

Chapter 2

PHONOLOGY

2.1 Ngawun phonemes

Ngawun seems to have had eighteen consonant and three vowel phonemes, as shown in Table 4. Table 5 gives examples of the consonants in word-initial, intervocalic and word-final positions; examples of the three vowels in stressed (first syllable) and unstressed (including word-final) positions can also be found in this table. A dash in this table indicates that the consonant is not known to occur in that position.

TABLE 4
Ngawun Phonemes

Agent and Location of Constriction / Manner of Articulation	Peripheral		Laminal		Apical		None
	Bilabial	Dorso-Velar	Dental	Alveo-palatal	Alveolar	Post-Alveolar	
Stop	p	k	t̥	tʲ	t	t̚	
Nasal	m	ŋ	n̥	nʲ	n	n̚	
Lateral					l	l̚	
Tap					r		
Glide		w		y		ɹ	
Vowel		u		i			a

TABLE 5
Examples of Phonemes

	Initial	Intervocalic	Final
p	palkal 'arm'	tYapul 'belly'	-
k	ka <u>n</u> tar 'head'	kakun ^Y 'possum'	-
t	t <u>i</u> ni 'tree'	ya <u>t</u> u 'father'	-
tY	tYana 'foot'	na ^Y t <u>i</u> ri 'sister'	-
t	t ^t Yiri 'call of willy wagtail'	warat <u>a</u> nka 'Iffley' (place name)	-
t	-	tYa <u>t</u> u 'short'	-
m	mili 'eye'	tYamar 'spider'	-
ŋ	ŋala 'by and by'	yaŋu <u>l</u> a 'goanna sp.'	-
n	n <u>a</u> manu 'saw'	n <u>u</u> nan 'snake'	-
nY	nYimul 'fly'	pa ^Y n <u>a</u> 'woman'	maŋan ^Y maŋan ^Y 'ear'
n	-	wana ^t Y <u>u</u> nka <u>r</u> i 'moon'	kun ^Y i <u>n</u> 'nose'
ŋ	-	pa <u>ŋ</u> a 'goanna sp.'	ka <u>n</u> t <u>u</u> ŋ 'father's sister'
l	liwin ^Y 'mosquito'	pulun 'father's father'	t ^Y i <u>n</u> pal 'coolibah'
!	!u <u>ŋ</u> u 'lap'	ka! <u>l</u> u 'hole'	ma! <u>l</u> 'hand'
r	-	t <u>a</u> ri <u>r</u> u 'thigh'	pu <u>r</u> iŋkir 'tomorrow'
w	wa <u>ŋ</u> ka 'one'	yaw <u>a</u> nu 'threw'	-
y	ya <u>r</u> 'mouth'	ka <u>y</u> a 'windbreak'	-
r	r <u>i</u> mpir <u>i</u> mpi 'shoulder blade'	ku <u>r</u> u 'kangaroo'	-

The opposition between the two laminal series is illustrated by the following pairs:

tapun 'spear' / t^Yapun 'name: Cherry O'Keefe'
kati 'meat' / ka^Ytⁱ 'a lie'
kuti 'star' / ku^tYir 'forehead'
namanu 'saw' / n^Yamuru 'itch'
nunan 'snake' / kun^Yaku^Ya 'dilly bag'

/t/ is almost non-existent both intervocally (known only in the place name warat̩ŋka 'Iffley') and word-initially (only in the onomatopoeic tit̩Yiri 'call of the willy wagtail'). /t/ in the former word, however, contrasts with /t̩/ in ɟayaɟaya 'to cut (reduplicated)' and initial /t̩i/ does occur, e.g. timul 'bone'. Within a morpheme /n/ seems to be almost non-existent intervocally but it does contrast with /n/ in the pair ŋaŋan 'snake'/punara 'white'. However, the topicaliser -nV and the past tense suffix -nu can give rise to pairs like ŋayunu 'I-TOP'/mayanu 'spoke' or yaraŋa 'you (plu.)-TOP'/maranu 'took'. Unfortunately, the vowel of the topicaliser is assimilated to the preceding vowel, but /u/ never occurs stem-finally in a verb. The opposition between lamino-dental and apico-alveolar is shown also by pairs such as k̩nta 'vulva'/kunta 'to kick'.

The opposition between the two apical series must, in the absence of intervocalic /t/, be illustrated by pairs involving nasals or laterals. These include ŋana 'we (pl.)'/paŋa 'goanna sp.', ŋani 'what'/kaŋi 'shoulder', yina 'to sit'/piŋa 'lower leg', kaluru 'left (hand)'/kaļu 'hole'.

Opposition between /r/ and /r̩/ is illustrated by ɟariɟu 'thigh'/ɟariŋu 'is standing' and pura 'to fetch'/pura 'to run (of water)'.

In addition to the apical laterals there is a lamino-alveopalatal lateral [l̩Y] which occurs in a few words in a cluster with a following /t̩Y/ and which contrasts with neither /l/ nor /l̩/. Since it is conditioned, as regards its point of articulation, by the following stop and so is predictable it clearly must be regarded as an allophone of one of the other laterals. The choice will be made on the basis of shared features. The features relevant to the point of articulation of Ngawun consonants can be analysed as coronal (the peripherals are -coronal and other consonants +coronal), distributed (relevant only to +coronal; the apicals are -distributed and the laminals +distributed) and anterior (of the stops [p], [t̩] and [t] are +anterior and [k], [t̩Y] and [t̩] -anterior). [l̩Y] is +coronal, +distributed, -anterior and so differs by only one feature from [l̩] which is +coronal, -distributed, -anterior and by two from [l̩] which is +coronal, -distributed, +anterior. [l̩Y] is therefore regarded as an allophone of /l̩/. Note, however, that on other grounds it could be argued that [l̩Y] should be regarded as an allophone of /l/; for example, the fact that heterorganic /l̩C/ clusters are very uncommon while /l̩C/ is common.

Glides /y/ and /w/ are frequently not audible when they occur word-initially before the homorganic vowel, /i/ or /u/ respectively. However, the convention is adopted of writing them in these positions, and also in those intervocalic positions where they could be regarded as predictable, e.g. /y/ in /piya/ 'don't'.

One word, [m̩nda:ra] 'sun' has a consistently long vocoid. This is phonemicised as /aa/.

2.2 Description of the phonemes

Because of the small size and restricted nature of the corpus, little can be said about the pronunciation of the phonemes beyond what is contained in Table 4, and the details of point of articulation given there are based on auditory impression rather than visual observation.

In most positions, excluding only where they follow a nasal in a cluster, the stops are usually lenis voiceless or lightly voiced. Intervocalic /t/ after a primary stressed vowel is sometimes a fricative [θ] or [ð], especially noticeable in the word /kaʔi/ 'meat'. After a nasal stops are voiced; /t/ may also again be a fricative [ð] as in /maŋda/ 'vegetable food'. Note that this is a widespread word which may be a recent borrowing in Ngawun (replacing /palŋa/ which occurs in other Mayi communalects) and that both it and /kaʔi/ (another widely used word) may have been used in local Aboriginal English or Pidgin; thus Miss O'Keefe's pronunciation of them may be influenced by English.

The pronunciation of the nasals has no noteworthy features; nor has that of the laterals, except of course that /l/ has an allophone [lʏ] occurring before /tʏ/.

/r/ is a tap intervocalically but tends to be trilled word-finally and before a consonant. Word-finally, if trilled, it may also be devoiced.

The only noteworthy feature of the pronunciation of the glides is the existence of a zero allophone of /y/ and /w/, occurring (more often than not) before /i/ and /u/ respectively.

In most environments /a/ is a low to mid-low central vocoid. Stressed /a/ is retracted after a peripheral, especially /w/ and especially if another peripheral follows. It is advanced after an alveo-palatal laminal. Unstressed /a/ also is advanced after /y/. Word-final /a/ may be centralised.

/i/ is typically [ɪ] but may be closer to [i] word-finally or before /y/ and perhaps other alveo-palatal laminals.

/u/ is typically in the region of [ʊ], sometimes [o], especially word-finally. It may be fronted and unrounded after /y/ and, to a lesser extent, /tʏ/ and /nʏ/.

All stressed vowels may be retroflexed before a post-alveolar apical consonant. All unstressed non-final vowels tend to be centralised and may be difficult to identify. Thus, for example, the second vocoid of [ʔarəʔu] 'thigh' and [maləʔu] 'hand' (the latter not a Ngawun word but used frequently instead of /ma!/) is assigned to /i/ only because it contrasts with the second vocoid of /ʔalaʔu/ 'baby' and /kaluʔu/ 'left-hand'.

2.3 Stress and intonation

The main stress on a word is almost always on the first syllable. Occasionally there is a secondary stress on the second syllable of a trisyllabic word. In a four-syllable word there may be a secondary stress on the third syllable, especially if the word is a reduplicated form. In a longer word secondary stress tends to fall on the first syllable of a disyllabic bound morpheme, if any (for example [íkalamùndu] 'grass-ABL'), or otherwise on odd-numbered non-final syllables (e.g. [wánatYùŋkarì] 'moon'). For purposes of stress the first vowel of suffixes of the form -VC(C)V normally counts as part of the preceding morpheme. Thus [ɪmbamìrɪŋgi] not [ɪmbamìrɪŋgi], although the latter seems to be possible.

The word /purɪŋkir/ 'tomorrow' is exceptional in that the main stress frequently falls on the second syllable, the first vowel then being centralised to [ə] and often reduced, thus [p^ərɪŋkər]. This is not an uncommon phenomenon in Australian languages for words of three or more syllables beginning with a peripheral stop (or sometimes nasal) and with a lateral or rhotic following the initial vowel. Note also Lamond's (1886) spelling of this word: bringar, and some spellings of /pulaɠara/ 'two' in old wordlists: Anonymous (1886) blagura, Lamond (1886) blakarra, Roth (1897) plā-gā-rā.

Because of the hesitancy of Miss O'Keefe's speech there seems to be nothing worthwhile that can be said about sentence stress or intonation.

2.4 Phonotactics

Ngawun roots all begin in a single consonant (given our decision to write yi and wu instead of i and u initially) and end in a vowel or one of a small number of consonants. Any non-apical consonant may occur word-initially; in addition there are in the lexicon (which contains a little over 300 words) one word each with initial /t/, /l/ and /r/ and two with initial /l/. Table 6 gives the percentage frequency of each CV combination in initial position in Ngawun lexical items. Total percentages of each C and V in these positions are also shown. Note that /t/, /n/, /ŋ/ and /r/ which never occur initially are not included. Perhaps the most noteworthy feature is the great predominance of /a/ in the primary stressed syllable.

Note that in Tables 6 and 7 figures are given only to an accuracy that seems justified by the number of words - about three hundred - on which they are based. Figures of more than about 10% are given to the nearest whole number, those between about 1 and 10% to the nearest half and those under about 1% to one decimal place. Any pretence at greater accuracy would merit the accusation of "delusions of accuracy" (to quote Moroney (1953:53)). As a result of this rounding off most sets of figures do not add up to exactly 100%.

Greater accuracy is justified in Table 8 because the figures are based on the number of phoneme occurrences, not on the number of words.

TABLE 6
Initial CV Frequencies

	<u>Ca</u>	<u>Cl</u>	<u>Cu</u>	<u>Total C</u>
p	8	4	5	17
k	11	1	13	25
t̥	6	1	3	10
t ^Y	2.5	2	1	5.5
t	0	0.3	0	0.3
m	7	2	1.5	10.5
ŋ	7	0	2	9
n̄	1	0	0.3	1.3
n ^Y	0.6	0.3	0	1
l	0	0.3	0.3	0.6
ḷ	0	0	0.3	0.3
w	7	1	1	9
y	4.5	3.5	1	9
ṛ	0	0.3	0	0.3
Total V	55	17	29	

Consonants occurring finally are /n^Y/, /n/, /n̄/, /l/, /ḷ/ and /r/, i.e. all non-vocalic coronal continuants except /n̄/. Table 7 gives the percentage frequency of occurrences of each V or CV combination in final position in lexical items.

TABLE 7
Final V(C) Frequencies

	<u>aC</u>	<u>iC</u>	<u>uC</u>	<u>Total C</u>
∅	36	15	20	71
nʸ	1.5	2	0.3	4
n	3.5	2	4	9.5
ŋ	0.3	0	0.3	0.6
l	3	1	3	7
ʃ	0.3	0	0	0.3
r	1.5	3.5	2.5	7.5
Total V	47	23	30	

Consonant clusters can have only two members and predictable glides between vowels are written. Consequently the only syllable types are CV and CVC. The only word not conforming to this system is /mant̩aara/ 'sun' which has a V syllable; phonetically, however, this combines with the preceding syllable to form a syllable with a long vocoid [da:].

The only four monosyllables in the lexicon are of the form CVC; these words are yar 'mouth', man 'neck', ma! 'hand' and nʸal 'just, now'. Disyllabic roots form 65% of the total, and of these 38% are CVCV and the remainder are roughly equally divided among the three other possibilities, CVCVC, CVCCV and CVCCVC. Trisyllabic roots form 26%; more than half of these are CVCVCV and about a quarter CVCCVCV. Almost half of four syllable roots are CVCVCVCV. There is one five syllable root, wanatʸun̩kari 'moon'.

The following intra-morphemic consonant clusters occur: homorganic nasal-stop; apico-alveolar continuant plus peripheral stop; apico-alveolar oral continuant plus peripheral nasal; /!p/, /!tʸ/ and /rtʸ/. /!p/ and /rŋ/ each occur only once in the lexicon, /lŋ/ and /rtʸ/ only twice. However, /lŋ/ also occurs in a common bound morpheme. 55% of clusters are homorganic nasal plus stop; approximately one sixth of the total are /mp/ and one sixth /ŋk/. /ŋt̩/, /lk/ and /rk/ are the next most frequent.

About 40% of lexical items have one cluster; apart from a few reduplicated forms only one word has two clusters. One reduplicated form has three clusters, one of which is across a morpheme boundary.

Considering now inter-morphemic clusters, it seems that any cluster beginning with any phoneme that occurs root-finally and with its second member any phoneme that occurs root-initially should be permissible. In fact the only phonemes noted as

second member of an intermorphemic cluster are the peripheral stops and nasals, with the exception of the cluster /nʏt̥/ which occurs when the ergative-instrumental-locative allomorph -t̥V is added to a stem with final /nʏ/, e.g. /kakunʏt̥u/ 'possum-E/I/L'.

The overall percentage frequency of phonemes in lexical items is shown in Table 8. The average root has 5.8 phonemes: 3.3 consonants and 2.5 vowels. The most frequently occurring phonemes are the vowels /a/ /u/ and /i/, followed in order by /k p r m l n t̥ ŋ tʏ y w ɾ nʏ/ with t̥ and the post-alveolar apicals forming the least frequent group.

TABLE 8
Overall Phoneme Frequencies

p	k	t̥	tʏ	t	t̥	Total stops
6.6	8.5	3.7	3.0	0.6	0.6	23.2
m	ŋ	n̥	nʏ	n	n̥	Total nasals
5.4	3.5	0.9	1.8	3.9	0.5	16.0
				l	l̥	
				4.5	0.7	
				r		Total liquids
				5.7		10.9
w			y		ɾ	Total glides
2.2			2.4		1.8	6.4
u			i		a	Total vowels
12.7			9.0		22.0	43.7

Other features worthy of note are the preference for word-initial position of /w/ /y/ (about 70% of occurrences of each) k and t̥ (about 50% each), and the preference for word-final position of n and nʏ (about 40% each). Also worth noting is the tendency for the second vowel of a word to be the same as the first. 43% of words whose first vowel is /u/ have /u/ as the second vowel while for two /i/s the figure is 37%; compare the overall percentage of vowels, 29 for /u/ and 21 for /i/. The figure for two /a/s is not so striking.

Some minor differences in frequencies could be expected in textual material. Initial /ŋ/ and /y/ would be more common because of their occurrence in pronouns. All bound morphemes end in a vowel or /r/, so the frequency of other consonants

word-finally would be lower than in the lexicon. Words would, of course, be longer on average.

2.5 Notes on other Mayi communalects

Little can be said about phonological differences between Ngawun and other Mayi dialects and languages. The only difference in the phoneme inventory that can be suggested is that Mayi-Thakurti (and perhaps Wunumara, which is very closely related) has a phoneme /ly/. This is suggested by the words /tYipilYa/ 'duck' (Tindale 1938a), /malYiri/ (?) 'possum string armlet' (Roth 1910a:43) and the place name phonemicised /kalYiya/ (Roth 1897:134).

A few phonotactic differences seem to be fairly well established. Mayi-Kutuna has word-final /y/, as a verbal termination and also in kakay 'bad', and apical stops, /t/ in /lirapatYit/ 'lip' (although the correct form may be /lirapatYi/) and /t/ in /munkut/ 'anus', also word-initial /t/, as in /tipari/ 'eye' and also may have a cluster /rw/ (Tindale's (1938a) /miṯirwaRi/ 'black goanna'). Mayi-Thakurti, Wunumara and Mayi-Kulan may have a cluster /rɬ/ (e.g. in kurɬu 'two' in the first two). Mayi-Kulan and Mayi-Yapi have /nŋ/ in /nYinŋin/ 'neck'. Mayi-Kulan has /lk/ in /taḷkutu/ 'ashes'. Mayi-Thakurti may have /lɬ/ (in /waḷta/ 'tail') and possibly /lt/ or even /lɬt/ (in NuL(T)u 'skin' and WuLTu 'river'). Cherry O'Keefe occasionally (and inconsistently) added final /ny/ to Mayi-Kulan words, changing a preceding /a/ to /u/. Thus /yuntu/ 'you' became /yuntunY/ and the bound morphemes /puna/ 'proprietary' and /muntu/ 'ablative' became /pununY/ and /muntunY/. Note also the demonstrative pronoun pairs /kula kulunY/ in Mayi-Kulan and /kutu kutunY/ in Mayi-Kutuna. Also, the alternative form "punu" given for the proprietary in Mayi-Yapi may perhaps be /pununY/.

In general initial laterals are more common in other communalects (perhaps excluding Mayi-Kutuna) than in Ngawun, and there is a correspondence between Ngawun initial /y/ and Mayi-Kulan initial /l/ in two words, /yarku/ - /larku/ 'coolamon' and /yawa/ - /lawa/ 'to throw' (/lawa/ also in Mayi-Yapi).

There is no other evidence of regular sound correspondences between unlike sounds, and in most cases where two corresponding words in different communalects seem to differ only minimally the explanation is probably error on the part of a collector. One group of words where this does not seem plausible is found in Oates and Healey's (1960) Mayi-Kulan list, where the usual /panYa/ 'woman' seems to be /panYatY/, /panYtYil/ 'man' /panYtYatY/, /kapul/ 'blood' /kaputY/, /timul/ 'bone' /timutY/, /tYikal/ 'wallaby' /tYikatY/ and /pariya/ 'budgerigar or white cockatoo' /pariyat/. Note also Bates' "yambitch" 'dog' instead of /yampi/ for Mayi-Yapi.

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