

# WORK PAPERS OF SIL-AAB

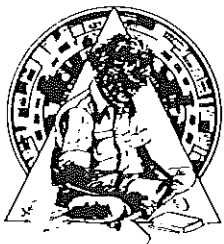
## Series A Volume 5

**AUSTRALIAN PHONOLOGIES: COLLECTED PAPERS**

**Editor: Bruce Waters**

SUMMER INSTITUTE OF LINGUISTICS  
AUSTRALIAN ABORIGINES BRANCH  
DARWIN  
DECEMBER 1981

SUMMER INSTITUTE OF LINGUISTICS  
AUSTRALIAN ABORIGINES BRANCH  
DARWIN  
N.T. 5788 AUSTRALIA



© SUMMER INSTITUTE OF LINGUISTICS 1981

ISBN 0 86892 226 9

## 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.

Views expressed by the authors are not necessarily those of SIL.

Research resulting in this volume was partially funded by grants from the Department of Aboriginal Affairs.

To order individual volumes of the Work Papers, or to place a standing order for either series, write:

Bookseller  
SIL  
PO Berrimah  
Darwin NT 5788  
Australia

S. K. Hargrave  
Series Editor



## 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

## TABLE OF CONTENTS

	Page
Preface	iii
Introduction to Series A Volume 5	v
SYLLABLE LENGTH AND STRESS IN NUNGGUBUYU by Michael Hore	1
1. Introduction	1
1.1 Background and Acknowledgements	1
1.2 Abbreviations	2
1.3 Nunggubuyu Phonemes	3
1.4 Motivation	5
1.5 Relationship to the Overall Phonological System	7
2. Stress Assignment	11
2.1 Introduction	11
2.2 Stress Groups	13
2.3 Introduction to the Rules	17
2.4 Discussion of the Rules	20
2.4.1 Preliminaries	20
2.4.2 Segmentation	21
2.4.3 Stress Assignment	26
2.4.4 Five-Syllable Adjustment	31
2.4.5 Primary Stress	36
2.4.6 Rules Related to Primary Stress	37
2.5 Rule Summary	43
2.6 Rule Ordering	45
2.7 Ordering with Respect to Other Phonological Rules	47
3. Related Topics	50
3.1 # and + Boundaries	50
3.2 Unstressed Words	55
3.3 Prenasalised Stops	56
Footnotes	60
References	62

	Page
BURARRA PHONEMES by Kathleen Glasgow	63
0. Introduction	63
1. Stress	64
2. The Phonemes	65
2.1 Consonants	66
2.1.1 Constraints	66
2.1.2 Stops	66
2.1.3 Nasals	69
2.1.4 Laterals, Rhotics and Glides	70
2.2 Vowels	71
2.2.1 Neutralisation	71
2.2.2 Fluctuation	71
2.2.3 Interpretation of Glides	72
2.2.4 Stressed Vowel Contrasts	73
2.2.5 Unstressed Vowel Contrasts	73
2.2.6 Vowel Allophones	74
3. Distribution	76
3.1 Distribution of Syllables	76
3.2 Distribution of Phonemes	78
3.2.1 In the Word	78
3.2.2 In the Syllable	79
3.2.3 Across Syllable Boundaries	81
4. Morphophonemics	84
4.1 At All Morpheme Boundaries	84
4.2 At Prefix-Stem Juncture	84
4.3 At Stem-Suffix Juncture	86
Footnotes	89
BURARRA ORTHOGRAPHY by Kathleen Glasgow	91
0. Introduction	91
1. Symbolisation of Phonemes	92
2. Grammatical Use of Hyphen	93

	Page
3. Spelling Conventions	94
4. Neighbouring Orthographies and Social Interaction	95
5. Rationale	97
6. Testing and Usage	98
Footnotes	99
References	100
Other Reference Works on Burarra	101
PHONOLOGY OF KALA LAGAW YA IN SAIBAI DIALECT by R. J. Kennedy	103
0. Introduction	103
1. Phonemes of KLY	104
2. Interpretation	
2.1 Interpretation of Ambivalent Consonant Sounds	105
2.2 Interpretation of Semi-Vowels	105
2.3 Vowel Length	109
3. Consonants	109
3.1 Consonant Contrasts	109
3.2 Consonant Variation	112
3.2.1 Process Statements	112
3.2.2 Stops	113
3.2.3 Fricatives	116
3.2.4 Nasals	116
3.2.5 Lateral	117
3.2.6 Rhotic	117
3.2.7 Semi-Vowels	118
4. Vowels	118
4.1 Vowel Contrast	118
4.2 Vowel Variation	120
5. Distribution of Phonemes	123
5.1 Distribution of Consonants in the Phonological Word	123
5.2 Distribution of Vowels in the Phonological Word	124
6. Syllables	125

	Page
7. Distribution of Syllables into Words	125
8. Stress and Intonation	127
8.1 Phonological Word	127
8.2 Phonological Phrase	128
9. Morphophonemics	131
9.1 Epenthesis	131
9.2 Metathesis	132
9.3 Assimilation	132
10. Text	133
References	135
Acknowledgements	137

## ANINDILYAKWA PHONOLOGY FROM PHONEME TO SYLLABLE

by Judith Stokes

	139
0. Introduction	139
1. Description of Phonemes	140
1.1 Consonantal Phonemes	140
1.1.1 Contrasts Between Consonants Having Similar Manner of Articulation	140
1.1.2 Contrasts Between Phonetically Similar Consonantal Segments	144
1.1.3 Phonemic Variation	146
1.1.4 Allophonic Variation	148
1.2 Vowel Phonemes	149
1.2.1 Vowel Contrasts	149
1.2.2 Vowel Allophones	153
1.2.3 Epenthetic Vowels	157
2. Distribution	158
2.1 Syllable Types	158
2.2 Phoneme Distribution	158
2.2.1 Consonants	158
2.2.2 Vowels	165
3. Variation	168

	Page
3.1 Syllable Reduction	168
3.1.1 Loss of Vowel Only	168
3.1.2 Loss of Vowel + Consonant	169
3.1.3 Loss of Consonant + Vowel	169
3.2 Phonemic Variation	170
3.2.1 Consonant Variation	170
3.2.2 Vowel Variation	174
3.3 Consonant/Vowel Sequence Variation	175
3.4 Syllable Sequence Variation	175
4. Orthography	175
Footnotes	178
Bibliography	181
THE PHONOLOGY OF MURINBATA by Chester S. Street and Gregory Panpawa Mollinjin	183
0. Introduction	183
1. The Phoneme	184
1.1 Consonants	185
1.1.1 Consonant Contrasts	185
1.1.2 Consonant Variations	195
1.2 Vowels	197
1.2.1 Vowel Contrasts	197
1.2.2 Vowel Variations	199
2. Interpretation	200
2.1 High Vowels	200
2.2 Semi-Vowels	201
2.3 Vowel Glides	201
2.4 Prenasalised Stops	202
3. Distribution	
3.1 Distribution of Syllables Into the Word	203
3.2 Distribution of Phonemes Into the Syllable	203
3.2.1 Vowels	203

	Page
3.2.2 Consonants	203
3.3 Distribution of Consonant Phonemes Into Clusters	204
4. Stress	206
5. Morphophonemics	209
6. Orthography	217
Abbreviations	220
Bibliography	220
Appendix - Murinbata to English Word List	221

## SOME FEATURES OF HIGH LEVEL PHONOLOGY IN WALMATJARI

by Joyce Hudson	245
0. Introduction	245
1. Phonological Clause	245
1.1 Final	245
1.2 Non-Final	247
1.3 Interrogative	247
1.4 Continuous	248
1.5 Monotone	248
1.6 Hesitation	249
2. Phonological Sentence	249
2.1 Simple	249
2.2 Sequence	250
2.3 Duration	252
3. Phonological Paragraph	252
4. Discourse Level Phonology	254
Footnotes	256
Abbreviations	257

## THE USE OF THE SYMBOL *ny* IN AUSTRALIAN ABORIGINAL ORTHOGRAPHIES

by G. R. McKay	259
1. Survey	259
2. Discussion	261

	Page
3. Conclusion	264
Acknowledgements	265
References	266
Appendix A	267
Appendix B	269



## SOME FEATURES OF HIGH LEVEL PHONOLOGY IN WALMATJARI

Joyce Hudson

### 0. INTRODUCTION

This analysis was written soon after the grammatical analysis of sentence and paragraph was completed (unpublished manuscript 'Walmatjari Paragraph Types'). Grammatical sentence and paragraph structures referred to here are described in that manuscript. Intonation is of some importance on higher levels than clause level. This caused me to look more closely at the intonation of the text materials used for grammatical paragraph analysis. This paper is the presentation of what I found.<sup>1</sup>

Most data presented here is from text material recorded on tape. Examples taken from text are labelled by the code name.

The grammar and phonological hierarchy are not always in phase; that is, there is not a one to one correspondence of grammatical units and phonological units. The two hierarchies will be distinguished throughout this paper by the use of 'P' for phonological hierarchy and 'G' for grammatical hierarchy.

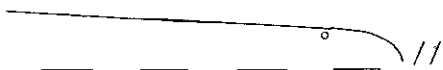
### 1. PHONOLOGICAL CLAUSE

There are six contours or phonological clause types described in this paper: Final, Non-final, Interrogative, Continuous, Monotone and Hesitation.

#### 1.1 FINAL

This contour has two sub-types. The P clause is not always in phase

with the G clause in that there may be several P clauses to one G clause. (See section 2, Simple Sentence, for more detail.)

a. 

This contour is the most frequent in text material. There is a slight lowering of pitch over the whole contour with a down glide over the last G word. A pause follows the contour usually. Clause stress (marked as °) occurs on the first syllable of the last G word in the P clause.

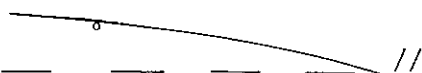
Examples:

ngajirta mankurla °pinarri  
NEG you:it knowing //

'You don't know about it.'

kunungurla °kujarti  
maybe like:this //

'Maybe it is like this.'

b. 

The pitch of this second sub-type of the Final contour may begin slightly higher than that of the one already described. The pitch lowers over the whole contour. Clause stress occurs on the first syllable of the first word of the G clause.

Examples:

°ngajungu marna kuyi kangku  
I I meat will:carry //

'I will carry the meat.'

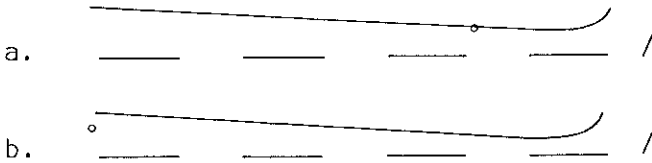
°yanku marna  
will:go I //

'I will go.'

So far I have not been able to establish the reason for choice of one of these contours in preference to the other. Both seem to be able to occur on the same grammatical clause. Possibly the determining factor is emphasis of a tagmeme of the grammatical clause. The emphasis is indicated by clause stress. The verbal auxiliary never takes clause stress; so in a G clause consisting only of a verb followed by the auxiliary, the first syllable of the verb receives clause stress resulting in sub-type b.

1.2 NON-FINAL

As Final contour has two sub-types, so does Non-final. Clause stress indicating emphasis of a tagmeme is again the only reason so far observed for the alternative contour being used.



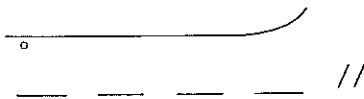
These contours are the same as the Final contour sub-types a and b respectively except for the rise in pitch on the last word in contrast to the down glide of Final. Several Non-final P clauses may occur to one G clause showing that grammar and phonology are out of phase here also. (See section 2, Simple Sentence.)

Examples:

yarntarni marnalu yanani °pulumukarti / 'Again we used  
 again we were:going to:food to go for food.'  
 AG1

°marnkal marnalurlanyanta yani kurlila /  
 spinifex we:him went south  
 'We walked south to him walking on the spinifex.'  
 SW

1.3 INTERROGATIVE

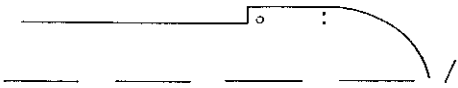


Clause stress occurs on the first syllable of the G clause. The pitch of the whole contour is higher than that of the Final and Non-final contours. There is a further rise of pitch at the end. There are four ways to signal a question in Walmatjari: use of a question word, 'what', 'when', 'where', 'how'; use of the interrogative mood in the verb phrase; addition of interrogative particle *payi* to the G or P sentence (this also anticipates an answer in the affirmative); and the use of the Interrogative intonation contour with any G indicative clause. The last situation is the only time that this contour is obligatory. In all the other cases it is optional.

Example of Interrogative contour on a G indicative clause.

	
°pirriyanku marna //	'I will come' becomes
will:come I	'Can I come?'

1.4 CONTINUOUS

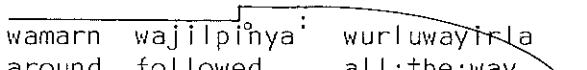


The feature of this contour is the length, rise of pitch and clause stress which all occur on the same syllable. It is usually the last syllable of the verb which is G clause final but this is not obligatorily so. A down glide (no pause) may follow if another word is added to the G clause but this is not the usual thing. Also *wali* 'finish' may be added to indicate that the long action has ceased.

N.B. This is the only place where clause stress has been found on the verbal auxiliary.

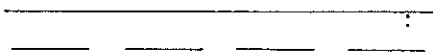
Examples:

	
nguniny. °pa:	'It stays there for a
stays it /	long time.' AG7

	
wamarn wajilpinya: wurluwayirra	'He followed them around
around followed all:the:way /	all the way.' TT

	
jurumahu: wali	'We waited for a long time
wait finish /	then stopped (went on with something else).' AG1

1.5 MONOTONE



There is no clause stress on the monotone contour. Pitch is higher than normal speech and level, with word stress emphasised thus making a rhythm which gives it a sing-song quality. The last vowel of the clause is often lengthened similarly to the continuous contour, though there is no pitch rise on the vowel in the monotone contour. In examples so far this P clause has always been in phase with the G clause. It usually is not found in isolation but a series of monotone

contours occur together so it is rather a higher level feature. (See section 3 for more detail.)

Example:

---

kamparnurla    tingkitingkilanani    marnalu  
 after:cooking    getting:out                    we:it  
 'After cooking it we get it from the fire with a stick.'    AG7

### 1.6 HESITATION

The glottal stop does not occur in Walmatjari in any other place. It is used to interrupt any P clause and is always followed by a pause. It is a means of hesitation before other G tagmemes are added or when the speaker wants to correct himself.

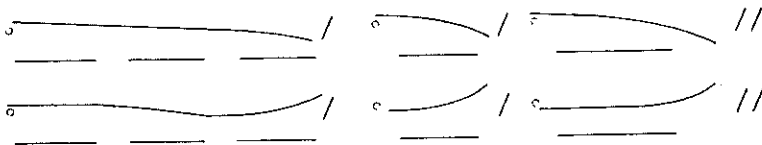
---

°pujurni manya / °pujungurni palu nguyinguyimalamala jutngurnini/  
 all    he:them    all            they turn:around                    finish  
 'He .. to all of them / All of the cars turn around here.'

## 2. PHONOLOGICAL SENTENCE

P clauses are joined to form larger units, P sentences. Pauses between contours are optional in all sentence types. Very often in Walmatjari a sentence consists of one G clause and one corresponding P clause.

### 2.1 SIMPLE



When a number of Final contours occur over a single G clause they form a *Simple P Sentence*. The same applies when a number of Non-final contours occur on a single G clause.

The additional P clauses are usually shorter, often occurring with one P clause on each G word. This sentence type may occur any time

the speaker is nervous or hesitant but its most common use is when additional information is being added. A feature of the G phrase is that descriptives are often added at the end of the G clause and are separated from the noun they are describing. When several descriptives are added to a single phrase, this *Simple P Sentence* usually occurs.

Examples:

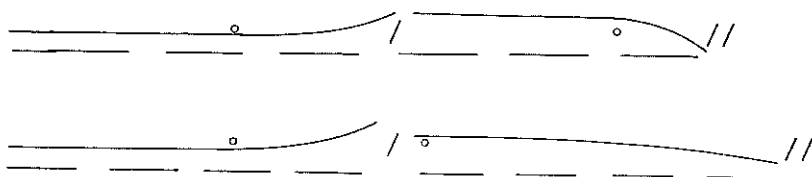
°lanany~~pa~~ palu / °jirnal~~jartir~~lu / °kamangkir~~rjartir~~lu /  
 spear:then they      spear:with      bamboo:with  
 °waya~~jartir~~lu //  
 wire:with

'Then they spear it with a spear made with bamboo and wire.' JF

nganapirtikanani °marnalu / °manangu / °munyinga / °wartunga //  
 turn:over      we      stick:with sand:in      fire:in

'We used to turn the food over in the hot sand with a stick.' AG7

## 2.2 SEQUENCE



This is made up of the combination of Non-final clause followed by a Final clause. It optionally occurs on the following G structures: Temporal Paragraph, Contrafact Condition Paragraph, Result Sentence, Reason Sentence, Contrast Paragraph, Negative Amplification Sentence, Amplification Paragraph.

Examples:

### Temporal Paragraph

°yanka marna julalany jakarrajinyangu / °papaji /  
 when I call Jakarta brother  
 wali nyana ngajukuramiparni papaji //  
 alright that my:only brother

'When I call Jakarta my brother, then he is my close brother.' OC

## Reason Paragraph

<sup>o</sup>marnkul marnalurlanyanta yani kurlila  
spinifex we:him went south

<sup>o</sup>jinamanta ngarnapanya mutikartu <sup>o</sup>miljarrartu //  
track it:us car with:two:eyes

'We walked along south on the spinifex (to avoid footprints because) the car might track us with its two eyes (headlights).'

SW

## Contrast Paragraph

tangkiyi pa- / kanarlany <sup>o</sup>purnkuji / <sup>o</sup>kanarlanykanarlany /  
donkey it some tame others

<sup>o</sup>rayinji- / <sup>o</sup>nguniny / 'Some donkeys are tame, others  
wild are are wild.' JD

## Negative Amplification Sentence

ngajirta <sup>o</sup>pujikatjiliny / <sup>o</sup>purika // 'It is not like a  
NEG like:cat big cat but big.' KW JD

## Amplification Paragraph

jalarra palu <sup>o</sup>kitpungany /  
now they walk:around

kitpungany palu <sup>o</sup>palkanga kuyi parrangalorra //  
walk:around they outside game hot:season

'The fish are around now, they are around in the hot season.' JF

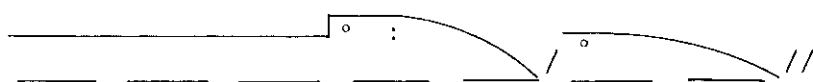
When either clause of a *P Sequence Sentence* is a Relator-Axis Clause, a pre-contour optionally occurs on the Relator. This pre-contour is even in pitch and lower than the main contour which follows without a pause.

Example:

puju <sup>o</sup>ngurrakarti marna yanku / <sup>o</sup>kangkku marnanta //  
if to:camp I will:go will:take I:you

'If I go to camp I will take you.'

## 2.3 DURATION



This occurs only on the Duration G paragraph. It consists of a Continuous contour followed by an optional pause and a Final contour. The down glide at the end of the Continuous contour does not always occur but if it does it is always on the connective *kitangarni* 'until' or *wali* 'finish'.

Examples:

yapajangka marna kurrarnani: kitangarni  
 from:child I will:sitting until

°puluru pajil yutukani miyi // 'I was living there as a  
 food they:me put food child until they put food  
 down for me.' SW

yarntarni luwarnu nyanarti pirninypal: wali //  
 again grind that wood finish

kitangarni °kalpajarrilany // 'Again we grind that wood  
 until becomes:soft until it becomes soft.' OM

## 3. PHONOLOGICAL PARAGRAPH

Contrasting P paragraph types have not been found. The feature of the P paragraph is the gradual lowering of pitch over many clauses accompanied by optional laryngealisation. This marks the end of the P paragraph and the next one begins on a high pitch again. These features occur simultaneously with the clause and sentence level phonology. Sometimes the last syllable of the P paragraph may be voiceless with a sudden decrescendo. This especially applies in narrative material when the story involves many Continuous contours and so the last few clauses are high pitched and sustained.

The P paragraph and G paragraph may be sometimes out of phase. Where they are out of phase, G paragraphs have been used to make tagmeme breaks in discourse analysis. Where these grammatical features are absent, the phonological features are used.

The last paragraph of a discourse may be lower in pitch than the rest of the discourse, though the paragraph level final intonation is still present.

Variations within the Phonological Paragraph. When Final, Non-final or Monotone contours occur in sequence they seem to be stylistic ways of linking the material within the paragraph but have not been found to be predictable enough to be set up as contrasting paragraph types. Whereas a series of Final contours is often used to relate a series of events, a series of Non-final or a series of Monotone contours are used when the events were especially fast moving and linked together, as in procedures. These last two contours are typically found in fast speech. In some ways this appears to be a discourse level feature.

Examples:

A series of Final contours

<sup>o</sup>kirrarnani marnalu / mayaru marna nyangani <sup>o</sup>ngurrpangu /  
 was:sitting we house I was:seeing ignorantly  
 'We stayed there. I saw my first house.'

martuwarra marna nyangani <sup>o</sup>purika / ngapanga marnalu <sup>o</sup>nyumukparnani /  
 river I was:seeing big water:at we bathed  
 'I saw my first big river. We bathed in the water.'

punul marnalan <sup>o</sup>tarrpartarnani / <sup>o</sup>punula wanti ngarnapangu <sup>o</sup>ngapa /  
 nose we:REFL held nose:at fall it:us water  
 'We were holding our noses. The water might get into our noses.'

<sup>o</sup>takuyanani marnalu ngapanga <sup>o</sup>nyumukparnani //  
 was entering we water:at bathing  
 'We were getting in and bathing in the water.' SW

A series of Non-final contours

<sup>o</sup>warrparnani marnalu // <sup>o</sup>warrparnani marnalu // <sup>o</sup>parntukanani marnalu //  
 shaking we shaking we spreading:out we  
 'We were shaking and shaking them (nuts). We used to spread them out.'

purangurlu<sup>o</sup>lanani //  
sun pierced

tikiyanurla marnalu walimpa puranguwarntiwarlanyja kamparnani /  
back:go we later another:day were:cooking

'The sun used to dry them out. We would come back later another day  
and cook.'

<sup>o</sup>kilyirra warlunga kamparnu wali /  
coals:at fire:at cook finish

'Cook them in the fire.' AG7

#### A series of Monotone contours

\_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_  
kamparnurla tingkitingkilanani marnalu tingkilanani pajanani  
after:cooking scrape:from:fire we scrape:from:fire were:biting

\_\_\_\_\_ : \_\_\_\_\_  
marnalu warluwarrawarra  
we hot

'After cooking them we used to scrape them from the fire with a stick.  
We used to bite them (to eat) while they were hot.'

\_\_\_\_\_ : \_\_\_\_\_  
ngarnu walmarta kaninyjurra takurn \_\_\_\_\_  
eat sand down enter 'We used to eat them at the sand  
and at the camp.'

#### 4. DISCOURSE LEVEL PHONOLOGY

Some intonational features can be best described from the point of view  
of the discourse.

**Lengthened vowel.** This is a common feature of some narratives,  
especially those involving travelling or procedures. This feature  
is described in the Continuous contour of the clause (section 1).  
Except where this contour occurs in Duration P Sentence and G  
Repetition paragraph, it is functioning on the discourse level. It  
is not linking two clauses into a single sentence for it is empha-  
sising simply the fact that that action was prolonged. In a discourse  
which tells the story of the growth of a berry, the verb *nguna* 'to stay,  
exist' occurs throughout the discourse to show the time lapse between

the various stages of growth. Most occurrences of this verb have length and I think this links the discourse as a whole, not the small sections (clauses) within it. However, this length is a feature of the G Repetition paragraph which is itself used to highlight continuous, prolonged or repeated action. Duration sentence is also used to show sustained action. Though the same feature occurs on both levels, it carries the same meaning with it.<sup>2</sup>

**Ingressive Lung Air.** Ingressive lung air is used in certain situations, possibly at a climactic point in the discourse. Some speakers seem to use this much more than others.

## FOOTNOTES

1. There are other features such as the intonation morpheme *-wu* which is used when calling from a distance which are not described here. They have not occurred in text analysed for this paper.
2. So far I have spoken of length only on the higher levels. The same thing occurs on word level and is worth mentioning briefly here. The lengthened vowel is always the second last vowel and it occurs on such words as involve time and distance. The length of time or the degree of distance involved is shown by the duration of the vowel. •

Examples:

wali:mpa marna yanku                    'A long time later I will go.'  
later    I        will:go

na:rri        marna yani                    'I went a very long way.'  
long:way    I        went

## ABBREVIATIONS

◦	Clause stress
/	short pause
//	long pause
G	grammatical hierarchy
P	phonological hierarchy
REFL	reflexive
NEG	negative
:	is used where more than one English word is needed to translate one Walmatjari word.

