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# Series A Volume 5

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#### PREFACE

These Work Papers are being produced in two series by the Summer Institute of Linguistics, Australian Aborigines Branch, Inc. in order to make results of SIL research in Australia more widely available. Series A includes technical papers on linguistic or anthropological analysis and description, or on literacy research. Series B contains material suitable for a broader audience, including the lay audience for which it is often designed, such as language learning lessons and dictionaries.

Both series include both reports on current research and on past research projects. Some papers by other than SIL members are included, although most are by SIL field workers. The majority of material concerns linguistic matters, although related fields such as anthropology and education are also included.

Because of the preliminary nature of most of the material to appear in the Work Papers, these volumes are being circulated on a limited basis. It is hoped that their contents will prove of interest to those concerned with linguistics in Australia, and that comment on their contents will be forthcoming from the readers. Papers should not be reproduced without the authors' consent, nor cited without due reference to their preliminary status.

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## INTRODUCTION TO SERIES A VOLUME 5

The papers in this volume deal with the phonologies of Nunggubuyu, Burarra, Kala Lagaw Ya, Murinbata, and some aspects of the higher level phonology of Walmatjari. Two papers dealing with orthographic decisions are also included.

Five of the papers in this volume are by SIL authors: Glasgow, Kennedy, Street and Hudson, with the Street paper co-authored by Gregory Panpawa Mollinjin. Their papers are herein being made available in preliminary form, and reader's comments would be appreciated by the authors. These papers normally will be further revised and published more widely elsewhere. The other three papers are by non-SIL authors: M. Hore (Church Missionary Society), J. Stokes (Church Missionary Society), and G. McKay (Northern Territory Education Department). With the exception of Graham McKay, the non-SIL authors have had some interaction with SIL personnel in the writing of their papers – usually of a consulting and/or editing nature. For this reason we are pleased to include their papers in this volume.

Michael Hore's paper primarily deals with rules for stress placement and the interaction of stress and length in Nunggubuyu. He is able to show that stress placement is predictable, given the distribution of long syllables. Interestingly, Michael's analysis hangs partly on the analytical decision that Nunggubuyu has a pre-nasalised series of stops - and he shows how this is motivated by the stress analysis. There is a further point of interest to those concerned with the notion of 'simplicity' as a grammar evaluation criterion; Michael shows that the present synchronic facts motivate two rules at quite different points in the cycle; the two rules are very similar, yet neither can be eliminated.

Kathy Glasgow presents the phonemes and morphophonemics of Burarra. Kathy has given considerable attention over the years to the possibility of a geminate versus non-geminate contrast in the stop series, as well as to other issues such as the interpretation of retroflexed sounds. This paper is the fruit of that research. Kathy's analysis places the Burarra orthography within the main stream of Australian phonologies; she rejects the 'geminate hypothesis' (mainly on the basis of mother-tongue speaker's reactions) and expounds a retroflexed order of sounds. In addition, she has divided what previously was analysed as a flapped apico-alveolar stop into a flapped apico-alveolar rhotic, and an apico-alveolar voiced stop. Interestingly, with these changes the segmental inventory is now the same as that in neighbouring languages.

Kathy's second paper deals with the proposed orthography for Burarra and the factors which influenced the decisions made. It is refreshing to see that Aboriginal people were consulted and felt free to take initiative in expressing their feelings concerning their own orthography. It is SIL policy to encourage and co-operate with the initiatives of Aboriginal people.

Rod Kennedy presents an account of Kala Lagaw Ya phonology (Mabuiag dialect, Torres Strait). Kala Lagaw Ya is a language of Australian descent, but heavily influenced by its proximity to the languages of Papua New Guinea.

Judy Stokes' paper on Anindilyakwa phonology is the fruit of many years of wrestling with what must be one of the most difficult of Australian phonologies. Judy gives a good, well documented account of the segmental phonology of the language. She alludes to the difficulties of finding a simple and transparent analysis of the high vowels. This is an area of interest, for it would appear that Anindilyakwa shares some features of the phonologies of Central Australian languages - which have labialised peripheral stops and a tendency to loss of contrast in the high vowels. Velma Leeding has addressed herself to the problem of the high vowels and labialised stops in Anindilyakwa, and is currently preparing a manuscript to be published elsewhere, dealing with these and other problems. Certainly, from a purely linguistic standpoint, Anindilyakwa is a most interesting language, and Judy's high quality work is a welcome addition to the literature on it.

The phonology paper by Chester Street and Gregory Panpawa Mollinjin is a re-written version of a paper on Murinbata which Chester wrote shortly after beginning study of the language. The morphophonemic changes dealt with would be of interest to anyone concerned with the idea of 'consonantal strength' in Natural generative phonology theory. Also included is a short dictionary of approximately 650 words.

Joyce Hudson's paper is a short account of some features of higher level phonology in Walmatjari. It deals with variations of intonational contours, and the grammatico-semantic parameters which correlate with such variations. The paper is partly based on text data which is included in some unpublished manuscripts on paragraph structure which Joyce wrote several years ago. The references to these texts have been left in the present paper, in the eventuality that the paragraph analysis will be published at a later date.

Finally, Graham McKay's paper gives the results of some testing of the acceptability of the digraph 'ny' as used in many Australian orthographies.

> Bruce Waters Volume Editor

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### BURARRA ORTHOGRAPHY

Kathleen Glasgow

#### INTRODUCTION

The Burarra orthography presented in this paper has received preliminary approval by the Northern Territory Department of Education for use in bilingual education.

There are approximately 600 Burarra speakers living in their homelands in the Blyth and Cadell River region, and also at Maningrida township.

The Burarra orthography described here received approval for SIL publications in 1974, and has been in use since then. Any subsequent spelling changes have not been a matter of orthography, but have been clarifications with regard to transitional and neutralised vowels.

There are 14 publications of scripture and Aboriginal-authored stories in the Burarra orthography. A set of literacy materials, consisting of approximately 60 units, has been prepared in chart form. The first 20 of these units have been recorded on cassettes as an aid to Aboriginal teachers. Two further publications are now with the printer.

## 1. SYMBOLISATION OF PHONEMES

The orthography symbols for Burarra consonants are represented in Table 1.

TABLE 1
Orthography Symbols for Burarra Consonants

	Bila	bial	Apic Alve	:o- :olar	Apico-Post- Alveolar		Lamino- Palatal		Dorso- Velar	
Voiceless Stops	/p/	р	/+/	†	/ <u>†</u> /	rt	 /†j/	ch	/k/	k
Voiced Stops	/b/	b	/d/	d	/d/	rd	/dj/	j	/g/	q
Nasals	/m/	m	/n/	n	/ņ/	rn	/ñ/	ny	-	ng
Laterals			/1/	1	/!/	rl		•	·	3
Rhotics			/ř/	rr	/r/	r				
Glides	/w/	W			•		/y/	У		

The orthography symbols for Burarra vowels are represented in Table 2.

TABLE 2
Orthography Symbols for Burarra Vowels

	Front	Central	Back
High	/i/ i		/u/ u
Low	/e/ e	/a/ a	/o/ o

#### 2. GRAMMATICAL USE OF HYPHEN

A hyphen is used to separate the prefix or prefix complex, which expresses such things as person/number, direction, noun class, manner and accompaniment, from the stem.

awurriny-bona 'they 2 fem. went'

nyina-boy 'you come toward'

an-molamola 'good one (of an- class nouns)'

burr-gorlk 'with belongings' (manner)

ana-galamang 'with an axe' (accompaniment prefix expressing instrument)

guna-wangarra 'concerning spirit of dead' (lit. 'it toward (us) spirit of dead')

This use of hyphen helps Burarra readers by breaking up the long words. That it is a grammatical division places it on a higher level of consciousness than stress, and it is being fairly successfully used by Burarras when writing.

Because primary stress is grammatically predictable on the first syllable of the first root in the stem, the hyphen most often occurs immediately preceding the primary stressed syllable. This is the case with the examples above. Where this is not so, a derivational prefix occurs as part of the stem. The derivational prefixes are few and easily recognised. They consist of the accompaniment prefix forms, ana-. ji-, mu-, gu-, and the derivational prefix bu-/wu-. To illustrate this, stress is marked in the following examples. Burarra speakers do not require this marking in the orthography, however.

Note that in the first example below, hyphen still occurs immediately preceding the stressed syllable. There are no examples of the accompaniment prefix ana- following a prefix and therefore preceded by hyphen. This is due to the restricted occurrence of V syllables, and elision which has probably taken place.

ana-'gurlpun 'hiccoughs'
an-ji'rrerda 'moon' (lit. 'it with ?')
an-mu'jaruk 'messenger' (lit. 'he with story')
an-gu'jarrcha 'knife' (lit. 'one for carving with')
a-gu'rlolamiya 'it is rotten' (lit. 'it with pus')
gun-bu'rral 'true one'
wu'leba 'finish it up'

#### SPELLING CONVENTIONS

Where homorganic apico-post-alveolar nasal plus stop occur, /rnrd/, the spelling is simplified to rnd. Because of apical distribution and assimilation to point of articulation, this is never ambiguous but rather, in reading from left to right, the 'modifying element' (McKay 1979) carries through the nasal-stop cluster.

Where /rd/, /rl/ and /rn/ occur word or stem initial, the Burarras prefer to use the simpler symbols d, I and n. This causes no problem of inconsistency, for the mutual exclusive distribution of the apico-alveolar and apico-post-alveolar stops, laterals and nasals in these positions, in effect, renders them neutralised.

Where /n/ or /rd/ occur followed by /g/, they are separated by a full stop word medial, as in ran.gu 'moon', and marn.gi 'understanding', to prevent their being read as the digraph ng /ŋ/. This convention has proven to be immediately effective without being taught. There are only a few Burarra words where these clusters occur.

Reduplicated stems are written without a break except where they are phonologically complex, that is, where more than two syllables are reduplicated or where the final syllable reduplicated is a CVCC syllable. Such phonologically complex reduplications are written as two words, except those which are inflected and must remain as one word. The following are examples of reduplicated words.

wakwak 'crow'
lipalipa 'canoe'
ngulamngulam 'morning'
ngardapa ngardapa alone alone 'separately'
ngarndarrk ngarndarrk argument 'argument back and forth'

'Willie wag tail bird'

(onomatopoeic name)

In words where there is fluctuation between full phonemes, either spelling is equally acceptable; perhaps a preference will stabilise in the future.

gu-jibirrichibirrich

Morphophonemic changes are symbolised except for those involving free fluctuation or optional elision of vowels. (See in this volume 'Burarra Phonemes' sections 4.2 (iii) and 4.3 (ii) and (vi).)

# 4. NEIGHBOURING ORTHOGRAPHIES AND SOCIAL INTERACTION

A comparison of the consonant symbols of other languages in the area is shown in Table 3. The Gupapuynu interdental series, which is symbolised dh, th and nh, is not included in Table 3, as the other languages being compared do not have interdental series. The vowel symbols are the same for all the languages compared here except that Djinang, due to the predictability of the allophones, does not require the symbols e and o, and Gupapuynu symbolises /a/ and /a:/ as a and a respectively.

Burarra is bordered by Djinang (Dji) and Gupapuyŋu (G) on the east, Nakkara (N) on the north, and Djeebbana (Djee), also known as Gunavidji, on the west. Further to the west and north are Kunwinjku (K) and Maung (M) which are also included here, as they were important in Djeebbana orthography decisions.

All of these language groups have at times been represented at Maningrida during the past 20 years. However, the groups consistently represented have been Djeebbana, who are the traditional land owners, Nakkara, Djinang and Burarra. The Burarra have interacted with all, to a greater or lesser extent, in the performance of rituals and in intermarriage. Interaction with both the Maung and the Djeebbana has been much less.

Interaction with the Kunwinjku for the performance of rituals has sometimes resulted in protracted visits, and there seems to be more Burarra-Kunwinjku intermarriage, specifically amongst the Gun-nartpa dialect of Burarra people who are geographically closer to the Kunwinjku.

There has been a good deal of Burarra-Gupapuynu interaction in the past, particularly by the Gun-narda dialect of Burarra who are geographically closer. There is intermarriage and some vocabularly borrowing in evidence.

Interaction with the Nakkara has been observed in the performance of rituals, including circumcision, indicating some closer ties. One Nakkara man has attended Burarra adult literacy classes. Bronwyn Eather reports one Nakkara woman as being insistent that she wanted the Nakkara orthography to help her to read Burarra also (Eather 1979, C-4). A Nakkara young man recently purchased a copy of all the Burarra Scripture publications and accompanying cassettes available.

There has also been a good deal of interaction between the Burarra and the Djinang. This is being evidenced today by the indigenous exchange of Christian ministry which is taking place. Three Djinang young women have also attended Burarra adult literacy classes.

TABLE 3
Burarra and Neighbouring Orthographies

					J. +P		-
	Lang	Stops	Fric	Nasals	Laterals	Rhotics	Glides
	В	b/p		m			W
	Dji	b/p		m			W
Dilakial	G	b/p		m			W
Bilabial	N Dian	b/bb		m			W
	Djee M	b/bb		m			W
	K	p b∕bb		m m			W
							W
	В	d/†		n	1	rr	
	Dji	d/t		n	l	rr	
0 - :	G	d/†		n	l	rr	
Apico-	N Dia-	d/dd	•	n	ŀ	rr	
Alveolar	Djee	d/dd		n	l	rr	
	M K	† d/dd		n		rr	
	<u> </u>	d/dd ——————————————————————————————————		n	<u></u>	rr	
	В	rd/rt		rn	rl	r	
	Dji	<u>d/†</u>		<u>n</u>	1	r	
Apico-	G	$\overline{d}/\overline{t}$		<u>n</u>	<u> </u>  -  r	r	
Post-	N	rd/rdd		rn	rl	r	
Alvolar	Djee	rd/rdd		rn	rl	r	
	М	rt .		rn	rl	r/rd*	
	K	rd/rdd		rn	rl	r	
	В	j/ch		ny		<u>-</u>	У
	Dji	dj/tj		ný			У
	G	dj/†j		ný			ý
Lamino-	Ν	dj/ddj		nj			ý
Palatal	Djee	dj/ddj		nj			ý
	M	j		yn			ý
	K	dj∕ddj ————		nj			ý
	В	g/k		ng			
	Dji	g/k		ng			
	G	g/k		ŋ			
Dorso-	N	k/kk		ng			
Velar	Djee	k/kk		ng			
	М	k	g	ng			
	K	k/kk	-	ng			
Glottal	K	h	· · · · · · · · · · · · · · · · · · ·				
<del></del> .							

<sup>\*</sup> Maung rd represents a rare 'apicodomal flap' (cf. McKay 1979, B-7)

### 5. RATIONALE

In earlier literacy work with a tentative orthography expressing the single stop versus geminate cluster interpretation, one man became a fairly prolific writer, and although he and others could read this orthography, he tended not to differentiate between single stops and geminate clusters in his writing.

In the tentative orthography mentioned above, the voiceless series of symbols was used and we received a negative reaction from a young school boy to this. He overheard some instruction and said, 'That's not p<sup>h</sup>ala, it's bala!' In this I agree with the choice of the voiced rather than voiceless symbols used word initially in the Djeebbana and Nakkara orthographies.

However, the Burarra orthography which received SIL approval in 1974, and has been in use since then, is based on the voiced/voiceless interpretation of the stops. At the time this change was made, those who knew how to read Burarra were naturally reading the tentative orthography. If their understanding of the contrast, reinforced by the orthography, had meant a strong feeling for single stop versus geminate cluster, they conceivably would have resisted the change to a voiced/voiceless based orthography. But this was not the case. One Burarra young man, literate in both English and Burarra and a teacher in Burarra adult literacy, felt that both symbolisations were equally as good. Those who read the first orthography have all adapted easily to the change.

The choice of the orthography which expresses the voiced/voiceless interpretation was made in order to achieve as close an equivalence to English as reasonable, and thereby facilitate the reading of Burarra publications by those learning to read English at school. The same equivalence should also facilitate Burarra to English literacy transition.

An additional advantage in the use of the voiced/voiceless stop symbols is that the words are shorter.

For the same reason of closest English equivalence, j and ch were chosen to symbolise the lamino-palatal stops rather dj and tj. The j and ch are also more contrastive in shape to the symbols being used for the apico-alveolar and apico-post-alveolar stops, which employ d and t.

The Burarra lamino-palatal nasal is symbolised ny. To symbolise it with nj would cause ambiguity with the cluster n plus j. Nevertheless, the yn, used in Maung, has advantages in that the

'modifying element' (McKay 1969) occurs digraph initial, which should aid readers in distinguishing it from the other nasals employing n, and as well, yn avoids confusion with word final ny in English.

#### 6. TESTING AND USAGE

The Burarra orthography was tested with a group of 5 or 6 Kormilda students, Burarras who had never read their own language. A little booklet had been prepared for them, giving a one time mention of the majority of sounds which have a close English equivalent represented by the same symbol, and introducing more carefully the 5 vowels and the consonants rr, ng and ny. The group was able to attack and recognise words well within an hour.

In developing this orthography, the Burarras have been our teachers, reacting against our earlier misinterpretation of the apical series, and aiding us in the search for the best way to represent the blur of vowel neutralisation and morpho-phonemic changes which occur in post-stress syllables. In 1975 on two occasions we met with a panel of Burarra literates at their initiative, to finalise these vowel spellings. The decisions were theirs.

The Burarra orthography has proven very satisfactory. On two or three occasions we have held a crash course for up to ten Burarras literate in English, to help them learn to read and write Burarra. Some of these were preparing to go to SAL and subsequently worked and produced material there.

The Burarra literacy materials have been used with children in the Jimarda outstation school, with satisfactory results as far as it went and with no orthography problems. The Burarra teacher was learning to read Burarra himself, as he taught from the materials consisting of chart books and cassettes. This program was interrupted when the teacher went to SAL for training.

One serious adult literacy class of about 5 men has been held using the Burarra orthography. Good progress was being made. The pupils were reading controlled material, although they had only progressed to about Unit 9 before logistic problems - return to homeland, death, etc. - disbanded the class.

A final encouraging evidence in favour of the Burarra orthography is that on several occasions Burarras who have been to some degree literate in English have told us that they now read Burarra and that a relative has taught them.

## FOOTNOTES

 The apico-post-alveolar series was originally interpreted as a cluster of /r/ plus apico-alveolar (Glasgow 1967).

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