

Chapter One

PHONOLOGY

1 PHONEMES

1.1 Phonemic systems

1.1.1 Consonant system

The Tiwi consonant system is a quite normal example of the general Australian type. This type has a maximum of six places of articulation — bilabial, dental, alveolar, alveo-palatal, retroflex and velar — but not all of these are used contrastively in every language. In many languages dental and alveo-palatal sounds are merged in a single phoneme, and, in some, alveolar and retroflex sounds are similarly merged. There are thus some languages with four, some with five, and some with six contrastive places of articulation. There is always a complete set of nasals, with one nasal corresponding to every stop. In addition there are always at least one lateral, an alveolar flap, a retroflex vocoid, and two semi-vowels (palatal and velar). There are generally no fricatives and features of a secondary type such as voice, aspiration, affrication, velarisation and glottalisation are not used contrastively. The result is a fairly simple system with usually not more than about fourteen to eighteen consonants. (See Capell, 1956 and 1962 for an account of the common Australian consonant system, and for some examples of the type.)

The Tiwi system is one of those which have only four contrastive places of articulation, dental and alveo-palatal sounds being merged in a single phoneme, and similarly alveolar and retroflex. It differs from the norm in one trivial respect — the possession of a single fricative phoneme.

There are fourteen consonant phonemes, as follows: four stops — bilabial, /p/, dental, /t̪/, alveolar, /t/, and velar, /k/; four nasals with corresponding places of articulation — bilabial, /m/, dental, /n̪/, alveolar, /n/, and velar, /ŋ/; an alveolar lateral, /l/; an alveolar flap, /r/; a velar fricative, /ɣ/; a retroflex vocoid, /ɹ/; and two semi-vowels — palatal, /j/, and velar, /w/.

p	t̪	t	k
m	n̪	n	ŋ
		l	
		r	
			ɣ
	j	ɹ	w

(The tabulation displays only *contrastive* places of articulation — hence the location of the palatal semi-vowel in the 'dental' column and of the retroflex vocoid in the

'alveolar' column, as 'palato-dental' and 'alveolar-retroflex' are in fact single places of articulation in Tiwi.)

Minimal or near minimal pairs are given below for those contrasts which may seem less obvious.

/t/ — /ʈ/	/maŋ'taŋa/, 'woman friend', /maŋ'ʈaŋa/, 'a stick'.
/n/ — /ŋ/	/ni'ŋani/, 'today', /ni'nani/, 'spirit'.
/ɣ/ — /w/	/'ŋaya/, 'we inc.', /'ŋawa/, 'we ex.'.
/r/ — /ɻ/	/aŋ'ʈora/, 'wallaby', /ji'ʈoɻa/, 'cabbage palm'.

NOTES

1. Treatment of alveo-palatal sounds

It should be noted here, with regard to the apparent absence in Tiwi of the series usually labelled 'alveo-palatal' or 'palatal' in descriptions of Australian languages, that the Tiwi 'dental' series is in fact the same series differently labelled. As already mentioned, Tiwi is one of the many Australian languages in which dental and alveo-palatal sounds are merged as members of a single phoneme. In this situation, many linguists have chosen to identify the phoneme by its alveo-palatal member, and this may have been the correct thing to do given the data they were describing, but, in the case of Tiwi at least, the data suggests that the apico-dental member of the phoneme is its basic form.

2. Treatment of retroflex sounds

Although retroflex sounds [ʈ], [ŋ] and [ʂ] all occur very commonly in Tiwi no evidence could be found which would require the setting up of a retroflex series of phonemes, distinct from the alveolar series. The retroflex sounds never occur initially in words or utterances. In the intervocalic positions in which they do occur it is always possible to postulate that the retroflexion is due to the presence of an immediately preceding /ɻ/, and this is in fact what has been done in the present description. /ɻ/ is established by independent evidence and, as /t/, /ŋ/, and [ʂ], (if these phonemes were set up) would never be distinguishable from /ɻt/, /ɻŋ/, /ɻʂ/, a separate retroflex series seems redundant.

Even more compelling is the following evidence. There are a great many masculine nominal forms such as [mi'aŋi], 'pandanus', [mwaŋi], 'son', [ʈati'ŋaŋi], 'boy' in which the masculine suffix -ti has an initial retroflex stop instead of the usual alveolar stop. This fact seems an inexplicable anomaly until one considers the corresponding feminine forms, which are [mia'ɻiŋa], [mwa'ɻiŋa], and [ʈatiŋa'ɻiŋa]. What these feminine forms prove is that a morpheme boundary occurs *following* the retroflexion and *preceding* the stop. A separate /ɻ/ phoneme is shown to be present in the masculine forms and the retroflexion of the stop is thus shown to be merely a conditioned feature.

3. The velar fricative

The one unusual feature of the Tiwi consonant system is its possession of a single fricative phoneme — the voiced velar fricative, /ɣ/ — as friction is generally not used as a distinctive feature in Australian languages. Tiwi may not be alone, however, in its possession of this phoneme, as the same sound appears to have been observed in some other north Australian languages (Jiwadja and Maung; see Capell 1962: 129). The phoneme remains an isolated, unintegrated oddity in the system, however, as there is not the slightest indication in Tiwi of the development of a systematic stop-fricative contrast. Moreover, the very low incidence of /ɣ/, and the restrictions on its occurrence — it can occur only in intervocalic position — both tend to suggest that the phoneme is a relative innovation, which may have arisen either as a result of outside influence or by a phonemic split from /w/, and which has not yet established itself as an equal member of the system.

In articulatory terms /ɣ/ is somewhat similar to /w/, as the place of articulation is the same for both and as the rounding of the latter is generally rather slight. Both

sounds are pronounced with the back of the tongue raised towards the soft palate but the height of the tongue is slightly greater for /ɣ/, producing a very narrow aperture which results in audible local friction. Unusual as it is (for an Australian language) the contrast is not in doubt, as the two sounds occur in exactly the same phonological environment, and one cannot be freely substituted for the other.

4. The glottal stop

Another possibility which had to be considered in the course of analysis was that of setting up a glottal stop phoneme, as the glottal stop does in fact occur in Tiwi and it would not be correct to say that it was without linguistic function. It has a function, certainly, but, as this function depends on syntagmatic rather than paradigmatic relations, it is not of a kind that can easily be accommodated within the framework of a phonemic description. The significance of the glottal stop in Tiwi depends on the restriction of its occurrence to sentence-final position. It signals the end of sentences, in fact, but, as it does this not by contrastively replacing something else but merely by being kept in a constant position relative to the sentence, its significance is of the kind that is best handled by prosodic theory rather than of the kind which has traditionally been dealt with by phonemics.

1.1.2 Vowel system

The Tiwi vowel system, in common with that of a small number of other north Australian languages, differs from the basic triangle generally found in Australia by the possession of a fourth vowel, /o/. The system is thus a quadrilateral based on two dimensions of contrast and having the following vowel phonemes: a close front unrounded vowel, /i/; a close back rounded vowel, /u/; an open front unrounded vowel, /a/; and an open back rounded vowel, /o/.

i u

a o

The four vowels are shown in stressed position in the following examples: /'tiŋa/, 'woman', /'tuŋa/, 'basket', /'taŋa/, 'Grab it!' /am'toŋi/, 'jabiru'.

NOTES

1. The a-o distinction

The distinction between /a/ and /o/ is neutralised following /w/. The word for 'crow', for example, could equally well be written as /wakwa'kini/ or /wokwo'kini/.

The functional load of /o/ is very low. It does not occur in word-initial or word-final positions, and even word-medially its incidence is very low. This makes it difficult to find good examples to demonstrate the /a/ — /o/ contrast, but, nevertheless, the contrast is not in doubt as the two sounds do occur in exactly the same phonological environments, and, where they occur, one is not freely substitutable for the other, e.g., /ji'lati/, 'knife', /ji'loti/, 'for ever'; /ɬaru'mwaka/, 'road', /aŋ'ɬora/, 'male wallaby'.

2. Vowel length

Differences of vowel length are not phonemic in Tiwi. The absolute length of stressed vowels varies considerably but this variation is of no linguistic relevance. Sequences of two identical vowel phonemes (as in /ta'apa/, 'Eat!' and /kii'ɬini/, 'little boy') are sometimes realised phonetically as a single long vowel, but these sequences are really interpreted as two syllables.

3. Diphthongs

Although a number of diphthongs occur phonetically these are all interpreted phonologically as two phonemes. There are no diphthong phonemes like English /ai/. (See section 2, note 1 for a discussion of this subject.)