u>toru</u>	'three'	<u>varu</u>	'eight'
<u>haa</u>	'four'	<u>iva</u>	'nine'
<u>rima</u>	'five'		

Examples of Ay-bases are:

<u>ua</u>	'rain'	<u>kino</u>	'bad'
<u>maitaki</u>	'good'	<u>ngere</u>	'not'
<u>peka+peka</u>	'trouble'	<u>mate</u>	'die'
<u>poo</u>	'night'	<u>maarama</u>	'tomorrow'
<u>ahi+ahi</u>	'evening'	<u>poopongi</u>	'morning'

(Kua ua ana) i nanahi.  
8.1 rain 25.2 yesterday

'It was raining yesterday.'

I tee ia raa, kua naa [te ua].  
day cease 5.3 rain

'Today the rain stopped.'

(Tee peka+peka hua nei raai) raatou.  
8.5 (trouble) 23.1 26.1 27.4 they

'They are still quarreling.'

Kua hau [te peka+peka] o Kaarepa raaua ma Tetanaitkura.  
settle 5.3 (trouble) npn. they (npn.)

'The quarrel between Kaarepa and Teanaikura was settled.'

### 3.2.1.3. G-class Bases

G-bases are a large class with an open membership. There are two subclasses of G-bases: G<sub>x</sub> and G<sub>y</sub>.

G<sub>x</sub>-bases do not take tE (5.3) 'definite article', while G<sub>y</sub>-bases take tE (5.3).

Examples of G<sub>x</sub>-bases are:

<u>ripi</u>	'throw'	<u>karanga</u>	'call, tell'
<u>tango</u>	'hold'	<u>kave</u>	'take, bring'

(Kua kave) au i ta-ku maati.  
8.1 take I match

'I brought my match.'

(Kave+hia) taatou ngaakau puaka ki tai, kootore+hia.  
take 22.1 guts pig seaward clean

'Take (our) pig's guts down to the beach to clean [them].'

(Karanga mai ee), mei koo mai ia.  
tell 24.2 29.1 yonder he

'[He] said that he came from there.'

(Karangathia atu) Raaira kia hano mai.  
tell 22.1 24.1 npn. come

'Tell Raaira to come here.'

Examples of Gy-bases are:

<u>kite</u>	'see'	<u>kai</u>	'eat'
<u>anga+anga</u>	'work'	<u>maki</u>	'sick'
<u>singa</u>	'fall'	<u>keret+kere</u>	'black'
<u>sina+sina</u>	'white'	<u>aha</u>	'what'
<u>poria</u>	'big'	<u>koo</u>	'husk'

(Kua kai) Taia i te hata+hata i roto i te puaka.  
 8.1 eat npn. (guts) inside pig

'Taia ate the guts of the pig.'

E ika reka te pusi [i te kai].  
 fish pleasant k. of fish 7.7 5.3 food

'The pusi is a good fish to eat.'

(E kai-hia ana) te rori e te tangata.  
 8.2 eat 22.1 25.2 starfish man

'The rori is eaten by the people.'

(Kua maki ana) Riinaa.  
 8.1 sick 25.2 npn.

'Riinaa was sick.'

Kua ora [to-na maki].  
 recovered 6.1 5.23 sick

'Her sickness is past.'

(Kua maki+hia) Riinaa noo te kai kino.  
 8.1 sick 22.1 npn. food bad

'Riinaa got sick because of the bad food.'

## 3.2.1.4. N-class Bases

N-bases are a large class with an open membership. There are two subclasses of N-bases: Nx and Ny. Nx-bases select only dominant possession, namely, A (7.16), maa (7.19), naa (7.22), tA (6.1), and A (6.5). Ny-bases select only subordinate possession, namely, O (7.77), moo (7.20), noo (7.14), tO (6.3), or O (6.6).

Nx-bases have referents which are alienable, movable, or towards which the possessor is in a dominant position or plays an active role. Animals, crops, instruments, and descendants are, in most cases, classifiable as Nx-bases.<sup>11</sup> Examples are:

<u>puaka</u>	'pig'	<u>ika</u>	'fish'
<u>maika</u>	'banana'	<u>matira</u>	'fishing rod'
<u>moni</u>	'money'	<u>tamaiti</u>	'child'
<u>mokopuna</u>	'grandchild'	<u>umu</u>	'oven'
<u>puka</u>	'book'	<u>apinga</u>	'thing'

The arrow shows the relationship with the possessive particle.

[E puaka] taa maatou i patu ana.  
7.1 pig we hit

'We killed our pig.'

↔

Tahu+hia [tahi umu] maa taaua.  
light      5.11 oven      us

'Light an oven for us.'

↔

Kua aakiri Marama [i ta-na puka] i roto i te aahata.  
clear      npn.      7.7 6.1 5.23 book      inside      box

'Marama has put her book into the box.'

Ny-bases have referents which are inalienable, immovable, or towards which the possessor is in a subordinate position or plays a passive role. Parts of the body, building, conveyances, clothings, and ancestors are, in most cases, classifiable as Ny-bases.<sup>12</sup>

Examples are:

<u>upoko</u>	'head'	<u>karaponga</u>	'throat'
<u>rima</u>	'hand'	<u>hare</u>	'house'
<u>pahii</u>	'ship'	<u>vaka</u>	'canoe'
<u>pona</u>	'dress'	<u>matua</u>	'parent'
<u>tupuna</u>	'grandparent'	<u>ngaahi</u>	'place'

↔

Kua hoa-hia [to-ku upoko].  
ache      6.3 5.21 head

'My head is aching.'

Kua mama [too maatou hare].  
 leak 6.3 5.29 house

'Our house leaked.'

E tere tikaai [te pahii] o Taanara ko Haka+tere.  
 sail 5.3 ship npn. (name of ship)

'Donald's ship called "Hakaterere" is really fast.'

### 3.2.1.5. L-class Bases

The L-base class is restricted to bases related to positions in time and space. There are three subclasses in this class: Lx, Ly, and Lz. Lx is a subclass with a closed membership. The following is believed to be an exhaustive list of Lx-bases:

<u>runga</u>	'top'	<u>raro</u>	'bottom'
<u>vaha</u>	'outside'	<u>roto</u>	'inside'
<u>mua</u>	'front'	<u>muri</u>	'back'
<u>tua</u>	'beyond'	<u>taha</u>	'edge'
<u>tai</u>	'seaward'	<u>uta</u>	'inland'
<u>konei</u>	'here'	<u>konaa</u>	'there'
<u>koo</u>	'yonder'	<u>hea</u>	'which'
<u>reira</u>	'aforementioned place'	<u>rera</u>	'aforementioned thing or person'
<u>nahea</u>	'what (past) time'	<u>napoo</u>	'last night'
<u>nanahi</u>	'yesterday'		

Kua maru te tua [i raro] o te hare.  
 shade side 7.7 bottom house

'The side made a shade under the house.'

Kua keta to-ku rima [i roto] i te huirā o te paasikara.  
 clenched hand 7.7 inside wheel bicycle

'My hand got caught in the wheel of the bicycle.'

[I nanahi,] kua pau taa maatou suka.  
 7.7 yesterday consumed sugar

'Yesterday, our sugar was consumed.'

I Maangaro+ngaro, kaa kore e ana [i reira].  
 (npl.) not cave 7.7 there

'In Penrhyn, there is no cave (there).'

Kua maoa ta-ku urnu. Kaa huke au [i rera].  
 cook oven uncover I 7.7 that

'My oven is ready. I will uncover it.'

Noo-ku ua henua nei [mei tai] [ki uta].  
 land 2.6 seaward 7.8 inland

'That land from the sea to the mountain is mine.'

E au hotu+hotu                    toka [tei roto]    i te tai roto.  
 (chain of corals) rock 7.5 inside                    sea inside

'There are a lot of coral stones grouped together in the lagoon.'

Taapeka+hia tahi niikau                    [ki runga] i to-ku puu niu.  
 tie                    coconut leaf 7.8 top                    tree coconut

'Tie one coconut leaf on top of my coconut tree (to show it is forbidden to climb the tree).'

Ly is another subclass which includes all proper place names (= npl.). Any place name is treated as a single morpheme, whatever its apparent morphemic composition, because its substitutes for other L-bases in the Frame 4. (see section 3.2). Examples are:

Omoka                    'Omoka (village)'

Maangaro+ngaro                    'Penrhyn'

Tongareva                    'Tongareva (= Penrhyn)'

Niusiireni                    'New Zealand'

Puka+puka                    'Pukapuka'

Tet+kasi                    'Tekasi'

Haka+susa                    'Hakasusa'

Manihiki                    'Manihiki'

Ee rahi te au puu niu                    [i Maangaro+ngaro].  
 many                    tree coconut 7.7                    (npl.)

'There are lots of coconut trees in Penrhyn.'

Kua tere ana te poti o Pita naa runga i te moana  
 sail boat npn. top ocean

[ki Manihiki] [mei Puka+puka atu].  
 7.8 npl. 7.6 (npl.) 24.1

'Peter's boat sailed in the ocean from Pukapuka to Manihiki.'

[Ko Omoka] tahi oohire.  
 7.9 npl. village

'Omoka is a village.'

Lz is the third subclass with six members:

<u>tee+ia</u>	'this one here by the speaker'
<u>tee+naa</u>	'that one there by the hearer'
<u>tee+raa</u>	'that one over there in the distance'
<u>ee+ia</u>	'these ones here by the speaker'
<u>ee+naa</u>	'those ones there by the hearer'
<u>ee+raa</u>	'those ones over there in the distance'

E hohonu ake tee ia ruaa+vai [i tee+naa].  
 deep (well) 7.7 (that)

'This well is deeper than that.'

Although they may be supposed to be consisting of the following minor morphemes: tee (6.8), ee (6.10), ia (5.17), naa (5.18), and raa (5.19), they are treated as Lz bases because they occur in the nuclear slot and they substitute for other L-bases in the Frame 4. (see section 3.2). The following are some examples of Lz-bases in comparison with the minor morpheme sequences.

E noho+anga [tee+ia] i roto i too maatou hare nei.  
 sit Lz inside house

'This one inside our house is a chair.'

Ee rahi roa taatou i runga [i tee ia noho+anga].  
 many top 7.7 6.8 5.17 sit 21.1

'There are so many of us on the chair.'

[Teet+naa] te tipi ei teretere i te taro.  
 Lz knife peel taro

'That is the knife for peeling the taro.'

Ei kore i piri [tee naa tuu-rua raakau].  
 not adhere 7.7 5.18 3.2 two timber

'Those two timbers did not adhere together.'

### 3.2.1.6. P-class Bases

The P-base is restricted to bases related to persons. There are three subclasses: P<sub>x</sub>, P<sub>y</sub>, and P<sub>z</sub>.

P<sub>x</sub> is a subclass with only one member: vai 'who'.

[Ko vai] to-o matua?  
 7.9 who parent

[Naa vai] tee ia apinga?  
 7.22 who thing

'Who is your father?'

'Who owns this thing?'

Py is another subclass which consists of proper personal names (= npn. ). Any proper personal name is considered as a single morpheme, whatever its apparent morphemic composition because it substitutes for other P-bases in the frame: ki (7.8) A (5.1) \_\_\_\_.

(see p. 141) Examples are:

<u>Toka</u>	'Toka, last name'
<u>Kaarepa</u>	'Kaarepa, boy's name'
<u>Tetokotahi</u>	'Teokotahi, last name'
<u>Sokotau</u>	'Sokoau, girl's name'
<u>Toomu</u>	'Tom, boy's name'
<u>Riinaa</u>	'Riinaa, girl's name'
<u>Maramaa+kura</u>	'Maramaakura, girl's name'

Kua sai te ara [i a Kaarepa], karanga atu au  
 blocked way 7.7 5.1 npn. tell I

[ki a Kaarepa], oi ake.  
 7.8 5.1 npn. move

'The way was blocked by Kaarepa and I told Kaarepa to move away.'

Kua haka+maaene+ene [Maramaa+kura] [i a Riinaa].  
 (tickle) npn. 7.7 5.1 npn.

'Maramaakura tickled Riinaa.'

Pz is the third subclass with eleven members, as shown in the table below. They are all considered as single morphemes since they can substitute for other P-bases as in:

Kua kave koe i te ika [ki aa vai]?  
bring you fish 7.8 5.1 who (= Px)

'To whom did you bring the fish?'

Kua kave au i te ika [ki aa Sei].  
bring I fish 7.8 5.1 npn. (= Py)

'I brought the fish to Sei.'

Kua kave au i te ika [ki a Vaikiki].  
bring I fish 7.8 5.1 npn. (= Py)

'I brought the fish to Vaikiki.'

Kua kave au i te ika [ki aa ia].  
bring I fish 7.8 5.1 him (= Pz)

'I brought the fish to him.'

Kua kave au i te ika [ki a raatou].  
bring I fish 7.8 5.1 them (= Pz)

'I brought the fish to them.'

	first person		second person	third person
singular	au~ku~u		koe~u	ia~na
dual	incl.	excl.	koorua	raaua
	taaua	maaua		
plural	taatou	maatou	koutou	ra tou

Pz-bases: Personal Pronouns

All of the eleven forms occur as minor morphemes (5.21 - 5.31) although the allomorphs for the first, second, and third person singular bases show different distributions from the allomorph counterparts of the minor morphemes. -ku 'first person singular' base, -u 'second person singular' base, and -na 'third person singular' base occur only after the following possessive particles: maa (7.19), moo (7.20), naa (7.22), noo (7.24), /taa/ (6.1), /too/ (6.3), /aa/ (6.5), /oo/ (6.6).

-u 'first person singular' base occurs only after /aa/ of A (5.1) 'personal-locational article.'

au 'first person singular' base, koe 'second person singular' base and ia 'third person singular' base occur elsewhere. (For allomorphs of the minor morphemes, see position Class 5.)

-ku 'I' : E tini tangata [taa-ku] i kite ana ki Otahuhu.  
 crowd man 6.1 Pz see npl.

'I saw a crowd in Otahuhu.'

-u 'you' : E hare suumaaringa [too-u].  
 house beautiful 6.3 Pz

'You have a beautiful house.'

-na 'he' : E puaka suumaaringa [taa-na].  
 pig fine 6.1 Pz

'He has a fine pig.'

-u 'I' : Kua unga ia [i aa-u] kia hano.  
 order he 7.7 5.1 Pz go

'He told me to go.'

au 'I' : Kaa uru [au] ki vaha i te hare.  
 go Pz out house

'I will go out of the house.'

koe 'you' : Kaa patu au [i aa koe].  
 hit I 7.7 5.1 Pz

'I will hit you.'

ia 'he' : Haka+peehea koe [i aa ia]?  
 how you 7.7 5.1 Pz

'What did you do to him?'

### 3.2.2. Transformation of Bases

A base of Class V, A, G, or N can be transformed into a base of another class. The transformed base has all the combinatorial possibilities of a single base of the same class. The transformed base is one type of complex nuclei. (see section 3.4.2).

- (1) HAKA- (2.1) 'causative prefix' transforms V, A, and N (including transformed N bases) to G bases. HAKA- occurs with G bases without changing their class. Examples are:

The raised letter shows the transformed class.

<u>haka+mataku</u> be afraid of	(2.1 + V) <sup>G</sup>	'to scare'
<u>haka+kino</u> bad	(2.1 + A) <sup>G</sup>	'to damage'
<u>haka+kite</u> know	(2.1 + G) <sup>G</sup>	'to inform'
<u>haka+puaka</u> pig	(2.1 + N) <sup>G</sup>	'to call a person a pig'

(2) -HANGA (2l. 1) 'nominalizing suffix' transforms V, A, and G (including transformed G bases) to N bases. -HANGA does not occur with N bases. Examples are:

<u>moe+hanga</u> sleep	(V + 2l. 1) <sup>N</sup>	'mat'
<u>poto-nga</u> short	(A + 2l. 1) <sup>N</sup>	'portion'
<u>noho+anga</u> sit	(G + 2l. 1) <sup>N</sup>	'chair'

### 3.3. Interjections

A small number of morphemes which have no combinatorial possibilities with other morphemes within a phrase are classified as interjections. Examples are:

<u>eitau</u>	greetings	'hello, thank you, oh.'
<u>ee</u>	address	'hey, oh, yes, well'

< > encloses interjections.

<Eitau>, mai hea    mai koe?  
(hello)            which            you

'Hello, where are you from?'

<Ee>, te mea    mua.  
yes            thing first

'Yes, the first one (is right).'

### 3.4. Classification of Nuclei

The nucleus of a phrase is the slot between (and not including) positions filled by preposed position Class 4, and postposed position Class 23.

The nucleus is considered to be a structural unit within the phrase for the following reasons:

- (1) All nuclei so defined fall into the same six substitution classes as single bases, namely, V, A, G, N, L, and P. (see section 3.2).
- (2) Some morphophonemic alternation is predictable in terms of the phonological structure of the nucleus. (see p. 46 for E (8.2); p. 47 for kA (8.3) and p. 85 for uA (5.7)).
- (3) Any statement of the combinatorial possibilities of minor morphemes and bases within phrases will be very complicated if the transformative morphemes (see section 3.2.2) are included in the peripheral slot of the phrase, rather than in the nuclear slot.

There are three types of nuclei: simple nuclei, complex nuclei, and compound nuclei.

### 3.4.1. Simple Nuclei

Simple nuclei are those which consist of a single base. The class of a simple nucleus is that of the base which it contains, so that simple nuclei are classed as V, A, G, N, L, or P.

### 3.4.2. Complex Nuclei

Complex nuclei are those which consist of a single base and at least one nuclear minor morpheme. The class of a complex nucleus is that of the base or the transformed base which it contains.

Examples of complex nuclei containing transformative nuclear minor morphemes are given in section 3.2.2.

Examples of complex nuclei containing non-transformative nuclear minor morphemes are as follows:

( ), or { } indicates nuclei. The raised letter indicates the resulting nucleus class.

<u>tokottoru</u> three	(3.1 + A) <sup>A</sup>	'three (people)'
<u>mo-moe</u> sleep	(1.3 + V) <sup>V</sup>	'sleep'
<u>motu+motu</u> island	(1.1 + N) <sup>N</sup>	'islands'

<u>kitethia</u>	$(G + 22.1)G$	'be seen'
see		

<u>kai-kaihia</u>	$\{(1.1 + G)G + 22.1\}G$	'be eaten'
eat		

L and P bases do not occur in complex nuclei.

### 3.4.3. Compound Nuclei

Compound nuclei are those which consist of two or more bases.

A compound nucleus always has one head. The head is the first base or the first transformed base in the nuclear slot. All other bases and transformed bases are modifiers to the head. All bases or transformed bases except for those of Class V and P occur as modifiers.

The class of a compound nucleus is that of the head which it contains. Compound nuclei are classed as V, A, (except Ax), G, N, L, or P.

<u>moe kino</u>	$(V + A)V$	'do not sleep well'
sleep bad		

<u>poo namu</u>	$(A + N)^A$	'The night when lots of mosquitoes come in'
night mosquito		

<u>haamani vaka</u>	$(G + N)G$	'to make a canoe'
make canoe		

<u>tamariki tamaaroa</u>	$(N + N)^N$	'boys'
children male		

<u>roto puu</u> inside center	$(L + N)^L$	'in the middle'
<u>ngaahi ruru</u> place fishing	$(N + G)^N$	'the place for fishing'
<u>tai roto</u> sea inside	$(N + L)^N$	'lagoon'
<u>Sokoau hanothanga</u> npn. go	$\{P + (V + 2L,1)^N\}^P$	'Sokoau's visit'
<u>rua raakau</u> two sticks	$(Ax + N)^N$	'two sticks'
<u>ngaahi tanu+hanga</u> place bury	$\{N + (G + 2L,1)^N\}^N$	'tomb'
<u>noho+hanga kai-kai</u> sit eat	$\{(G + 2L,1)^N (1,1 + G)G\}^N$	'dining chair'
<u>poti sii-sii ika</u> boat to fish fish	$\{N + (1,1 + G)^G + N\}^N$	'fishing boat'
<u>tamaiti ngaakau kino</u> child guts bad	$(N + N + A)^N$	'bad tempered child'

### 3. 5. Classification of Phrases

Penrhyn utterances are divided into (morphological) phrases by the application of the rules described in section 3. 0. All phrases are divided, by internal structural differences (i. e. different combinatorial possibilities of peripheral minor morphemes and nuclei), into two types: nominal phrases and verbal phrases.

Nominal phrases are those which (1) begin with any particle of Class 7, 6, 5, or 4, or (2) contain any nucleus of Class N, L, or P.

Verbal phrases are those which are not nominal phrases.

Following are some examples of identified nominal and verbal phrases.

<u>(Kua hano ana)</u>	[	<u>a-ku</u>	<u>mokopuna</u> ]	[	<u>ki</u>	<u>vaha</u> ]
8.1	V	25.2	6.5 5.21	N	7.8	L
	go		grandchild			outside

<u>[i te hare]</u> ,	<u>(rere+rere ai).</u>
7.7 5.3	N (1.1 + G) <sup>G</sup> 25.1
house	fly

'My grandchildren went out (side) of the house to play with a swing (there).'

<u>[I nanahi]</u> ,	<u>(tunu+tunu ana)</u>	<u>[au]</u>	<u>[i taa maatou ika]</u>
7.7	L (1.1 + G) <sup>G</sup> 25.2	P	7.7 6.1 5.29 N
yesterday	cook	I	fish

<u>[ki runga]</u>	<u>[i te umu]</u> .
7.8	L 7.7 5.3 N
top	oven

'Yesterday, I cooked our fish in the oven.'

<u>[I Maangaro+ngaro]</u> ,	<u>[apinga tikaai]</u>	<u>[te kaha]</u> .
7.7	L N 23.3	5.3 N
(npl.)	thing	k. of fish

'In Penrhyn there are lots of kaha fish.'

(Ripithia atu) [te peeni] [ki raro].  
 (G + 22.1)<sup>G</sup> 24.1 5.3 N 7.8 L  
 throw pencil down

'Put down the pencil.'

[Ee Naani], (hano mai). (Kaa hano) [taaua], (sae-saere).  
 7.13 P V 24.2 8.3 V P (1.3 + V)<sup>V</sup>  
 (npn.) come go we walk

'Hey, Naani, come on. Let's go for a walk.'

(Kua topa mai) [te ua], (horo atu) [maaua]  
 8.1 G 24.2 5.3 A G 24.1 P  
 fall rain run we

[ki te ngaahi ruru].  
 7.8 5.3 (N G)<sup>N</sup>  
 place shelter

'It started raining and so, we ran to the shelter.'

### 3. 5. 1. Nominal Phrases

Nominal phrases have different combinatorial possibilities from verbal phrases, which may be summarized in the following formulae. These formulae are also intended to rule out a high proportion of phrases which are ungrammatical in the language provided that all previously stated selection restrictions are taken into account. <sup>13</sup> The formulae are followed by examples from the texts of the corpus.

## Nominal Phrase Formulae:

$$(1) \quad +(\overbrace{+7. +6. +5. +4.}) + \binom{A}{G} +23. +24. +26. +27. +28. +29.$$

$$(2) \quad +7. \overbrace{+6. +5.} + N +23. +24. +26. +27. +28. +29.$$

$$(3) \quad +7. \overbrace{+6. +5.} + \binom{L}{P} +23. +24. +26. +27. +28. +29.$$

## Notations:

+	:	obligatory
†	:	optional
$\overbrace{+X+Y}$	:	If X occurs, Y must also occur (not vice versa)
$\overbrace{+X-Y}$	:	If X occurs, Y must not occur (not vice versa)
+ (X, Y)	:	Either X or Y must occur
numeral	:	a member of a given position class
capital letter	:	a member of a given nucleus class

<u>[ei kite]</u> see	7.3 + G	'to eat'
<u>[te kai]</u> eat	5.3 + G	'the food'
<u>[i te poopongi]</u> morning	7.7 + 5.3 + A	'in the morning'
<u>[e au kai]</u> food		
<u>[suumaaringa hua]</u> fine	7.1 + 4.1 + (G+A)G + 23.1	'just fine food'
<u>[to-na maki]</u> sick	6.3 + 5.23 + G	'her illness'
<u>[te au ahitahi]</u> evening	5.3 + 4.1 + A	'the evenings'
<u>[i too maatou kaaua]</u> fence	7.1 + 6.3 + 5.25 + G	'our fence (object)'
<u>[i te au kai]</u> food	7.7 + 5.3 + 4.1 + G	'the food'
<u>[tee ia au kai]</u> food	6.8 + 5.17 + 4.1 + G	'this food'
<u>[ki tee ia au tangata]</u> man	7.8 + 6.8 + 5.17 + 4.1 G	'to these people'
<u>[apinga tikaai]</u> thing	N + 23.3	'real thing'
<u>[e puaka]</u> pig	7.1 + N	'a pig'

<u>[naa hare]</u> house	5.3 + N	'the houses'
<u>[e te tamaiti]</u> child	7.14 + 5.3 + N	'by the child'
<u>[e au ika]</u> fish	7.1 + 4.1 + N	'fish (pl.)'
<u>[too te ariki]</u> chief	6.3 + 5.3 + N	'belong to the chief'
<u>[te au motu+motu]</u>	5.3 + 4.1 + (1.1 + N) <sup>N</sup>	'the islands'
<u>[i to-na hare]</u> house	7.7 + 6.3 + 5.23 + N	'in his house'
<u>[i te au toka]</u> rock	7.7 + 5.3 + 4.1 + N	'of the rocks'
<u>[tee naa au raakau]</u> timber	6.8 + 5.18 + 4.1 + N	'those timbers'
<u>[i tee ia au raa nei]</u> day	7.7 + 6.8 + 5.17 + 4.1 + N + 26.1	'these days'
<u>[Pita]</u> npn.	P	'Peter (subject)'
<u>[i runga]</u> top	7.7 + L	'on top'
<u>[too roto]</u> inside	6.3 + L	'inside'
<u>[a vaha]</u> outside	5.1 + L	'outside (subject)'

<u>[ki a Kaarepa]</u> npn.	7.8 + 5.1 + P	'to Kaarepa'
<u>[i taa raatou]</u> they	7.7 + 6.1 + P	'than they'
<u>[to-na tahi hua]</u> one	6.3 + 5.23 + A + 23.1	'all by himself'
<u>[i te manako maitaki</u> mind good		
<u>roa]</u>	7.7 + 5.3 + (G+A) <sup>G</sup> + 23.2	'very good idea'
<u>[te ingoa tikaai]</u> name	5.3 + N + 23.3	'the real name'
<u>[noo reira hua]</u> there	7.24 + L + 23.1	'only because of that'
<u>[tei aa koe hua]</u> you	7.5 + 5.1 + P + 23.1	'only at your (place)'
<u>[i te poopongi ake]</u> morning	7.7 + 5.3 + A + 24.3	'that morning'
<u>[te anga+anga hua</u> (work)		
<u>atu raai]</u>	5.3 + G + 23.1 + 24.1 + 27.4	'just that work'
<u>[mai te maunga mai]</u> mountain	7.6 + 5.3 + N + 24.2	'from the mountain'
<u>[mai koo mai]</u> yonder	7.6 + L + 24.2	'from there'

<u>[ko au hua ake]</u> I	7.9 + P + 23.1 + 24.3	'just me'
<u>[uaa poo nei]</u> night	5.7 + A + 26.1	'tonight'
<u>[te haka+mata mai nei]</u> eye	5.3 + (2.1 + N) <sup>G</sup> + 24.2 + 26.1	'the sprouting'
<u>[ko ua tamaiti ina]</u> child	7.9 + 5.7 + N + 26.2	'that child'
<u>[i raro ona]</u> down	7.7 + L + 26.2	'down there'
<u>[tei aa ia ana hoki]</u> he	7.5 + 5.3 + P + 26.2 + 28.1	'also at his (place) there'
<u>[ei kore paha]</u> not	7.1 + A + 27.1	'maybe not'
<u>[te angatanga hua]</u> (work)		
<u>atu raai]</u>	5.3 + G + 23.1 + 24.1 + 27.4	'just that work'
<u>[ko te apinga raa]</u> thing	7.9 + 5.3 + N + 27.2	'the thing (is), however, '
<u>[noo roto raai]</u> inside	7.24 + L + 27.4	'still inside'
<u>[naa raatou paha]</u> they	7.22 + P + 27.1	'they maybe (as a subject)'
<u>[te kino hoki]</u> bad	5.3 + A + 28.1	'also evil'
<u>[e aha hoki]</u> what	7.1 + G + 28.1	'what ...'

<u>[i naa huru+huru hoki]</u> hair	7.7 + 5.3 + (1.1 + N)N + 28.1	'the hair, too'
<u>[i Tongareva hoki]</u> npl.	7.7 + L + 28.1	'in Penrhyn, too'
<u>[noo-ku hoki]</u> I	7.24 + P + 28.1	'also mine'
<u>[e tahi ee]</u> one	7.1 + A + 29.1	'one (for me) and ...'
<u>[e aha ee]</u> what	7.1 + G + 29.1	'what, then ...?'
<u>[e puaka ee]</u> pig	7.1 + N + 29.1	'a pig, but ...'
<u>[i reira ee]</u> there	7.7 + L + 29.1	'there, and ...'
<u>[Tere ee]</u> npn.	P + 29.1	'Tere (said) that ...'

### 3.5.2. Verbal Phrases

All verbal phrases may be summarized in the following formula. The formula is also intended to rule out a high proportion of phrases which are ungrammatical in the language provided that all previously stated selection restrictions are taken into account. (see section 3.1.2). The formula is followed by examples from the texts of the corpus.

## Verbal Phrase Formula:

$$^{\dagger}8. + \begin{pmatrix} V \\ A \\ G \end{pmatrix} ^{\dagger}23. ^{\dagger}24. ^{\dagger}25. ^{\dagger}26. ^{\dagger}27. ^{\dagger}28. ^{\dagger}29.$$

<u>(Kaa moe)</u> sleep	8.3 + V	'will sleep'
<u>(Kua maitaki)</u> good	8.1 + A	'has been good'
<u>(kia kai)</u> eat	8.6 + G	'in order to eat'
<u>(kua hano hua mai)</u> go	8.1 + V + 23.1 + 24.2	'has just come by'
<u>(mate roa)</u> die	A + 23.2	'died immediately'
<u>(ee kite hua ana)</u> see	8.2 + G + 23.1 + 26.2	'usually see'
<u>(ee hano atu)</u> go	8.2 + V + 24.1	'go there'
<u>(kua kino+kino mai)</u> bad	8.1 + (1.1 + A) <sup>A</sup> + 24.2	'has got worse'
<u>(mee kite atu)</u> see	8.7 + G + 24.1	'if (you) see'
<u>(e rauka mai ana)</u> available	8.2 + V + 24.2 + 25.2	'usually available'
<u>(kua ua ana)</u> rain	8.2 + A + 25.2	'has been raining'

<u>(kai-kai ai)</u> eat	$(1.1 + G)^G + 25.1$	'to eat (there)'
<u>(tee tuu nei)</u> stand	$8.5 + V + 26.1$	'is standing here'
<u>(tee peka+peka hua)</u> (fight)		
<u>nei raai)</u>	$8.5 + A + 23.1 + 26.1$ $+ 27.4$	'still fighting here'
<u>(tee noho nei)</u> stay	$8.5 + G + 26.1$	'staying here'
<u>(kua hano atu paha)</u> go	$8.1 + V + 24.1 + 27.1$	'may have gone there'
<u>(ka maitaki raai)</u> good	$8.3 + A + 27.4$	'still be good'
<u>(kaa kai raai)</u> eaten	$8.3 + G + 27.4$	'still edible'
<u>(tee tuu nei hoki)</u> stand	$8.5 + V + 26.1 + 28.1$	'just standing here'
<u>(maitaki hoki)</u> good	$A + 28.1$	'also good'
<u>(i tae mai ana hoki)</u> reach	$8.4 + G + 25.2 + 28.1$	'just arrived'
<u>(hano mai ee)</u> come	$V + 24.2 + 29.1$	'come here (so that) ...'

(ee ngere ee)  
not

8.2 + A + 29.1

'no, but ...'

(karanga mai ee)  
answer

G + 24.2 + 29.1

'said that ...'

## NOTES

<sup>1</sup>The term "morphology-syntax" is used because it is a division of the grammar "lying on a level between that of phonology and of syntax proper. Morphology-syntax will deal with the identification of morphemes, their classification, and the combinatorial possibilities with a unit of distribution to be defined." (Biggs 1960)

<sup>2</sup>A capital letter V indicates any vowel.

<sup>3</sup>E (8. 2) plus kore (A-base, 'not') will negate a verbal phrase which implies a present tense.

<sup>4</sup>ei (7. 3) plus aha (G-base, 'what') will negate an imperative construction.

<sup>5</sup>kA (8. 3) plus kore (A-base, 'not') will negate a nominal phrase. kA before kore has two allomorphs: /kaa/ and /aa/. They are in free variation.

<sup>6</sup>ei (7. 3) plus kore (A-base, 'not') will negate a verbal phrase which implies a past tense.

<sup>7</sup>/f/ is a voiceless labio-dental fricative. It occurs only in a few loanwords, and does not contrast with other phonemes. Therefore, it is not discussed in Chapter II. [f] in the original word is sometimes replaced by /p/. For example, in case of the English word, February, both /feeperuare/ and /peeperuare/ freely occur. Examples of words containing /f/ are:

<u>iaira</u>	'file'
<u>Fiitii</u>	'Fiji'
<u>Farairee</u>	'Friday'

<sup>8</sup>E (7.14), A (7.16), and O (7.17) seem to be lengthened if they fall on the syllable where final phrase stress [<sup>∇</sup>] occurs (see section 2.7).

... <u>e</u> koe.	[... e koe #]	'by you'
... <u>ee</u> koe.	[... <sup>∇</sup> ee kOE #]	'by you'
... <u>e</u> Toka.	[... e Toka #]	'by Toka'
... <u>ee</u> Toka.	[... <sup>∇</sup> ee TokA #]	'by Toka'
... <u>o</u> Pita.	[... o Pita #]	'of Peter'
... <u>oo</u> Pita.	[... <sup>∇</sup> oo PitA #]	'of Peter'

<sup>9</sup>Ibid.

<sup>10</sup>Some bases occur in the frames which are supposed to be mutually incompatible. The word tai 'sea, seaward', for example, occurs in Frame 2 and Frame 4. tai is, therefore, classified as an N-base as well as an L-base. Consequently, tai (N-base, 'sea'), and tai (L-base, 'seaward') are homonyms. Two or more words, when they have the same phonological form but are members of mutually exclusive classes or subclasses, constitute a pair (triplet, etc.) of homonyms. Examples are:

<u>koo</u>	G-base	'husk'
<u>koo</u>	L-base	'yonder'
<u>hoki</u>	V-base	'return'
<u>hoki</u>	(28. 1)	'emphasis, addition'
<u>ee</u>	of E (8. 2)	'non-past'
<u>ee</u>	(7. 13)	'vocative'
<u>ee</u>	(6. 19)	'demonstrative, pl.'
<u>ee</u>	interjection	'yes'

<sup>11</sup>Biggs (1961:23-24) and Buse (1960:131).

<sup>12</sup>Ibid.

<sup>13</sup>The formula presented here is simply a summary of a phrase which indicates combinatorial possibilities that are considered most basic in the structure of a phrase. Therefore, all previously stated restrictions must be taken into account. Examples are: (1) au (4. 1) must be preposed by one or more particles of Class 7, 6, and/or 5. (see p. 95 ). (2) L-bases occur immediately following tei (7. 5), mAi (7. 6), i (7. 7), or ki (7. 8), but bases of Class A, G, N, or P must be preposed by a particle of Class 5 in sequence with any particle of 7. 5 - 7. 8. (see p. 128 ).

## REFERENCES

- Bataillon, Pierre. 1932. *Langue d'Uvea (Wallis)*. Paris, Geuthner.
- Bergmann, Hans-Georg. 1963. *Vergleichende Untersuchungen Über die Sprache der Osterinsel*. Ph.D. Dissertation. University of Hamburg.
- Biggs, Bruce G. 1960. Morphology-syntax in a Polynesian language. *Journal of the Polynesian Society*. 69. 376-79.
- \_\_\_\_\_. 1961. The structure of New Zealand Maori. *Anthropological linguistics*. 3. 1-52.
- Buck, Peter H. 1932. *Ethnology of Tongareva*. (Bernice P. Bishop Museum bulletin, 92) Honolulu, Bernice P. Bishop museum.
- Buse, J. E. 1960. Rarotongan personal pronouns: form and distribution. *Bulletin of the school of oriental and African studies*. 23. 123-37.
- \_\_\_\_\_. 1963a. The structure of the Rarotongan verbal piece. *Bulletin of the school of oriental and African studies*. 26. 152-69.
- \_\_\_\_\_. 1963b. The structure of Rarotongan nominal, negative, and conjunctival pieces. *Bulletin of the school of oriental and African studies*. 26. 393-419.
- \_\_\_\_\_. 1963c. Rarotongan sentence structures. *Bulletin of the school of oriental and African studies*. 26. 632-45.
- \_\_\_\_\_. 1965. Problems of morphology and classification illustrated from Rarotongan. *Lingua*. 15. 32-47.
- \_\_\_\_\_. 1966. Number in Rarotongan Maori. In memory of J. R. Firth, ed. by C. E. Bazell et al., 52-65. London, Longmans, Green and co.

- Capell, Arthur. 1962. Oceanic linguistics today. *Current Anthropology*. 3. 371-97.
- Carroll, Vern. 1965. An outline of the structure of the language of Nukuoro. *Journal of the Polynesian society*. 74. 192-226, 451-72.
- Challis, R. L. 1967. Personal letter. June 2. Auckland.
- Chrétien, C. Douglas. 1965. The statistical structure of the Proto-Austronesian morph. *Lingua*. 14. 243-70.
- Churchill, William. 1912. *Easter Island*. Washington. (Carnegie institute publication, 174.)
- Churchward, C. Maxwell. 1959. *Tongan dictionary*. London, Oxford university.
- Dempwolff, O. 1934-38. *Vergleichende Lautlehre des Austronesischen Wortschatzes*. Berlin, Reimer.
- Department of Island Territories. 1967. Personal letter. March 17. Wellington.
- Dordillon, René Ildefonse. 1931. *Grammaire et dictionnaire de la langue des Iles Marquises*. Paris, Institut d'ethnologie.
- Durrad, W. J. 1913. A Tikopian vocabulary. *Journal of the Polynesian society*. 22. 86-95, 141-48.
- Dyen, Isidore. 1960. Review of Grace's Polynesian within the Austronesian family. *Journal of the Polynesian Society*. 69. 180-84.
- \_\_\_\_\_. 1965. A lexicostatistical classification of the Austronesian languages. (*International journal of American linguistics* memoir, 19.)

- Elbert, Samuel H. 1953. Internal relationships of the Polynesian languages and dialects. *Southwestern journal of anthropology*. 9. 147-73.
- Emory, Kenneth P. 1946. *Eastern Polynesia, its cultural relationship*. Ph. D. dissertation. Yale university.
- \_\_\_\_\_. 1963. East Polynesian relationships. *Journal of the Polynesian society*. 72. 78-100.
- Fuentes, Jordi. 1960. *Dictionary and grammar of the Easter Island languages*. Santiago, Editorial Andres Bello.
- Grace, George W. 1959. The position of the Polynesian languages within the Austronesian (Malayo-Polynesian) language family. *International journal of American linguistics*. 25.
- \_\_\_\_\_. 1961a. Austronesian linguistics and culture history. *American anthropologist*. 58. 359-68.
- \_\_\_\_\_. 1961b. Lexicostatistical comparison of six Eastern Austronesian languages. *Anthropological linguistics*. 3. 1-22.
- \_\_\_\_\_. 1964. Movements of the Malayo-Polynesians. *Current anthropology*. 5. 361-68.
- Great Britain Naval Intelligence Division. 1943. The Northern Cook group. *Pacific Islands*. 2. 551-53.
- Green, Roger. 1966. Linguistic subgrouping within Polynesia. *Journal of the Polynesian society*. 75. 6 38.
- Grezel, le P. 1878. *Dictionnaire futunien-français avec notes grammaticales*. Paris, Maisonneuve.
- Haudricourt, Andre. 1965. Problems of Austronesian comparative philology. *Lingua*. 14.

- Hohepa, Patrick W. 1965. A Profile-generative grammar of Maori. Ph. D. dissertation. Indiana university.
- Jakobson, R., C. G. M. Fant, and M. Halle. 1967. Preliminaries to speech analysis. Cambridge, The M. I. T. press.
- Janeau, Vincent-Ferrier. (ed.) 1908. Essai de grammaire de la langue des Iles Gambier ou Mangaréva ... et dictionnaire mangarévian-français. Braine-le-Comte, Imprimerie Zech et fils.
- Jaussen, Tepano. 1898. Grammaire et dictionnaire de la langue maorie: dialecte tahitien. Paris, Bélin.
- Kennedy, T. F. 1966. Cook Islands. A descriptive atlas of the Pacific Islands. Wellington, Reed. 26-29.
- Krupa, Viktor. 1966. Morpheme and word in Maori. The Hague, Mouton.
- \_\_\_\_\_. 1966. The phonemic structure of morphemic forms in 4 Oceanic languages. Journal of the Polynesian society. 75.
- Marshall, D. S. 1965. Polynesian glottochronology. Ph. D. dissertation. Harvard university.
- Milner, G. B. 1966. Samoan dictionary. London, Oxford university.
- Moeka'a, Rangi. 1966. The structure of the Pukapukan verbal piece. Type-script copy. University of Auckland.
- Morton, E. J. 1962. A descriptive grammar of Tongan (Polynesian). Ph. D. dissertation. Indiana university.
- Pawley, Andrew K. 1966a. Samoan phrase structure. Anthropological linguistics. 8.1-63.
- \_\_\_\_\_. 1966b. Polynesian languages: a subgrouping based on shared innovations in morphology. Journal of the Polynesian society. 75. 39-64.
- Pratt, G. 1911. Grammar and dictionary of the Samoan language. Samoa, London missionary society.

- Pukui, Mary K. and Samuel H. Elbert. 1957. Hawaiian-English dictionary. Honolulu, University of Hawaii.
- \_\_\_\_\_. 1964. English-Hawaiian dictionary. Honolulu, University of Hawaii.
- Robson, R. W. 1963. Pacific Islands year book and who's who. 9th ed. Sydney, Sydney and Melbourne publishing co.
- Savage, Stephen. 1962. A dictionary of the Maori language of Rarotonga. Wellington, Department of island territories.
- Smalley, William A. 1964. Manual of Articulatory phonetics. New York, Practical anthropology.
- Stimson, J. J. and D. S. Marshall. 1964. A dictionary of some dialects of the Polynesian languages. The Hague, Peabody museum of Salem.
- Tregear, Edward. 1883-95. A Paumotuan dictionary. Wellington, Whitcomb and Tombs.
- Tregear, E. and S. P. Smith. 1907. Vocabulary and grammar of the Niué dialect of the Polynesian language. Wellington, Government printer.
- Violette, Louis. 1879. Dictionnaire samoa-français-anglais. Paris, Maisonneuve.
- Voegelin, C. F. and F. M. Voegelin. 1964. Languages of the world: Indo-Pacific fascicle one and two. Anthropological linguistics. II.
- Walsh, D. S. and B. G. Biggs. 1966. Proto-Polynesian word list I. Auckland, Linguistic society of New Zealand.
- Williams, Herbert W. 1957. A dictionary of the Maori languages. Wellington, Government printer.