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for the degree of

Master of Arts

"A description of the Waluwara Language"

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A DESCRIPTION OF THE

WAḶUWARA LANGUAGE

J. G. Breen

Submitted for the Degree of Master of Arts
in Linguistics at Monash University.

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LINGUISTIC MAP OF MT. ISA-URANDANGIE AREA

(Boundaries are very tentative and are intended to represent the situation at the time of first European settlement)

1. INTRODUCTION

1.1 The Waḷuwara and their country.

First published reference to the Waḷuwara tribe is made by W.E. Roth (1897), who speaks of "the Elookera or Walookera, a small tribe using words absolutely distinct, showing no traces of contact with neighbouring peoples" and living along the Georgina River "between Roxburgh and Caranuotta and onwards". The territory allotted to the tribe by Tindale (1940) was "Roxborough Downs north to Carandotta and Urandangie on the Georgina River; on Moonah Creek to near Rochedale, south-west to Pituri Creek; at Wolga". 'Wolga' is presumably Walgra. My own enquiries seem to confirm this location; see the map.

Tindale gives "Maule" as the name for the tribe, but this name is unknown to any of the present informants and absent from the other literature. The few early published references to the tribe use various spellings of the name Waḷuwara (the name used by the members of the tribe themselves) and Waḷukara (a name used by some of the neighbouring tribes). Capell (1963), following Tindale, uses the name "Mawula".

Neighbouring tribes were the Jalanga and the Kalkatungu on the east, the Bulaṇu on the north, the Jaroinga and the Andegerebinha on the west and the Rangwa, speakers of Wongka-jutjuru (or Wonggadjara) on the south. Of these only the Bulaṇu spoke a closely related language; this language formed a link between Waḷuwara and Wagaja, spoken further to the north and west.

The Waḷuwara tribe appears to have been made up of three sub-tribes or hordes: the Kapula at Carandotta, the Paṇkara at Rochedale and west towards Headingly, and the Waḷuwara proper at Walgra and Urandangie. However, the situation is far from clear, and other names associated with the area are Manda and Paringkarami, mentioned by Waḷuwara informants; Yunnalinka, said by Roth to have been at Carandotta; and Wonganja, mentioned by Capell (1963) as an extinct language once spoken east of Waḷuwara. The last two names are not recognised in the area at the present time.

1.2 The linguistic affinities of Waḷuwara.

O'Grady, Voegelin and Voegelin (1966) classify Waḷuwara as the only member of the Warluwaric Group of the Pama-Nyungan Family of the Australian Macro-Phylum. However, as the Bulaṇu language, whose existence was unknown until 1967,

forms a link between Waḷuwara and Wagaja (Wakayic Group), these three languages must now be regarded as members of the same group.

Apart from general structural similarities -- generally similar phoneme inventories; the use of suffixation as the chief morphological process; the absence of a passive voice; singular, dual and plural number distinctions; a fairly flexible word order -- to select some obvious examples, Waḷuwara appears to have little in common with its immediate neighbours (except, of course, Bulaṇu). Cognate items in vocabulary seem to amount to only a few percent and the broad similarities in phonology and morphology hide many big differences in the detail.

1.3 Previous work.

A word list of a little less than 100 items was published by Roth (1897). This is generally correct apart from numerous mistakes in transcription, due to the inadequacy of both the alphabet used and the hearing of the linguist. A second list was published by Dutton (1906), and contains about 30 words. These are contained in a list that is ostensibly of words from the language of the Stonehenge district, about 400 miles south-west of the Waḷuwara country, and the first part of

the list is clearly of words from this area; the second part, however, is certainly Waḷuwara, and it appears that the editor may have lost a page of the original manuscript.

The only study by a competent linguist has been the brief work done by K.L. Hale, who spent a few hours with an informant in 1960. A 12-page handwritten report by Hale to the Australian Institute of Aboriginal Studies, together with his field notes, provides a very useful introduction to the language.

1.4 The informants.

The four remaining moderately competent speakers at the time of this study (1967-1970) were all members of one family. The main informant was Mrs. Ida Toby, popularly known as Queen, who was recorded at Mt. Isa in 1967-8 and 1970 and on Barkly Downs station in 1969. She was in her mid or late sixties and was an excellent and enthusiastic informant, although her knowledge of the language was not, and probably never had been complete. An older brother, Mr. Fred Age, of Dajarra, who had been Hale's informant, was willing and helpful but had lost much of his fluency and forgotten much of the vocabulary. Mr. George Age ("Walgra George"), of Urandangie, aged about 66 in 1967, was recorded in 1967 and

1968. He was much less willing than other members of his family to help, but gave some very useful information. Mrs. Lily Clayton, of Thorner station and later Urandangie, despite her willingness, was unable to help much; she was sick and almost toothless, and, after losing her husband in 1968, was quite senile. Both she and her brother Fred Age were several years, at least, older than the other two informants.

Two younger men, Smallie Kitchener (aged 53 in 1967) and Billy Major, were recorded briefly in 1967. The former knew a little of the language; the latter only a few words.

The language is not used at all now and will become extinct in a few years. Very little of the literature is remembered, and that only by Mrs. Toby and George Age; one brief story was recorded from each of them. It proved impossible to get two informants together at any time and so no conversation could be recorded, except between Mrs. Toby and myself. However this was counteracted to some extent by Mrs. Toby's acting ability; she was able to carry on both sides of an imaginary conversation with great facility, and did this briefly on many occasions.

Data could be obtained from the two oldest informants only by direct eliciting, which, of course, involves the risk of literal translation from English into the language. However, sufficient data was obtained indirectly from Mrs. Toby (especially) and George Age to provide attestation for all except a few of the rarer grammatical forms, such as some of the inflected pronominal forms.

1.5 The method.

The first recordings of Waḷuwara were made in the course of a linguistic survey in 1967, and at this time no further study of the language was planned; however, owing to technical difficulties, it was necessary to spend more time than anticipated in Mt. Isa and this provided the opportunity to record most of the material in the Australian Institute of Aboriginal Studies booklet "Linguistic Materials for Fieldworkers in Australia". This was later transcribed and two further field trips were made, with the aims of (i) confirming the data already obtained, (ii) investigating features of the language revealed but not fully explained by the data collected so far, and (iii) recording conversation and literature in the language. As mentioned above, the third aim was not successfully achieved. In the preparation for and during the second and third field trips, use was made of the manual by Wurm (1967),

and on the whole the methods used throughout the study conformed fairly well to those recommended by Wurm. On a fourth field trip to the area, primarily for the purpose of recording in other languages, a little supplementary recording was done.

1.6 Acknowledgments.

The author is, of course, greatly indebted to the Australian Institute of Aboriginal Studies, who financed the work, and to Professor U.G.E. Hammarström, who supervised it.

Thanks are due to Dr. Kenneth Hale, for the use of his field notes and for other comments made in private communications, to Mr. Barry Blake. for making available a copy of a short but useful recording of Mr. Fred Age, made in 1967, and to members of the staff of Linguistics Department, Monash University (in particular, Mr. Björn Jernudd, Miss Mona Lindau and Mrs. Sandra Keen), for helpful discussions.

Addendum. Since the above was typed, the writer's attention has been drawn to a brief word-list and a very short description of the "Wallawarra" tribe by J.G. Edge, published in 1899. Also, the Australian Institute of Aboriginal Studies has recently received a copy of a tape recording made by Mr. M.T. Deakin at Urandangie in 1964, in which George Age gives a short speech in Waḷuwara.

2. PHONOLOGY

2.1 A note on terminology.

Since a number of terms, such as 'word', 'utterance', 'sentence', will be used in sections of this description which precede the sections in which they are most properly defined, some remarks on terminology are appropriate at this point.

It is assumed that such widely used terms as 'phoneme', 'allophone', 'morpheme' are known and understood. The usage here is as described by Hammarström and Jernudd (1969), e.g. phones are grouped into allophones, allophones into phonemes. However, in view of the nature of a linguistic description such as this one, it is felt that some simplifications can be made.

For example, we deal with phones only on the level of phonology. When discussing morphology or syntax, the grouping of phones into phonemes can be taken as established. Thus there is no need to use the term 'morph', since a morph is a sequence of phones, and, having once established and described the phonemes, there is no longer any need to use phones or sequences of phones in our description. We do,

of course, make use of morphs in establishing the phonemes, but the concept is not necessary in later sections.

For the same reason, the term 'lex' is not necessary, and therefore the more generally known term 'word' can be used instead of 'lexeme'. A word is thus a sequence of phonemes constituting a free morpheme with or without attached bound morphemes. A free morpheme is the smallest unit that can stand alone as an utterance (e.g. as the answer to a question). In phonemic script a word is separated from the preceding and following word by a space. More rigorous definitions will be given in the appropriate section.

Similarly, there is no need to distinguish between 'syllab' and 'syllabeme', and the term 'syllable' is used instead of the latter. A syllable, in Waḷuwara, can be defined as /(C)V(C)/where C represents any consonant phoneme, V any vowel phoneme, items in parentheses are optional and / / enclose items in phonemic script. This definition again is not complete.

An utterance is a segment of speech bounded by silence or by speech by another person. This is broken up into sentences, often incomplete and usually bounded by brief

pauses, and further into clauses and phrases, which may be bounded by brief pauses, and are not themselves further broken up by pauses. The terms 'phrase' and 'clause' are best defined at this stage by means of an example.

In the sentence: /ŋupaa jiwa ṯawa ṇandiji jitjiṛalu/

tomorrow	that man	go-	Urandangie-
		purpose	to

Tomorrow that man is going to Urandangie

the first and last words are adverbial phrases, /jiwa ṯawa/ is a noun phrase which forms the subject of the sentence, /ṇandiji/ is a verb phrase and /jiwa ṯawa ṇandiji/ is the main (and only) clause of the sentence. A clause is thus made up of one or more phrases and can form a minimal sentence. The adverbial phrases are qualifiers of the minimal sentence. In fluent speech there may be a brief pause after /ŋupaa/ and/or before /jitjiṛalu/, but nowhere else within the sentence.

Other terms are given their traditional meanings.

2.2 The phoneme inventory.

Table 2.1 gives those phones which are important in the Waḷuwara language and at the same time provides a key to the phonetic symbols used throughout this section.

Table 2.1
Inventory of phones

(a) Contoids

	bilabial	interdental	dental	apico-alveolar	lamino-alveolar	palatal	retroflex (apico-domal)	velar
voiceless fortis stop	p	t̪	t̪	t	tj	c	ʈ	k, k^w
voiceless lenis stop	b̥	d̪	d̪	d̥	dj		ɖ̥	g̊, $g^{\circ w}$
voiced stop	b	d̪	d̪	d	dj		ɖ	g
nasal	m	n̪	n̪	n	nj		ɳ	ŋ, $ŋ^w$
lateral		l̪		l, l:	lj		ɭ, ɭ:	
flap				ɾ, ɾ̥				
voiceless fricative						ç	ʂ	h
voiced fricative						j^	ʐ^, ʐ	
frictionless continuant				ɹ	j	ɹ̥		ɣ, $ɣ^w$

(b) Vocoids

	front	central	back
high	i, i:, I, y	ɨ, ʉ	u, u, u , ʊ
mid	e, ɛ	ə	ɔ
low	æ , a	ɐ	ɑ, ɑ:

The list in this table is not intended to be exhaustive; for example, phones such as [β , ʍ], heard once or twice in "non-standard pronunciations", are not included. The vocoid symbols are each intended to represent a range of sounds close to, but not necessarily including the vocoid represented by the same symbol in the I.P.A.system. The contoids conform in general to the I.P.A.system but depart from it, because of its inadequacy or for ease of typing, in a few cases. The diacritic ʌ , used to denote a fricative articulation, is taken from Catford and Ladefoged (1968), p.9.

These phones have been grouped into the phonemes shown in Table 2.2.

Table 2.2

The phoneme inventory

(a) Consonants

p	t̪ʌ	t	tj	ṭ	k
		ɢ			
m	n̪ʌ	n	nj	ṇ	ŋ
	l̪ʌ	l	lj	ḷ	
		r			
w			j	ɽ	ɣ

(b) Vowels

i	u
a	

The symbol 'G' is used for the phoneme which has as allophones the voiced stops: [b, ḏ̪, d, dj, ḏ̣, g], heard only in homorganic nasal-stop sequences. The symbol 'ṛ' is used for the phoneme whose chief realization is [ɖ̣]; this is a common practice in Australian linguistics. 'r' represents the alveolar flap-glide.

Table 2.3 gives minimal pairs, for both word-initial and word-medial positions, for all consonant pairs for which they have been found. A few sub-minimal pairs are included. Pairs involving consonant clusters are not included in this table, and consequently the phoneme /G/ is omitted. Very few minimal or sub-minimal pairs are known for consonants in clusters; a few examples are: /jaḷwi, jalwi, jalkitjara; pulɣa, puḷɣa, purɣandi; kaṇkaḷija, kaṇpaḷija; panpa, panmaṭala; ŋalwa, ŋalɣa/. (The English equivalents of these words are, respectively: old woman, shoulder, personal name (Fred Age), fur, old man, middle, top, bottom, saddle, single men's camp, go in (imperative), crack.)

Table 2.4 gives minimal pairs for vowels. Following Table 2.4 is an appendix giving the English equivalents of words used in Tables 2.3 and 2.4.

Table 2.3

Minimal pairs -- consonants

	p	ṭ	t	tj	ʈ	k	m	ṇ
		pawa	X	pila	panmaʈala	paka	pala	paka
	tupu	ʈawa		tjila	ʈanmaʈala	kaka	maḷa	naka
ṭ	ʈuʈu	ʈ	X	(tanuru	(ʈura)	ʈara	ʈawa	ʈaku
				tjanara)	ʈuru	mara	mawa	naku
t	wapa	waʈa	t	X	X	X	X	X
	wata	wata						
tj	jipala	maʈa	jitala	tj	ʈanma	tjipa		
	jitjala	maʈja	jitjala		tjanma	kipa		
ʈ	papa	(maʈa)	mutuka	(matja)		(ʈaḷaʈaḷa)	ʈala	kaka
	paʈa	paʈa	muʈuka	paʈa	ʈ	kaḷa	mala	naka
k	wapa	waʈa	wata	-katja	ʈuʈa		kara	kana
	waka	waka	waka	kaka	ʈuka	k	mara	nana
m	kipa	ŋaʈa	kuta	kutja	paʈa	miki		mana
	kima	ŋama	kuma	kuma	pama	mimi	m	nana
ṇ	ʈupu	ŋaʈa	wata	matja		waka	ŋama	ṇ
	ʈuṇu	ŋaṇa	-wana	mana		-wana	ŋana	
n	jipa		kuta	kutja		kaka	kuma	wapa
	jina		kuna	kuna		kana	kuna	wapa
nj	jipa		jita	-katja		kaka	kuma	
	jinja		jinja	kanja		kanja	kunja	
ṇ	matjapa	ŋaʈa	wata	matju		puka	ŋama	ŋana
	matjaṇa	ŋaṇa	-waṇa	maṇu		puṇa	ŋaṇa	ŋaṇa
ŋ	japa	ŋaʈa		-katja	jaʈa	kaka	ŋama	ŋaṇa
	jaŋa	ŋaŋa		kaŋa	jaŋa	kaŋa	ŋaŋa	ŋaŋa
ḷ			ŋutu					(jira
			ŋuḷu					jira
l	papa			matja	paputu	-ku	pama	mana
	pala			mala	papulu	-lu	pala	mala
lj	jarapa			ḷatja		jaraka		
	jaralja			ḷalja		jaralja		
ḷ	papa	waʈa	ŋutu	matja	kaʈu	waka	ŋamaa	mana
	paḷa	waḷa	-ŋuḷu	maḷa	kaḷu	waḷa	ŋaḷaa	malj
r	papu	waʈa	kuta	ḷatja	ʈuʈa	waka	kuma	-wa
	paru	wara	kura	ḷara	ʈura	wara	kura	wara
w	papa		jita	matju	paʈa	ʈaka	kuma	ʈana
	pawa		jiwa	mawu	pawa	ʈawa	kuwa	ʈawa
j	jipa	puʈa	jita	watji	paputu	ʈaka	jaramana	ʈana
	jija	puja	jija	waji	papuju	ʈaja	jarajana	ʈaja
ṛ	wapa	waʈa	wata	matja	kaʈu	kaka	jamu-	mana
	-wara	-wara	-wara	mara	karu	kara	jaru	mar
ɣ				-katja		kaka		
				kaɣa		kaɣa		
	p	ṭ	t	tj	ʈ	k	m	ṇ

Note: X denotes an impossible opposition; a blank denotes one that is possible but has not been found.

ṇ	m	ṇ	n	nj	ṇ	ŋ	ḷ	l	lj
paka	paḷa	paka	X	X	puka	pama	X	X	X
ṇaka	maḷa	ṇaka			ṇuka	ŋama			
ṭaku	ṭawa	ṭakuju	X	X	ṭuka	ṭaṇa	X	X	X
ṇaku	mawa	ṇakuju			ṇuka	ŋaṇa			
X	X	X	X	X	X	X	X	X	X
			X	(tjira njiraa)			X	X	X
kaka	ṭala	kaka	X			ṭala	X	X	X
ṇaka	mala	ṇaka				ŋala			
kaŋa	kaṛa	kaŋa	X			kaŋa	X	X	X
ṇaŋa	maṛa	ṇaŋa				ŋaŋa			
maṇa	m	maṇa	X	mimi	muka	maŋa	X	X	X
ṇaṇa		ṇaṇa		njimi	ṇuka	ŋaŋa			
ṇ	ŋama	ṇ	X		ṇaṇa	ṇaŋa	X	X	X
wapa	ŋaṇa				ṇaṇa	ŋaŋa			
wapa	kuma	wapaṇa	n	X	X	X	X	X	X
	kuna	wapaṇa							
	kuma		kana	nj			X	X	X
ŋaṇa	kunja		kanja						
ŋaṇa	ŋama	ŋaṇa		-nja	ṇ	ṇaṇa	X	X	X
ŋaṇa	ŋaṇa	ŋaṇa		-ṇa		ŋaṇa			
ŋaṇa	ŋama	ŋaṇa	kana	kanja	ṇaṇa	ŋ	X	X	X
(jiṛa	ŋaŋa	ŋaŋa	kaŋa	kaŋa	ŋaŋa				
jiṛa		(jiṛaṇaŋu jiraḷaḷa)					ḷ	X	X
maṇa	pama	maṇa	janu	ṇanji	ṇaṇa	maŋa	(wamaḷamaḷa jamaḷamaḷa)	l	X
maḷa	pala	maḷa	jalu	ŋali	ŋala	maḷa			
				kanji				ḷala	lj
				-kalji				ḷalja	
maṇa	ŋamaa	maṇa	kana	kanja	ṇaṇa	njiṇi	ŋulu	mala	(kiljik
maḷa	ŋaḷaa	maḷa	kaḷa	kaḷa	ŋaḷa	njiḷi	-ŋuḷu	maḷa	(kiḷima
-wa	kuma	-waṇa	jini	ŋunja	tuṇa	njiṇi		wili	jaralj
wara	kura	waṛa	jiri	ŋura	tuṛa	njiṛi		wiri	jarara
ṭaṇa	kuma	ṭaṇa	kana	jinja	maṇu	kaŋa		pala	
ṭawa	kuwa	ṭawa	kawa	jiwa	mawu	kawa		pawa	
ṭaṇa	jaramana	ṭaṇa	jina	jinja	puṇa			-wali	
ṭaja	jarajana	ṭaja	jija	jija	puja			waji	
maṇa	jamu-	maṇa	kana	kanja	-waṇa	kaŋa	ŋulu	jalu	
maṛa	jaṛu	maṛa	kaṛa	kaṛa	-waṛa	kaṛa	ŋuṛu	jaṛu	
			kaṇa	kanja		kaṇa			
			kaγa	kaγa		kaγa			
ṇ	m	ṇ	n	nj	ṇ	ŋ	ḷ	l	lj

ḷ	l	lj	ḷ	r	w	j	ṛ	ɣ	
ɣ	X	X	pala	X	paka	para		X	p
X	X		ḷala		waka	jara			
X	X	X	X	X	ṭuka	ṭawa	(ṭuṇu	X	ṭ
X	X				wuka	jawa	ṛuṇa)		
X	X	X	X	X	X	X	X	X	t
X	X	X		X	tjinGa	tjipa		X	tj
X	X				winGa	jipa			
X	X	X	ṭala	X	ṭuru	ṭala		X	ṭ
X	X		ḷala		wuru	jala			
X	X	X	kara	X	kuma	kipa	(kuṇukuṇaa	X	k
X	X		ḷara		wuma	jipa	ṛuṇa)		
X	X	X	mala	X	mawu	mala	muṇa-	X	m
X	X		ḷala		wawu	jala	ṛuṇa		
X	X	X	ṇurGa	X	ṇanGa	ṇaŋa		X	ṇ
X	X		ḷunGa		wanGa	jaŋa			
X	X	X	X	X	X	X	X	X	n
X	X	X	njiri	X	njiri	njiri		X	nj
X	X		ḷiri		wiri	jiri			
X	X	X		X	ṇuka	ṇika		X	ṇ
X	X				wuka	jika			
X	X	X	ŋala	X	ŋupaa	ŋaŋa		X	ŋ
X	X		ḷala		wupaa	jaŋa			
X	X	X	X	X	X	X	X	X	ḷ
X	X	X	X	X	X	X	X	X	l
X	X	lj	X	X	X	X	X	X	lj
	lj	(kiljikiljima	ḷ	X	ḷara	ḷiri		X	ḷ
		kiḷima			wara	jiri			
		jaralja	njiḷi	r	X	X	X	X	r
		jarara	njiri						
			kaḷa	jara	w	wiri		X	w
			kawa	jawa		jiri			
					ṭawa				
					ṭaja	j		X	j
			ṇuḷa	kara	ṭawa	ṭaja			
			ṇura	kara	ṭara	ṭara	ṛ	X	ṛ
			ŋaḷaṭa	kara	kawa	(kajaṭa	kara		
			ŋaɣaṭa	kaɣa	kaɣa	kaɣa)	kaɣa	ɣ	
		lj	ḷ	r	w	j	ṛ		

ḷ	l
ŋulu	lala
-ŋuḷu	ḷalja
	mala
	maḷa
	wiii
	wiri
	pala
	pawa
	-wali
	waji
ŋulu	jalu
ŋuṛu	jaṛu
ḷ	l

Table 2.4

Minimal pairs -- vowels

a/i/u

ṇakara : ṇikara : ṇukara
wara : wiri : wuru
mawa : mawi : mawu

a/i

wanGa : winGa
-wali : wili
pala : pila : pili
para : pira
ṭaja : ṭiji
tjiraṇa : tjiriṇa
kulara . kulira
makari : makiri
kuta : kuti
njima : njimi

a/u

paka : puka
paḷu : puḷu
ŋaḷu : -ŋuḷu
ŋañji : ŋuñji
waka : wuka : wuku
-ka : -ku
kaḷa : kaḷu
papa : papu
ŋuta : ŋutu

i/u

miṭi : muṭu
piṇa : puṇa
jañiṇa : januṇa

Phonemic notation is used for Tables 2.3 and 2.4. The common phonic realizations in each case can be deduced from a study of the appropriate parts of Section 2.3.

Note that these tables include some forms that do not occur in the corpus; for example, imperatives such as /para, pira, ḷatja, kiljikiljima/. The existence of these words is not doubted, as they are all verbs whose imperative would occur occasionally, and there are no irregular imperatives in Waḷuwara (except /ṭaŋuṇaŋa/, and the regular form /ṭaŋuṇa/ is also attested).

Appendix to Tables 2.3 and 2.4 : English equivalents of the words included in these tables.

jala (~jalla)	flame
jalu	yet
jamalamala	pigeon sp.
jamu-	somewhere else
janiṇa	possessions
janu	they (plur)
januṇa	them (plur)
jaŋa	look (imperative)
japa	fall (")
jara	river
jarajana	woman
jaraka	at the river
jaralja	rogue
jaramana	horse
jarapa	of the river
jarara	white man
jaṛu	just, only
jaṭa	father
jija	yes
jika	cold
jina	you (accusative)
jini	name
jinja	him, her, it (acc.)
jipa	you
jipala	you two
jiraḷaḷa	lung
jiraṇaŋu	wild
jiri	mud
jita	tie (imperative)
jitala	one who ties
jitjala	word
jiwa	he, she, it, that
-ka	locative suffix
kaɣa	cry (imper.)
kajaṭa	younger sibling
kaka	mother's brother
-kalji	not
kaḷa	meat
kaḷu	there (allative)
kana	not
kanja	step on (imper.)
kanji	daughter's child
kaŋa	carry (imper.)
kara	also
kaṛa	copulate (imper.)
kaṛu	young man

-katja	present habitual suffix
kaṭu	fruit
kawa	come here (imper.)
kiljikiljima	tickle (imper.)
kiḷima	prepare (imper.)
kima	let go (imper.)
kipa	raw
-ku	agentive suffix
kulara	care for (imper.)
kulira	fight (imper.)
kuma	sandhill
kuṇukuṇaa	cough, cold
kuṇa	faeces
kunja	melt (imper.)
kura	come on (imper.)
kuta	go in (imper.)
kuti	swan
kutja	two
kuwa	cook (imper.)
-lu	allative suffix
ḷala	elder brother
ḷalja	awake
ḷara	listen (imper.)
ḷatja	dance (imper.)
ḷiri	high
ḷunGa	break (imper.)
makari	sister-in-law
makiri	murderer
mala	sore
maḷa	burrow
maṇa	this (accusative)
maṇu	slow
maṇa	fin
maṛa	this
maṭa	hit (imper.)
maṭja	pituri
matjaṇa	ate
matjaṇa	of the pituri
matju	bad
mawa	hang (imper.)
mawi	cave
mawu	witchetty grub
miki	ground
mimi	mother's father
miṭi	forehead
muka	good
muṇa-	soft
muṭuka	motor car
muṭu	nest

mutuka	in the nest
ñaka	there (locative)
ñaku	that (agentive)
ñakuju	there (allative)
ñaña	that (accusative)
ñañGa	go (imper.)
ñaŋa	get (imper.)
ñuñGa	now
-nja	complement formative
njili	burr
njima	having fish
njimi	fish
njiŋi	march fly
njiraa	coolibah
njiri	skin
-ña	past tense suffix
ñakara	cut (imper.)
ñaña	son, daughter
ñika	jealous
ñikara	be jealous (imper.)
ñuka	many
ñukara	wind
ñula	ant
ñura	there
ŋaɣata	gum (from tree)
ŋala (~ŋalwa)	go in (imper.)
ŋali	we (dual, inclusive)
ŋala	breathe (imper.)
ŋalaa	herb sp.
ŋalata	maybe
ŋalu	subincised penis
ŋama	mother
ŋamaa	having milk
ŋaña	me
ŋañji	something
ŋaña	I
ŋaŋa	eye
ŋata	for me
ŋulu	grass
-ŋulu	elative suffix
ŋunja	fruit sp.
ŋunji	old
ŋupaa	tomorrow
ŋura	string
ŋuru	home
ŋuta	give (imper.)
ŋutu	nose
paka	jump (imper.)
pala	thereabouts

paḷa	elder sister
paḷu	daughter
pama	pass wind (imper.)
panmaṭala	single men's camp
papa	little girl
papu	egg
papuju	for the egg
papulu	to the egg
papuṭu	a few
para	creep (imper.)
paru	yellow
paṭa	big
pawa	son's child
pila	anus
pili	coolamon
piṇa	chop (imper.)
pira	stick (imper.)
puja	seeds, flour
puka	stick feathers on (imper.)
puḷu	testicles
puṇa	white
puṭa	suck (imper.)
ruṇa	catfish
ṭaja	tree sp.
ṭaka	where (locative)
ṭakuju	where to
ṭaṇa	which (accusative)
ṭaṅuru	supplejack (tree)
ṭara	where
ṭawa	man
ṭiji	tea
ṭuka	throw (imper.)
ṭuṇu	anthill
ṭuṇa	spinifex gum
ṭupu	penis
ṭura	song
ṭuṭu	bird
ṭuṭa	little boy
ṭjanara	needlebush
tjaṇma	tell (imper.)
tjila	point (imper.)
tjinGa	lie, untruth
tjipa	sing (imper.)
tjira	spear (imper.)
tjiraṇa	speared
tjiriṇa	was sick
ṭala	spittle
ṭalaṭala	axe
ṭaṇma (~ṭanma)	bite (imper.)

ṭanmaṭala	biter
ṭuru	honeyeater
waji	question particle
waka	alive
-wali	plural formative
waḷa	pull (imper.)
wamaḷamaḷa	small
-waṇa	accusative suffix
wanGa	track (imper.)
-waṇa	past conjunctive suffix
wapa	mother's mother
wapaṇa	mother's mother (nominative)
wapaṇa	copi
wara	grind (imper.)
-waṛa	possessive suffix
waṭa	dig (imper.)
wata	stone
watji	before
wawu	the rest, the others
wili	negative adverb
winGa	pigweed
wiri	soldier
wuka	hunt (imper.)
wuku	water
wuma	his, her, its
wupaa (wupawa)	he, she, it (reflexive)
wuru	you (plural)

The minimal pairs in Table 2.3 provide sufficient evidence for most of the phonemic contrasts. In fact this evidence is superfluous in many cases; the vast difference between, for example, [m] and [ʈ] is sufficient to justify their inclusion as members of different phonemes in any real language.

There are, however, some items that require further justification. These are:

(a) the voiced stop /G/, which was excluded from Table 2.3;

(b) the decision to regard the velar glide [ɣ] as a phoneme;

(c) some phonemic distinctions which are made in Waḷuwara, but are not made in some other Australian languages. These involve the pairs [ʈ] and [tj], [ɳ] and [nj], [ɭ] and [lj], which are allophones of the phonemes /tj/, /nj/ and /lj/, respectively, in some languages. See, for example, Douglas (1964) on the Western Desert language and Hercus (1969) on the Madimadi language of Victoria.

(d) the interpretation of certain phones as double consonants;

(e) the decision not to regard vowel length as phonemic.

2.2.1 The voiced stops.

The contrast between the voiced and voiceless stops was noticed late in the study of the language, partly because of

its rarity, partly because it was masked, in the minimal pairs, by another contrast that was thought to be phonemic, and partly because the absence of such a contrast in other Australian languages tended to blind the investigator to the possibility of its presence in this one.

The minimal pairs are [pantu / pa:ndu][1] and [wampa / wa:mba]. The obvious conclusion, which appeared to be well supported by other evidence, was that the voicing of the plosive was conditioned by the length of the preceding vocoid. The appearance of voiced stops in longer words, following a short vocoid, was explained in terms of an underlying long vocoid; the data suggested that long vowels were realized as short vocoids in words of more than two syllables. (This seemed to be a general rule, not applying just to words containing a voiced stop.) This led to some minor problems, but the only real exception was [ka:ɲʈa].

The belated conclusion that vowel length was not phonemic (see 2.2.5) made it necessary to recognise these contrasts between voiced and voiceless stops as phonemic. The following minimal and sub-minimal pairs are known:

[1] In general, transcription will be narrow only to the degree necessary to illustrate the points under discussion.

		English equivalents	
[wampa	wa:mba	dry	young woman
pantu	pa:ndu	waist	butt, of tree
mampunu	mambiri	good	mark
ṯiṉṯini	ṯi:ṉḍa	vagina	fat
kunti	kundiri:dja	house	are thick (as flies)
kunti	kundibiḍa	house	shrimp
pinjtji	mi:njdji	nest	clever
kaṉṯi	kaṉḍila]	deep	close, near

It will be noted that there are no contrasts between [g] and [k]; in fact, the cluster [ŋk] has not been heard in any Waḷuwara word.

Several possible solutions to this problem were considered. The first one that presents itself is to have two series of stop phonemes. This, however, is unnecessary as there is no possibility of contrast between the various voiced stops; they are always determined by the preceding nasal. One argument in favour of having six voiced stop phonemes is based on the differences between them; if, for example, the difference between apico-alveolar and apico-domal articulation is sufficient to seperate /t/ from /ṯ/, /n/ from /ṉ/, /l/ from /ḷ/, why should the phones [d] and [ḍ], which are differentiated in exactly the same way, be grouped in a single phoneme. This argument, however, was

not thought sufficient in itself to justify the extra phonemes.

The idea of prenasalised stops was rejected on phonetic grounds; the nasal sound is too clear and too protracted to be regarded as simply prenasalisation either before voiced or voiceless stops.

Another possibility was to regard the clusters [mb], [n̪d̪] etc. as single phonemes. This had some attractions, as these clusters do function in some ways as single consonants: There is a suffix [nda], but no other bound morphemes with an initial consonant cluster;
There are some cases where a sequence of phones beginning in a cluster of this type seems to function as a unit, as in [ŋamanduru], 'milk' (cf. [ŋama] 'mother, breast'), [bikulunjdjulunjdjulu] (with an apparent reduplication of [njdjulu]) and [gajaŋgaja] (possible reduplication), but no comparable cases for other consonant clusters;
The vowel of the first syllable of a two-syllable word is realized as a long vocoid before [mb], [n̪d̪] etc., but not before any other cluster (except in [ka:n̪t̪a], which will be explained in 2.2.4).
However, this solution requires six phonemes instead of one. An alternative is to call syllable boundary phonemic; it

appears to fall before an [mb] type cluster but between the two phonemes of any other cluster. This would necessitate marking every syllable boundary. One could postulate some type of juncture, so that [ba:ndu], for example, would be */pa+ntu/ and [bantu] */pantu/, but the */+/ cannot be equated with any segment of the utterance.

The second of the solutions discussed above seemed most acceptable and was therefore adopted.

2.2.2 The velar glide.

One must consider the possibility that the phone [ɣ] is an allophone of one of the other velar phonemes /k/ or /ŋ/, a variant of the allophone [g] of /G/, or an allophone of the bilabial (really labio-velar in its articulation) glide /w/ or even of one of the other glides /j/ or /ṛ/.

It should be pointed out that /kaɣa/, which figures in most of the pairs involving /ɣ/ in Table 2.3, is a rarely heard allomorph of a morpheme whose most common allomorph is /kaa/.

Hale, at one time (see Hale, 1960), regarded [ɣ] as an allophone of /k/, but he has since rejected this solution.

It is clear, as will be shown in a later chapter, that [ɣ] descended from an ancestral velar stop, but sub-minimal pairs occur in such a variety of positions that it cannot now be regarded as a member of the /k/ phoneme. The following pairs illustrate this point:

[juɣu : uku ; jarɣulu : karkuru ; jarɣa : markana ; urɣara : ṭurkuṇu ; ŋaɣaḍa : kakaṇa ; warɣuluma : warki ; birɣibuṇa : kirki].

(English equivalents: tree, water, one, fish sp., climb (imperative), hand, run (imperative), back, gum (from tree), mother's brother (nominative), join together (imperative), subsection name, ghost gum, plover.)

/ɣ/ cannot be identified with /G/ because of the very restricted range of environments in which the latter occurs. [ɣ] has, however, been heard on two occasions as a realization of /G/, in [kanuŋɣu] for /kanuŋGu/, but [kanuŋgu] is normal. ([kanuŋu] has also been heard.)

Sub-minimal pairs for [ɣ] with [j] and [ṛ] are provided by /ŋaɣaṭa, ŋajara, ŋaṛaṇa/ (gum (from tree), we (dual, exclusive), who (nominative)) and by /juɣu, mujuŋuṇu, kuṛukuṛu/ (tree, hollow, head). Since the differences in point of articulation between these phones are the same as those which are significant in the separation of the nasal

phonemes and of the stops, it is felt that this evidence is sufficient.

[ŋ] and [ɣ] are separated by a difference that is very distinctive in Waḷuwara; there are no examples of a nasal occurring as a variant of a glide, nor of a glide as a variant of a nasal. (There is one possible exception, [marɣuluma : warɣuluma] but these may be different words.) The pairs /ŋaɣaṯa, ŋaŋara/ (gum (from tree), wake up (imperative)) and /juɣu, juŋuṯa/ (tree, north) provide further grounds for their separation.

Articulatorily and auditorily, [ɣ] is very close to [w], and, in fact, they are to some extent interchangeable in certain environments in Waḷuwara. The labialisation of velars -- stop and nasal as well as the glide -- is common in the environment /u(C)-a/ and the opposition is therefore neutralised in this environment. However, the minimal pairs /kaɣa : kawa/ (from Table 2.3) and /ŋalɣa : ŋalwa/(crack, go in (imperative)), as well as the contrast between [uɣu] in /juɣu/,'tree', and [u:] in [ṉu:ṇu], 'honey', (phonemically /ṉuwuṇu/) force us to classify them separately.

It is concluded that the velar glide must be regarded as a phoneme.

2.2.3 The interdental/lamino-alveolar opposition.

The claim by O'Grady, Voegelin and Voegelin (1966) that, in Australian languages, the number of linear distinctions between stops (excluding the glottal stop) is equal to the number of linear distinctions between nasals is based on evidence from a large number of languages, and has not been challenged. In addition, it is common for the lateral phonemes to show the same distinctions (except that there is no labial or velar member of this series).

The data of Table 2.3 show that Waḷuwara conforms to this pattern, with six phonemes each in the voiceless stop and the nasal series and four laterals. The only evidence to the contrary concerns the interdental/lamino-alveolar distinction. There are examples of interchangeability, e.g. the words /ṯipiḷi ~ṯipilji ~tjipilja/ 'duck' and /ṯapukuṯu ~tjapukuṯu/ 'small', occasional uses of the verbal tense suffix /-jitja/ where /-jiṯa/ is normal (and vice versa) and rare cases of such realizations as [djadami] instead of the normal [ḏadama] and [ḏilaiḏa] for [djilaiḏa]. Also there is a morphophonemic alternation between the allomorphs /-ṇa/ (after /a/ and /u/) and /-nja/ (after /i/) of a noun suffix, and /nj/ and /ṇ/ are in complementary distribution in word-initial position, the former occurring

before /i/ and the latter before the other vowels. The tendency is for lamino-alveolars to occur before or after /i/ and interdentals in other positions, but there are many exceptions, e.g. /kanja/ (cf. /mukaṇa/), /janjula/, /ṯiṯiṯiṯi/ (cf. /tjitji/), /ṯiḷila/ (cf. /jiljiri/), tjulɣa/ (cf./ṯulɣu/), /tjalki/ (cf. /ṯalɣa/), /ṯiṇGa/ (cf. /tjinGa/), /maḷalja/,/kaḷatja/, /matja/ and /matju/. (The English equivalents of these words are respectively: stand on (imperative), conjunctive adverb, tree sp., soft, budgerigar, maggot, mosquito, male dog, sand, vagina, open, fat, untruthful, no, tree sp., pituri, bad.)

There is, therefore, no alternative to recognising the interdental/lamino-alveolar contrast as phonemic.

2.2.4 Long contoids.

A long lateral is heard rarely in a word in which there is normally a short lateral in that position, e.g. [kaḷ:a, ŋuḷ:u] instead of a much more common [kaḷa, ŋuḷu]. Certain words, however, are regularly realized with a long apical lateral. In two cases, this has been found to contrast with a short lateral:

[ṯawul:u], 'chin, jaw' : [ṯawulu], 'bulb (of plant)'

[wil:i], 'Eremophila sp.' : [wili], negative adverb.

There is, however, some evidence to suggest that these long laterals can be classed as phonemically lateral-glide clusters:

[iḷ:aŋa-~iḷwaŋa-], 'to hit (by throwing)'

[ŋal:a-~ŋalwa-], 'to enter'

[wal:ari-~walɣari-], 'to turn'.

There are no oppositions between a lateral-glide cluster and a long lateral. There are, however, some alternations between [lw] and [l]; [ŋala-] is a third form of the verb 'to enter', and [-la] and [-lwa] alternate as the agent suffix on verbs. The diachronic evidence (see Chapter 5) shows that there is a change, still incomplete, from *[lp] to [lw] to [l], and [l:] appears to be intermediate between the last two. Similarly, [l:] is an intermediate stage in the change from *[lk] to [lɣ] to [l], and [ḷ:] is an intermediate stage in the corresponding changes involving clusters with [ḷ]. An attempt was therefore made to find out whether other frequent occurences of a long lateral in a word were simply realizations of a cluster with /w/ or /ɣ/. However, the informant did not accept the latter forms, except in the three cases listed above. It was therefore decided to write these words (only a few in number) with a double lateral, e.g. /ṯawullu/, /willi/, /wuwalla/ ('smoke'), /puḷḷukutu~puḷukutu/ ('strong, hard').

The palatal fricatives [j^ʌ] and [ʝ] were heard consistently in the two morphemes realized as [pij^ʌi-pi:j^ʌi-piʝi-pi:ʝi] (meaning 'blunt') and [paj^ʌa-paʝa-pajʌa] (the exact meaning is not known, but the reference is to a certain dance movement). [ʝ] was used by Mrs. Toby and the other forms, [j^ʌ] and [jʌ], by Fred Age. These phones clearly are not realizations of the phoneme /j/; / miji/ (conjunctive adverb) and /ṯiji/ ('tea') are normally realized as [mi:] and [ṯi:] respectively, and the /j/ in such words as /majaŋara, ṯaja, kajaṯa, kajalla, ŋajara, wajaṯa/ (English equivalents, respectively: shield, tree sp., younger brother or sister, far, we (dual, exclusive), net) is a palatal glide. Likewise, they do not belong to the phoneme /tj/; contrasts are provided by the words /pitjiṛa, tjitji, jitjiṛa, witjipakani/ (swim (imperative), budgerigar, place name (Urandangie), cormorant) for the first case and by /matja, ḷatja, katjalara/ (pituri, dance (imperative), lizard sp.) for the second case.

Auditorily, the voiced fricative [j^ʌ] is very similar to [j], being distinguished mainly by its greater length. The voiceless form [ʝ], used by Mrs. Toby, is clearly distinct from [j]; the use of a voiceless form where other informants use a voiced phone is a feature of this informant's pronunciation of several phonemes.

Despite the lack of any other consonant clusters containing /j/ in Waḷuwara, it has been decided to represent the palatal fricative as /jj/, so that the two morphemes containing it are written /pijji/ and pajja/.

A palatal fricative has been heard also in a stem that was finally interpreted as /pirtji-/ ('to swallow'). This stem, where it occured in words of three or more syllables (/pirtjiṇa, pirtjijitja, pirtjitjita/), was heard variously as [piɹtji], [piçi] (in realizations by Mrs. Toby and Mrs. Clayton) and [pitji]; the imperative, /pirtja/, was heard as [piritja]. Further reference will be made to this morpheme in Section 5.2.

A retroflexed fricative, occuring in about half a dozen words and contrasting with the retroflex glide and stop and the phoneme /r/ as shown by the examples in Table 2.6, is similarly interpreted as a long /ṛ/ and written /ṛṛ/.

Table 2.6

/ṛṛ/	/ṛ/	/ṭ/	/r/
miṛṛi	miṛimala	miṭi	wiri, mirinjdja
njiṛṛa, wiṛṛaa	ḷiṛa	tjiṭa	njiraa, tjira
puṛṛa	ṇuṛa	ʈuʈa	ɻura, ʈura
waṛṛuŋu	-waṛa, kaṛu, jaṛu	kaʈu	wara

2.2.5 Vowel length.

Long vocoids are frequent in Waḷuwara. These are divisible into four groups:

(a) word-medial or word-final long vocoids in two syllable words in slow speech, corresponding to short vocoids in realizations of the same words in normal speech or in derived or inflected forms of more than two syllables;

(b) word-medial or word-final vocoids which are long or semi-long in all realizations of a word or its combined forms;

(c) long vocoids which alternate with a sequence vocoid-glide-vocoid in realizations of the same morpheme;

(d) long vocoids as realizations of word-initial syllables.

Type (a) is exemplified by [ŋa:ŋa], 'eye', as compared to [ŋaŋariṇa], 'woke up'; [pa:ndu], 'butt of tree', from which is derived [panduŋuḷu], 'a devil'; and [n̪a:nda], 'go', but [n̪andaṇa], 'went'. The length of the vocoid in such cases has been found to be not phonemic, but phonologically and, to a minor extent, syntactically conditioned. It is therefore predictable. The rules will be discussed in subsection 2.3.8.

Examples of type (b) are [ka:ra], 'south', [n̪u:n̪u], 'honey', [iṛaṭa:ri:tja], 'frightened', [kanaṭara:], 'hungry'.

Many of these are formed by addition of a suffix to a stem, for example:

/kanaṯara/ + /-a/ > [kanaṯara:] (2)

/jiṛaṯa/ + /-a/ + /-ri-/ + /-jitja/ > [iṛaṯa:ri:tja]

Some can be shown by comparison with cognate forms in other languages to have resulted from the loss of an earlier intervocalic consonant:

*/kakara/ > */kaɣara/ > [ka:ra]

*/ṉukuṇu/ > */ṉuɣuṇu/ > /ṉuwuṇu/, [ṉu:ṇu]

Type (c) examples include:

[ma:maḷu] (/maṛa/ + /-maḷu/)

[ṯa:wali] (/ṯawa/ + /-wali/)

In these cases the glide would be heard in slow and careful speech and the logical phonemic interpretations are /maṛamaḷu/ and /ṯawawali/. Diphthongs such as [ai] (/aji/) and [au] (/awu/) also belong to this type.

Type (d) includes words whose initial syllables are realized as [i:~i~ji] or as [u:~u~wu]. Examples are (giving only one of the common realizations of each word): [i:pa, jiwa , i:ka , iṛaṇaŋu , wuma , utjuru].

(2) A phonological rule to be formulated in 2.4.5 will make it necessary to call this suffix /-aa/, not /-a/. However, at this stage this does not matter.

Long vocoids of the second type differ from those of the first type in that (i) as already stated, they retain their length to a much greater extent in normal speech. The difference is not simply one of length, and, in fact, may be realized more in vocoid quality and stress; for example, the [a:] of [iɾaṭa:ri:tja] may, in some cases, be replaced by a short vocoid, since, because of the length of the word involved and the presence of the long vocoid [i:] in close proximity, it is under great "pressure" to undergo shortening. But, in such cases, it is distinguished from the expected realization of /a/ in the same environment by being lower and more retracted, and by carrying a little more stress. (ii) They are sometimes heard as two vocoids rather than a homogeneous long vocoid. For example, the realization of the purposive mood form of the verb 'to hit' fluctuates between [maṭi:] and [maṭiji], whereas the word for 'fish' is heard in isolation as [nji:mi] and in inflected forms or often in speech as [njimi], but never as [njijimi].

Because of these phonetic differences, reinforced by morphological considerations, it was decided to interpret the long vocoids of type (b), and their alternative forms, as /iji/, /uwu/, and /aa/. Thus we write /kaara/, /ṇuwuṇu/, /jiɾaṭaarijitja/ (the initial /j/ will be justified below) and /kanaṭaraa/. [ka:ṇṭa], referred to in 2.2.1, is thus /kaaṇṭa/.

On morphological grounds, the insertion of /ṛ/ between the two vowels of /aa/ could possibly be justified, e.g. */jiṛaṭaṛarijitja/, */kanaṭaraṛa/, and in other cases /ɣ/ could be justified on diachronic grounds, e.g. */kaɣara/. However, in most cases there is no phonological evidence to support such insertions, and they are not made. The morpheme usually realized as [ka:] has on a couple of occasions been heard as [kaɣa] and the diachronic evidence favours the interpretation /kaɣa/. However, because of its rarity, this is regarded as an alternative form, /kaa~kaɣa/. The same solution is adopted, for the same reason, for the reflexive forms of the three singular personal pronouns: /ŋaṯaa~ŋaṯawa/, /jindaa~jindawa/ and /wupaa~wupawa/. The /awa/ forms in each case are rare. Contrast the interpretation given above of [ṯa:wali]; in this case [ṯa:] is an unusual form of the morpheme /ṯawa/, 'man', and [ṯawa] is normal.

In view of the interpretation of [i:] and [u:] (type (b)) as /iji/ and /uwu/, respectively, the interpretation of initial [i:] and [u:] (type (d)) as /ji/ and /wu/ is consistent. There are some words in which the initial glide has never been heard by the writer, e.g. /jiḷwaŋa, wuwalla, wuṇṇa, jinŋandalu/, but as there are no contrasts between */ i/ and / ji/ or between */ u/

and / wu/, the appropriate initial glide is defined as phonemic in all cases. This interpretation is supported by the fact that, apart from one borrowed word, Waḷuwara has no words with initial /a/.

This discussion (Sub-section 2.2.4) can be usefully summarised in tabular form, and this is done in Table 2.6. In this table, V represents any vowel/vocoid, W any glide, ~indicates fluctuation, > means "is more common than" and >> "is much more common than".

Table 2.6

Interpretation of long vocoids.

Type	Environment	Phonetic form	Phonemic form
(a)	bisyllabic word in isolation	[V:] > [V]	/V/
	longer word in isolation	[V] > [V:]	
	bisyllabic word in normal speech	[V] > [V:]	
	longer word in normal speech	[V] >> [V:]	
(b)	all	[V:] > [VWV] >> [V]	/VWV/
	all	[V:] > [VV] >> [V]	/VV/
(c)	all	[VWV] >> [V:]	/VWV/
(d)	word initial	[V] ~[V:] ~[WV]	/WV/

2.3 Description of the phonemes.

2.3.1 The voiceless stops.

The designation "voiceless stop" is used to contrast these phonemes with the voiced stop, and is not intended to be a precise description. In fact, these phonemes may be realized with some voice in certain environments.

The most common realizations are:

(a) In word-initial position; lenis, voiceless or weakly voiced, unaspirated.

(b) In intervocalic position, or as part of an intervocalic cluster, following a strongly or moderately stressed vowel; fortis, voiceless, unaspirated.

(c) In intervocalic position, or as part of an intervocalic cluster, following a vowel with little or no stress; lenis, voiceless or weakly voiced, unaspirated.

Consonants never occur word-final.

Rarely heard realizations include the homorganic weak fricatives, e.g. [waḷø̥ad̪ji] for /waḷpatji/, glides or zero, e.g. [wuṭijalu] or [uṭijalu] for /puṭijalu/. These may be attributable to the advanced age of the informants, but are of some interest in view of the tendency in Waḷuwara for stops to undergo lenition. This will be discussed in Chapter 5.

/p/ is a bilabial stop. Realizations other than [p], [p̚] or [b] are rare.

/t̪/ is an interdental (lamino-dental) or dental (apico-dental) stop, whose release is usually accompanied by some friction. The friction is much less noticeable with the dental than with the interdental allophones. Tongue position for the interdentals is with the tip protruding slightly between the upper and lower teeth, while in the dental articulation the tongue tip touches the edge of the upper teeth. Common allophones are [t̪, d̪̚, d̪, t̪̚, d̪̚, d̪̚]. A weak voiced fricative [ð] sometimes replaces a more common [d̪], for example in some realizations of the vowel suffix /-jit̪a/. /t̪/ has less tendency to be voiced than do the other voiceless stops, especially in the word-initial position. The dental allophones, in particular [t̪̚], are more common word-initially than in other positions, possibly as a result of the absence of /t/ in this position.

/t/ alternates with /t̪/ in certain complex verbal suffixes, such as /-t̪at̪a~t̪ata/, /t̪at̪iji~t̪atiji/, /-tjat̪a~-tjata/. This may be due to a bias against two such similar stops in successive syllables, although the suffix /-tjit̪a/ and words such as /t̪at̪ali/ and /t̪it̪it̪it̪i/ are not known to undergo such a change.

/t/ is one of the less common phonemes and occurs only intervocalically or in the intervocalic clusters /nt/ and /tp/. The latter occurs in only one word, /ṇatpaṇu/, which is probably a borrowing from Bulaṇu, and is the only known example in Waḷuwara of a consonant cluster with a stop as the first member.

/t/ is an apico-alveolar stop, and no noticeable friction accompanies its release. Allophones are [t, d̪, d].

/tj/ is lamino-alveolar; the occlusion is made by pressing the blade of the tongue against the gum ridge, the tip of the tongue being behind and in contact with the lower teeth. Like /ṭ̪/, this phoneme has a somewhat fricative release. The common allophones are [tj, d̪j, dj]. In the environment /#-i/ a voiceless palatal allophone [c] has been heard. Occasional realizations, possibly influenced by English, are [tʃ] and [dʒ]. The fluctuation between /ṭ̪/ and /tj/ has been referred to above (2.2.3).

/ṭ/, one of the rarer phonemes, is a retroflex, or apico-domal stop. The occlusion is made by pressing the tongue tip against the palate, and the release is not noticeably fricative. The word initial position /ṭ/ may be fronted towards [t]. As /t/ does not occur in this position,

this does not lead to confusion. The other common allophones are [t̥, ḍ̥, ḍ̥].

/k/ is a velar stop, and is released without noticeable friction. Labialized varieties occur in the environment /u-a/, e.g. [n̥ukwara, t̪ukwa]. In fact, it may be stated as a general rule that any velar may be labialized in the environment /u(C)-a/, where C is any consonant and () encloses an optional segment.

2.3.2 The voiced stop.

The phoneme /G/ has allophones [b, d̪, d, dj, ḍ̥, g]. Each has the same point of articulation as the corresponding voiceless stop, and differs from its voiced allophone only in that it is more strongly voiced. A voiceless realization has been heard, but only on a couple of occasions. A voiced fricative has been heard rarely, for example [d̪i:n̪ð̪a] for /t̪in̪Ga/.

/G/ occurs only in binary clusters in which a nasal is followed by the homorganic voiced stop. Apart from [d] -- the cluster /nG/ occurs in two of the commonest morphemes in the language -- none of the allophones is common. They are,

however, all rather more common than the corresponding homorganic nasal-voiceless stop clusters.

2.3.3 The nasals.

The nasals are voiced and have the same points of articulation (as far as can be observed) as the corresponding stops. Apart from the standard forms -- [m, n̪, n, nj, ṇ, ŋ] -- the nasal phonemes have few allophones. /n̪/ and /nj/ have in most environments, but especially intervocalically, a noticeably longer duration than the other nasals. The transition from [n̪] to the following vocoid is accompanied by an interdental glide or weak fricative while [nj] is followed by a palatal off-glide. These are not evident in nasal-stop sequences and it is often difficult to distinguish between such sequences as [n̪t̪] and [nt̪], [njtj] and [ntj]. However, there are no contrasts between such pairs, and they are therefore interpreted as homorganic clusters /n̪t̪/ and /njtj/.

Rarely, a nasal is realized simply as nasality in the preceding vocoid; this has been noted only in nasal-stop sequences. There is no evidence of any significant difference in this respect between voiced and voiceless stops. Examples are [uŋarã.ba] for /wuŋaramGa/, [wã:pa] for /wampa/ and

[maɲɲã.dji] for /maɲɲanjGi/. In/paɲɲapaɲɲa/ the /ɲ̥/ is often realized, in both occurrences, as retroflexion as well as nasality in the vocoid.

An occasionally heard allophone of the two apical nasals is the corresponding nasally released stop, initially voiceless, occuring after a short stressed vocoid, for example in [utnamaiḍa] (/wunamajiṯa/), [puṭṇa] (/puṇa/) and [katnama] (/kanama/). In the last case the realization [kanama] has not been heard, and the phonemic interpretation /kanama/ in preference to */katnama/ is based on analogy with similar words.Also, on a few occasions, a stop has replaced an apical nasal as the first member of a nasal-nasal cluster, as [watmani] for /wanmani/ or [ṭaṭmaṇa] for /ṭaṇmaṇa/.

A dental allophone, [n̪], of the interdental nasal /n̪/ is often heard, especially word-initial. /ṇ/ is sometimes fronted towards [n] in word-initial position and, more rarely, after a long vocoid, e.g. [b̥i:na] for /piṇa/. As /n/, like the other alveolar phonemes, does not occur in word-initial position, no confusion with /n̪/ or /ṇ/ can arise in this position.

There are some indications that the opposition between /n/ and /ṇ/ may be neutralized in clusters in which /m/ is the second member, and possibly also in some other clusters, e.g. with /k/. For example, there is fluctuation between /tjanma/ and /tjaṇma/, /ṭanma/ and /ṭaṇma/. A suspected sub-minimal pair was /kunma : ŋuṇma/, but when this was checked with the main informant the realization [ŋunma] was heard. The situation is, therefore, still not clear.

2.3.4 The laterals.

/l̥, l, lj, ɭ/ are voiced laterals with the same points of articulation as the corresponding stops. /l̥/ and /lj/ are very common. Only /ɭ/ appears word-initially, although [l] may occur in this position as an allophone of /ɭ/.

As mentioned above (2.2.4), lateral phonemes are rarely realized as a long contoid, e.g. [kaɭ:a, ŋul̥:u] and in such realizations there is usually a momentary complete occlusion, so that an alternative notation [kaḍɭa, ŋuḍl̥u] might be used. A similar realization is normal for a double lateral, e.g. /ṭawullu/ is heard as [tawul:u] or [ṭawudlu], with [ṭawulu] as a rare variant in careless speech.

An occasional realization of /l/ and /ḷ/ in careless speech is as the corresponding glide, [ɹ] (which is also a very common allophone of /r/) and [ɹ̥] (which is, of course, the normal realization of /ṛ/). For example, [maniɹ̥igå] for /maniḷika/.

2.3.5 The alveolar flap.

The normal realization in stressed position (i.e. following a stressed vowel) is the alveolar flap [ɾ]. In unstressed positions it is most commonly an alveolar glide [ɹ]. A common variant in the idiolect of the main informant, Mrs. Toby, is a voiceless flap [ɾ̥], often accompanied by a distinct aspiration [ɾ̥h]. Following a long stressed vocoid the contact between the tongue and the alveolae is often protracted, so that the sound approaches [d]. Rarely, there is a brief trill [r].

2.3.6 The glides.

/w/ is most commonly realized as a labio-velar semi-vowel [w], but also frequently as zero or as lenghtening of a following /u/ (see 2.2.4). Word-initial /w/ before /a/ or /i/ is almost always [w]. Where /w/ forms the second member of a consonant cluster it is sometimes realized as

zero, or, more frequently, as length in the preceding consonant. See the discussion in 2.3.4.

/j/ is often a palatal semi-vowel [j], but is also often realized as zero or as lengthening of a following homorganic vowel, /i/ (see 2.2.4). In word-initial position, /j/ before /u/ is always [j], but before /a/ it may occasionally be zero, or, very rarely, [ij] or [j^ʌ]. /jj/ is realized as a voiced palatal fricative [j^ʌ] (by Fred Age, in both morphemes in which it occurs) or as a glide-glide cluster [jɹ] (by Fred Age, in /pajja/) or as a voiceless palatal fricative [ç] (by Mrs. Toby, in both morphemes. [j^ʌ] is distinguished auditorily from [j] chiefly by its longer duration.

/r̥/ is a retroflex frictionless continuant [ɹ̥] in most realizations, but may, in intervocalic position, be realized as zero. In effect, this may result in a [j] in such environments as /i-i/ and /i-a/. Examples are [ijaṯa:ri:dja] for /jir̥aṯaarijitja/ and [ṯawiji] for /ṯawir̥i/. /r̥r̥/ is a voiced retroflex fricative, but with considerably less friction than [ʐ̥] and distinguished auditorily from the glide [ɹ̥] mainly by its greater length; or (in most realizations by Mrs. Toby) a voiceless fricative [ʂ], sometimes with some voice initially and thus approaching [ʐ̥].

/ɣ/ is typically a velar frictionless continuant. Like other velar phonemes, it is labialized in the environment /u(C)-a/ and may then be indistinguishable from /w/; not always, because the labialization may not extend over the entire duration of the phone. An example of labialization is [jarwulu] for /jarɣulu/ 'one'. It has been heard as a labial also in the word /juɣu/; i.e. [juwu], but this is rare. Another common allophone, especially but not exclusively used by Mrs. Toby, is a voiceless variety, a weakly fricative [x] or even [ø], used intervocalically after a stressed vocoid, e.g. [juxu], [ŋaxa̤da] for /juɣu/, /ŋaɣa̤ta/. In consonant clusters where /ɣ/ is the second member, it is often realized as zero, as length in the preceding contoid, or rarely as [x].

2.3.7 The vowels.

Since there are only three vowel phonemes, one would expect each to have a wide range of allophones. This is so.

2.3.7.1 The low vowel.

Figure 2.1 illustrates diagrammatically the range of normal realizations of the phoneme /a/ when short and stressed. In this diagram, B represents any bilabial

consonant, D any interdental, A any alveolar, P any lamino-alveolar, R any retroflex and K any velar.

Figure 2.1

		following consonant							
		/j/	P	A	R	D	B	/w/	K
	/j/	ɛ	ɛ æ		æ^{ɹ}		æ		æ ɒ
	P		æ		æ^{ɹ} ɒ^{ɹ}	æ ɒ			
	A								
preceding	R	ɛ æ	æ ɒ			æ ɛ ɒ		ɒ	
consonant	D								
	B		ɒ		ɒ^{ɹ}				
	/w/								
	K	æ					ɒ ɔ		ɒ ɔ

For example, when in the environment /tj-t/ (i.e. P-A) and stressed, /a/ is realized approximately [æ]. In the environment /j-t/ (i.e. j-A) and carrying some stress, /a/ will be realized in the vicinity of [ɛ] or [æ], or somewhere between them.

Figure 2.1 is simply a summary of average pronunciations and is necessarily simplified to some extent. For example, we are told that the first /a/ in /janGawu/ and in /jara/ will be [ɛ] or [æ] (if it is a short vocoid; the rules regarding vocoid length will be given in 2.3.8.4). But we are not told that in /janGawu/ it is normally [ɛ] while in /jara/ it is usually [æ]. The reason for this difference is not clear; it may be connected with the fact that in /janGawu/ there is some stress on the second syllable, and the first vowel is realized with less stress than in /jara/. (Stress will be discussed in 2.4.)

The figure does, however, illustrate some important points:

/a/ is realized as a low vocoid, but normally somewhat higher than the low cardinal vocoids [a] and [ɑ].

/j/, whether preceding or following, tends to raise and advance /a/, to [æ] or even as high as [ɛ]. This is stronger than any of the other environmental influences on this vowel.

Lamino-alveolars and, to a lesser extent, alveolars tend to raise and advance /a/ to some extent, especially when preceding it.

In spite of the frontness of their articulation, interdentals and bilabials show no tendency to advance /a/, except for the anomalous case of the environment R-D. In fact, bilabials

favour a rounded back articulation, close to that of [ɔ], in some environments, e.g. /wapa/ may be [wɔpa], /kamaṇḍili/ is usually [kɔmaṇḍili].

The anomalous appearance of [ɛ] and [æ] in the environment R-D is exemplified by [iṛæṭa.ɹi:dja] for /jiṛaṭaarijitja/ and [ḷiḷɛḍa] for /ḷiḷaṭa/, 'heart'. Velars and /u/ also favour retracted and occasionally rounded articulation; cf. the two examples in the preceding paragraph.

/a/ is raised and retroflexed before retroflex consonants, occasionally even becoming a syllabic [ɹ̩], e.g. [bɹ̩ṭawɹ̩ṭa].

In unstressed syllables /a/ is generally [ə] and is not greatly affected by environment, with the exception that [j] tends to raise and advance it in the same way as described above.

When realized as a long vocoid (the circumstances under which this happens will be discussed in 2.3.8.4) /a/ is lowered to an approximately central low vocoid [a̠:] or [ɑ̟:]. A following lamino-alveolar may be preceded by a palatal on-glide, e.g. [ma̠:jtju].

The double vowel /aa/ is realized almost always as a long vocoid, similar in quality to the long realizations of /a/ but often of longer duration. Unlike /a/, /aa/ retains the quality of the long vocoid even when circumstances, such as rapid speech, cause it to be shortened.

Nasality has been noted only rarely, and only as the realization of a nasal phoneme; see 2.3.3.

A rising intonation at the conclusion of an utterance (e.g. an exclamation) may be accompanied by lengthening of a final /a/ and its distortion, usually in the direction of [u], e.g. ['n̪andau], 'go on ' (said with urgency), but sometimes in the direction of [i], as in ['d̪aṛa' jiwai].

Word-final /a/ (and other vowels) may occasionally be reduced to a voiceless form, e.g. [ɒ̥], or even to zero.

2.3.7.2 The high front vowel.

/i/, when short, is most commonly realized as approximately [ɪ]. Following /j/ or a lamino-alveolar, it is usually raised towards [i]. Preceding /w/, it is retracted to [ɨ], or may, in addition be rounded to [ʉ]; /jiwa/ may be [i:wa], [jɨwa] or [jʉwa]. A following labial consonant

may have a similar, but less marked, effect. In certain environments /i/ may be lowered towards [e]; this has been noted word-finally (the suffix /-mi/ as [me]), before an alveolar (e.g. [jeta] for /jita/ and [jenda] for /jinGa /) and in /ŋawija/ (rarely [ŋaweja]). Before a retroflex, /i/ is centralised and retroflexed, and may be close to [ə], e.g. [itjəɻa] for /jitjiṛa/.

When /i/ or /iji/ is realized as a long vocoid, a phone in the neighbourhood of [i:] is generally heard, but there are occasional lower realizations, e.g. [me:] for /miji/.

2.3.7.3 The high back vowel.

/u/ is typically [ʊ] when short, and slightly higher, [ʊ̝:], in its long realization. Before /w/ it may be realized as zero, as in [n̪wɔkamaiḍa] (/n̪uwakamajiṭa/) or [kuŋwa] (/kuŋuwa/). Before /j/, [ɯ] has been heard, as in [ŋɯi:nda] for /ŋujinda/. In word final position it is rarely lowered towards [o], e.g. [kunatjaro]. In the environment P-B an advanced form is heard, as in /tjuwala/ ([tjʉwala]) and /wunjdjumuru/ ([wunjdjʉmuru]). This is also heard, unpredictably, in other environments, e.g. ['kaḷʉ'n̪a.nda] for /kaḷu n̪anGa/, 'go over there ', [u:laŋʉḷu] for /wulaŋuḷu/,

'from those two' and [wupamaḷu] for /wupamaḷu/, 'because of him'. Unstressed /u/ may be lowered and centralised to [ə], e.g. [wurəṇa] (/wuruṇa/, 'you, plural, accusative').

2.3.7.4 Vowel length.

As stated above (2.2.4), the sequences /aa/, /iji/ and /uwu/ are most commonly realized as long vocoids, approximately [a:], [i:] and [u:], while other sequences of the form VWV (e.g. /awa/and /aṛa/) may also be realized as the corresponding long vocoid. The remainder of this discussion applies to the phonemically simple vowels /a, i, u/.

The circumstances in which a vowel may be realized as a long vocoid can be specified by a set of "rules". These rules are numbered in order of priority; the first relevant rule applies to a particular case, and all later rules are to be ignored. For example, according to rule 6, /ṇanGa/ is, in slow speech, [ṇa:nda]. According to rule 7, it would be [ṇanda], but since rule 6 has applied, no later rule is relevant, and the final form specified by the rules is [ṇa:nda].

No reference is made in the rules to semi-long vocoids. There is, however, no sharp division between long and short vocoids, and vocoids that would be better described as semi-long occur in many cases where the rules specify a long vocoid, especially in normal speech, and also in some cases where a short vocoid is expected.

The rules are:

1. Vowels are short (i.e. realized as short vocoids) in rapid speech.
2. A vowel is long (and often distorted) when it occurs utterance final and is realized with a high rising tone, implying, for example, urgency or exasperation. Thus ['n̪u:n̪uma'ɟa:u], /n̪uwun̪u mar̪a/, 'The honey is here (not over there where you are going)'.
3. A vowel may be long in utterance final position.
4. The vowel of a prosodic suffix is frequently long.
5. Vowels are short in a word that is realized without a primary word-stress. This applies mainly to certain non-inflecting words and in certain cases to vocatives. (Stress will be discussed in 2.5.) Examples are [papa , n̪unda , jaka].
6. A vowel is long in two syllable words when it precedes a nasal-voiced stop sequence, as in [wi:nda, n̪a:nda, wa:mba, mi:njdji].

7. A vowel is short before (i.e. immediately before) a consonant cluster, e.g. [pu̧ɣa, kunma, ŋunti].

8. A vowel is short before /ṭ/ or /ḷ/, e.g. [muṭu, kaḷa, tjiṭa, njiḷi].

9. /u/ is short if the next vowel is also /u/, as in /ṭuṭu, wuku, juɣu/.

10. A vowel is long in a two syllable word before a stop, /l/, /r/ or /ṇ/, e.g. [ma:la, pi:li, wa:ta, ku:ti, ṭu:ra, ma:ṭa, ma:tju, wa:ka, pa:pu, mu:ka, bi:ṇa].

11. A high vowel is short before /ŋ/, e.g. [njiŋi , uŋwa] (/wuŋa/).

12. /i/ may be long when it follows a word-initial /j/, as in [i:kari:dja] (/jikarijitja/) or [i:mimi].

13. /i/ is long in a two syllable word when it follows a word-initial lamino-alveolar consonant, e.g. [nji:mi, nji:na].

14. /u/ is long when preceded by /w/ in the first syllable of a two syllable word, e.g. [u:ma, u:ka].

15. /a/ is long in a two syllable word when preceding /ŋ/ or /w/, as in [ŋa:ŋa, ka:ŋa, n̪a:ŋa, ma:wu, wa:wu].

16. A vowel may retain some or all of its length if any word to which rule 5, 9, 12, 13 or 14 applies is modified by the addition of one or more bound morphemes, e.g. [pi:lilu, mu:kamaiḍa] for /pililu, mukamajiṭa/.

17. All vowels are short.

These rules may be represented by the formulae shown below. First, however, a number of symbols must be defined.

V is any vowel. [V:] includes [V.].

C is any consonant. C^1 means one or more consonants; in effect, one or two, because the language has no clusters of more than two consonants.

T is any stop phoneme.

N is any nasal phoneme.

P is, as previously defined, any lamino-alveolar phoneme.

L is any lateral phoneme.

-> means "is realized as".

{ } encloses alternatives.

() encloses optional segments.

/ is a morpheme boundary, // a word boundary, /// a pause, e.g. an utterance boundary or a pause within an utterance, as after a clause.

;<1 means "having a stress less than primary word stress".

' means "having a high rising tone".

/ marks the definition of the environment. Thus /C-N would mean "preceded by a consonant and followed by a nasal". / CVC-(CV)// would mean "preceded by the sequence 'consonant-vowel-consonant' and followed by the sequence 'consonant-vowel-word boundary' or immediately by a word boundary".

The rules are:

1. V -> [V] / rapid speech
2. V -> [V:] / -///
3. V -> [V(:)] / -///
4. V -> [V(:)] // prosodic suffix / C-
5. V -> [V] / (CV) C-C <1
6. V -> [V:] //C-NGV//
7. V -> [V] / -CC
8. V -> [V] / -{t̥, l̥}
9. /u/ -> [u] / -Cu
10. V -> [V:] //C-{T, n, l̥, r} V//
11. /i,u/ -> [i:, u:] / -ŋV//
12. /i/ -> [i(:)] / j-
13. /i/ -> [i:] ///P-CV//
14. /u/ -> [u:] //w-CV//
15. /a/ -> [a:] //C-ŋV//
16. [V:] ///C-C^{1}V// -> [V(:)] ///C-C^{1}V/C
17. V -> [V]

Exceptions to these rules are rare, and are most likely to be heard when a two syllable word is spoken in isolation, in answer to a question such as "What do you call ----- ". Examples are [pa:npa, ja.l̥wi]. There are no consistent exceptions.

2.4 Inter-phonemic fluctuation.

2.4.1 Vowel harmony.

Vowel harmony is not a prominent feature of the Waḷuwara language, and occurs in only one morpheme, the purposive suffix /ji~ju/. The /ji/ form is found after /a/ or /i/, as in /ŋamaji, japiji, jaŋaṯiji, ŋankanaji/, while /ju/ follows /u/, e.g. /wukuju, ṉuwuŋuju/.

2.4.2 Interdental-lamino-alveolar fluctuation.

This has already been discussed in 2.2.3. Examples showing the distribution of the suffix /ṉa~-nja/ are /papaṉa, ŋamaṉa, wuruṉa, januṉa, miminja, makarinja/. There is, however, no prohibition against the sequence /iṉa/, and the suffix /-ṉaraŋu/ regularly follows /i/, e.g. / jaŋaṯiṉaraŋu/.

There is an alternation between /ṯ/ and /tj/ in certain verb suffixes; thus we have /jaŋaṯiji/ but /karitjiji/, /jaŋajiṯa/ but /karijitja/, but also /maṯarijiṯa/. The choice of /ṯ/ or /tj/ depends on the group to which the verb belongs, and the grouping is only partly phonological; in fact, certain verbs of different groups share the same imperative form.

Thus /tjira/ is the imperative of the verb 'to spear' (present tense /tjirajiṯa/) and of the verb 'to be sick' (present tense /tjirijitja/).

2.4.3 Interchange of the nasals and stops.

A very few examples of interchange between a nasal and the corresponding stop have been noted, e.g. [juŋuṇa] for /juŋuṯa/, [katjiṇa] for /kanjiṇa/. In the second case, the informant experienced no difficulty in recognising the word when, two years later, it was played back to her.

Note also the alternation between /-ṯa/ and /-ṇa/ in a verb suffix; /jaŋaṯata/ but /pakariṇata/. (Another allomorph of the same suffix is /tja/, as in /karitjata/.)

2.4.4 Fluctuations in rapid speech.

Unintentional assimilation of a vowel or consonant to a following vowel or consonant is not uncommon. Examples are:

[mikulu] for /mikilu/

[jawiṇuŋuḷu] for /jawiṇiŋuḷu/

[ṇan'da.mu'kaṛali] for /ṇanGami kaṛali/

['ṇaŋaḷi'pali'djaṇma'ri.dja] for /ṇaŋaḷi jipala tjaṇmarijitja/

['ʈakuja'ɳandaɳa] for /ʈakuju ɳanGaɳa/

['ŋaɳanji'jaŋaɳa] for /ŋaɳa jinja jaŋaɳa/

Loss of a syllable will be noticed in the fourth and sixth examples above; in both cases /ji/ has been realized as zero. Loss of one of two identical syllables is exemplified by: ['kunta,ŋuɭa'ŋari,djaɳa] for /kuntiŋuɭu ŋaŋaritjaɳa/ and ['kaɭa,ŋaɳaka'ɹi:ɖa] for /kaɭa ŋaɳa ɳakarijiʈa/.

The word /jiwa/, 'he, she, it, that, there', is very often affected by these processes - assimilation and elision - and may be realized as [ji, ju, ja, wa] or even [wi]. In such cases it is auditorily similar to a suffix on the preceding word, being completely unstressed. (Compare the realization of this word when stressed, 2.3.8.2.)

2.4.5 Alteration of stem-final vowels.

It will be noticed in the next chapter that the addition of certain suffixes may result in a change in the final vowel of the stem of a word. For example, when certain allophones of the possessive suffix are added to a noun whose stem-final vowel is /i/ or /u/, this vowel is lost, e.g. /kuɳukuɳu/ becomes /kuɳukuɳaa/; /ʈuwaɭi/ may become /ʈuwaɭija/, but may also become /ʈuwaɭa/ or /ʈuwaɭaa/. To account for such

cases, a rule was formulated which stated that, if a suffix beginning with a vowel is added to a stem ending in a different vowel, the final vowel of the stem is elided.

This rule having been formulated, it was then possible to take advantage of it to explain some other similar phenomena. Fo example, when the irrealis mood suffix, originally phonemicized as /maḷa/, is added to a verb stem, the final /a/ of the stem becomes /i/. Thus /jaŋa/ becomes /jaŋimaḷa/, /maṭa/ becomes /maṭimaḷa/, and so on. This can now be explained if we regard the irrealis suffix as /imaḷa/, thus bringing the rule into operation.

However, a change in the rule then became necessary, because, for example, /ḷari-/ + /-imaḷa/ is not */ḷariimaḷa/ but /ḷarimaḷa/. The rule is therefore simplified to:
If a suffix beginning in a vowel is added to a stem, the final vowel of the stem is elided.

For the purpose of determination of vowel length and of stress, the morpheme boundary should be assumed to follow the initial vowel of such a suffix. To make this automatic, the rule can again be changed, and will now read: If a suffix beginning in a vowel is added to a stem, the final vowel of the stem is assimilated to the initial vowel of the suffix, and the latter is then elided.

The steps in the postulated process are illustrated by the case of /jaŋimaḷa/:

suffixation	/jaŋa/ + /-imaḷa/	>	/jaŋaimaḷa/
assimilation		>	/jaŋiimaḷa/
elision		>	/jaŋimaḷa/

This rule necessitates a change in the phonemicisation of a few suffixes; for example, the allomorph of the accusative case suffix previously represented as /-aṇa/ must now be /-aaṇa/. So, for example, /ŋankana/ + /-aaṇa/ > /ŋankanaaṇa/.

2.5 Stress and intonation.

Suprasegmentals, or prosodic units, are features which, extending over a sequence of phones, perform three functions:

(a) They give the hearer clues to how the sequence is to be segmented,

(b) They add to the semantic content of the sequence by helping to signal that, for example, a certain utterance is a question, not a statement,

(c) They add to the "emotional" content of the sequence by conveying such feelings as surprise, anger, disappointment and so on.

Suprasegmentals are realized in various combinations of four basic properties of perceived sound: loudness, pitch, quality and length. All four of the variables are to some extent interdependent, but the first, loudness, appears to be the main variable involved in the fulfilment of function (a), while functions (b) and (c) are fulfilled mainly by means of a pattern of varying pitch. The stress pattern on each word, or word prosodeme, fulfils function (a), while the intonation pattern fulfils functions (b) and (c). Given sufficient data, one could further subdivide intonation patterns into those performing function (b) - phrase, clause, sentence and utterance prosodemes - and those performing function (c) - contouremes. (A prosodeme is a class of prosodes and a contoureme a class of contours; cf. Hammarström (1966).) However, in view of the limited data available for Waḷuwara, this has not been attempted.

2.5.1 Representation of stress and intonation.

Stress has been marked so far by the standard I.P.A. method; ' for primary and ˌ for secondary stress. However, in this section, four levels of stress - sentence stress (representing the highest degree of loudness - see below), primary and secondary stress, and tertiary or unstressed -

must be considered. The symbol " is therefore introduced to represent sentence stress. Unstressed syllables can remain unmarked. Tones will be specified as normal, high, very high and low, abbreviated to n, h, vh and l.

Stress in Waḷuwara is realized chiefly as loudness. However, there is no direct correlation between degree of stress and degree of loudness. The word stress levels are intended to represent the relative degrees of stress within a word, and have no reference to relationships between words; e.g. a secondary stress on one word may correspond to a higher degree of loudness than a primary stress on another word in the same utterance. This is especially likely if the former word is one whose primary stressed syllable also carries a sentence stress.

If, as is normal, a word has one syllable which is stressed more than the other syllables in the word, this syllable is defined as having primary stress. A word may have only one primary stress unless it is followed by a word in which all syllables are unstressed, in which case there may be a second primary stress on the last syllable (see the examples to rule 4 below). Stressed syllables other than primary stressed syllables carry secondary stress.

Superimposed on the word stress patterns, or word prosodemes, are sentence prosodemes, which may be realized mainly in loudness, but usually mainly in pitch. One effect of this superposition is that one, or occasionally two, words in a sentence may carry a stress (normally on the primary stressed syllable) which is noticeably higher than normal primary word stress. This is referred to as sentence stress, and designated by ".

Because of the lack of natural speech in the recorded corpus, data on sentence prosodemes and contouremes are meagre; as a rule, only Mrs. Toby produced utterances with sufficient fluency that a sentence stress could be noted. Only a few remarks will therefore be made on these aspects of the language.

2.5.2 Word prosodemes.

A very common pattern of stresses in Australian languages is that in which there is a primary stress on the first syllable of a word and secondary stress on the other odd-numbered syllables except the last. Thus, considering, for illustration, only words containing CV-type syllables, we have 'CVCV, 'CVCVCV, 'CVCV,CVCV, 'CVCV,CVCVCV and so on.

This pattern is adhered to by many words in Waḷuwara, but there is a large and complex set of exceptions, often with more than one permissable stress pattern. An attempt is made here to devise a set of rules by which the stress patterns on a word may be predicted and the result is presented below. However, this problem would repay further study.

In the rules given below, a formula

V -> ['V] / X-Y

means "the syllable of which V is the vowel has primary stress when preceded by X and followed by Y, X and Y representing a string of one or more symbols".

The string [ˈˌV], is used in place of ['V] in the above formula, specifies that the syllable containing V may carry either primary or secondary stress; [(')V] means either primary stress or unstressed and [(ˌ)V] means either secondary stress or unstressed. In such cases it is not specified which of the alternatives is more likely. In general, this cannot be specified; however, one tendency is for the primary stress to appear on a later syllable if a word is lengthened by suffixation.

The symbols defined in 2.3.7.4 have the same meanings here. In addition:

Subscript 1 is used to denote a particular (but unspecified) member of a class; i.e. N_1VN_1 means a sequence in which both nasals are the same.

The morpheme boundary / is used only to separate a bound morpheme from another morpheme.

[V:] refers to a long vocoid, and includes diphthongs.

$\overset{[V:]}{-}$CV means that the vowel concerned is realized as a long vocoid, unless CV happens to be a glide followed by the homorganic vowel, in which case the vowel concerned and the following syllable are realized together as a long vocoid or a diphthong. So, if the vowel represented by - were /i/, $\overset{[V:]}{-}$ka would mean that /ika/ was realized as [i:ka], $\overset{[V:]}{-}$ji would mean that /iji/ was realized as [i:], or if - represented /a/, $\overset{[V:]}{-}$ji would mean that /aji/ was realized as [ai]. $\overset{[V:]}{-}$V means that the vowel concerned and the following vowel are realized together as a long vocoid, e.g. $\overset{[V:]}{-}$a, if - represents /a/, means that /aa/ is realized as [a:].

< > enclosing two items means that the former is permitted only if the latter applies. Thus, V-> [±V] X-Y /</>

is a combination of the two formulae

V -> [ˌV] X-Y//

and V -> [ˈV] X-Y/

with disjunctive ordering.

A group of rules is disjunctively ordered if the only rule of the group which can apply in a particular case is the first which is applicable (or, of course, none may apply). A group of rules is conjunctively ordered if the application of one in a particular case does not preclude the application of any later members of the group. In the present case, the rules are arranged in conjunctively ordered groups, specified by numbers, and each made up of one or more disjunctively ordered rules, specified by letters, a, b, c, etc. Thus, for example, the only rule of the group 2a, 2b, 2c, ---- -- 2t that applies to a word is the first one that can apply, and all later rules in this group are ignored. This, however, does not prevent a word from returning and being acted on more than once by a particular group of rules, which thus may specify the degree of stress on more than one syllable; this may be necessary for a very long word. When a rule - say 2g - has applied, one then proceeds to 3a, 3b if 3a does not apply, and so on. When a syllable has been assigned a stress other than tertiary by any rule, no later rule can apply to this syllable. Also, no

later rule applies to any syllable that has been assigned a tertiary stress by rule 6a. The rules operate on the left-most available sequence of syllables.

The rules are given below, with examples of words (or, in the case of rule 4, pairs of words) to which they could be applied:

1 V -> [V]

2a V -> [ˌV] /// k-ṛuŋalγama

/kuṛuŋalγama/

b V -> [<ˈ>V] /// CVT-rV/</>

/pakaru, kapiri, jikiri, wutjuru/

c V -> [ˈV] /// CVC-(/)V(CV)//

/kalaaka, matjaa, maṭaa/

d V -> [<ˈ>V] /// $\begin{Bmatrix} T \\ W \end{Bmatrix}$ VNG-$\begin{Bmatrix} T \\ L \end{Bmatrix}$ V/</>

/kunGatji, ṭumGaki, kaṇGila, janjGaṭa/

e V -> [<ˈ>V] /// CVC-L $\begin{Bmatrix} W \\ : \end{Bmatrix}$ V<///>

/ṭawullu, kajalla, kulalwa, muŋallumaṇa/

f V -> [(ˈ)V] /// CV $\begin{Bmatrix} L: \\ LW \\ rW \end{Bmatrix}$ -/CV/CV

/jallariṇa, wurγaraṇa, walγaritjaṇa/

g V -> [(ˈ)V] /// jVT- $\begin{Bmatrix} N \\ L \\ /r \end{Bmatrix}$ V

/japunu, jitjala, jipala, jikarijitja/

h V -> [(<ˈ>)V] /// CVC^{l}-/ $\begin{Bmatrix} N \\ r \end{Bmatrix}$ $\begin{bmatrix} V \\ V \end{bmatrix}$ </// >

/maṭaṇa, ṇanGaṇa, mukamaṇa, ŋaṭaŋu, maṭarakari/

i V -> [(')V] /// CVC-/CV/CV

/kuŋaṭatami, tjiritjiṭa, ŋaŋaritjaṇa/

j V -> [(')V] /// wu(/)C-C^{1}V

/wumaḷu, wuŋaraṃGa, wukalpara, wuṭuŋu/

k V -> [(')V] /// CV $\begin{Bmatrix} N \\ L \end{Bmatrix} \begin{Bmatrix} T \\ N \end{Bmatrix}$ -CV(/)C

/waḷkaraṭukiji, ŋuṇparilaka/

l V -> [(,)V] /// CV $\begin{Bmatrix} N \\ L \end{Bmatrix} \begin{Bmatrix} T \\ N \end{Bmatrix}$ -CV//

/maṇkaru, wankaṭa, waḷpatji, ṭiṇṭini, mampunu, waṇmira/

m /a/-> [(')a] /// C $\begin{Bmatrix} ij \\ ar \\ uw \\ ir \end{Bmatrix}$ -(/)CV(C)V

/wijaparijiṭa, jiṛaṭaarijitja, tjuwalaka, kaṛaliwali, ṭuwaḷiṇaraṇu/

n /i/-> [(')i] /// CVj-LV

/ṭajili/

o V -> [,)V] / N_1VN_1G-CV//

/mamGiri, mimGaru/

p V -> [,V] /// CVT- $\begin{Bmatrix} N \\ L \\ NG \end{Bmatrix}$ V//</>

/kapula, kuṭana, ṭaṭali, paṭanGi, ŋaṭala/

q V -> ['V] /// WVC^{1}- $\begin{Bmatrix} N \\ L \end{Bmatrix} \begin{Bmatrix} T \\ N \end{Bmatrix}$ V/

/jatjunmajiṭa/

r V -> [(<!>)V] /// CVC^{1}- $\begin{Bmatrix} N \\ L \end{Bmatrix} \begin{Bmatrix} T \\ N \end{Bmatrix}$ V/</>

/piralku, kutjinka, kumGaḷṭa, matjaḷku/

s V -> [(')V] /// C-C^{1}V

/ṇunda, jaka, jiwa/

t V -> [ˈV] / [V:] --(/)CV(/)C

/jaŋajiṭa, karijitjami, kuṛijiwaka/

3a /a/ -> [ˈa] / //kuṛuŋ-lγama

/kuṛuŋalγama/

b V -> [ˈV] / //C-CV(/)C

/punjGuru, papuṭu, kanuŋGu, maŋGalja/and most other words.

c V -> [ˈV] / //C-(C)ˌCV

See 2b, d, e, f, etc.

4 V -> [ˈV] / --//CVC[1]V//

/waṇunGa jaka, kuṛukuṛuḷa janu, maṛaṭuriṇa jiwa/

5a V -> [(ˌ)V] / ˈCVCV/CV(/)C-(/)CV

/ŋamaṇaraŋu, njinaṭakari/

b V -> [ˌ)V] / CVCVC-/C

/waṭaḷaṭarijiṭa, jaramanaka/

c V -> [ˌV] / CVC[1]V/C-CVCV

/ṭajiliṇaraŋu/

d V -> [ˌV] / CVCV/C-(/)CV//

/jararamaḷu, tjipiljapaji/

6a /i/ -> [i] / V/j-TV

/waṭaḷaṭarijiṭa, karijitja, jaŋajiṭa/

b V -> [ˌV] / /ˈCVCVCV/C-(/)C

/pamarakaka, jararamaḷu/

c V -> [<ˌ>V] / ˈCV(/)CV(/)C-(/)CV<//>

/mawuruka, panGipanGi, jaramana, ṇatamaṇami, ŋunparilaka, waṭaḷaṭarijiṭa, ṭajiliṇaraŋu/

7a V --> [,V] / 'CVCV/CV(/)C-(/)CV

b V --> [,V] / CVCVC-/C

c V --> [,V] / CVC]V/C-CVCV

d V --> [,V] / CVCV/C-(/)CV//

If the pattern is not complete after 7, i.e. if there are still any sequences of more than two unstressed vowels in a word (except that a sequence of three unstressed vowels is permitted if rule 6a applied to the first vowel in the sequence), return to 6a and repeat rules 6 and 7.

This system of rules is quite complex and further study may show that it is unnecessarily so; for example, there may be a system in which, for certain words, the stress could be considered as spread over two syllables, being realized more on the first or the second according to conditioning factors, such as the presence or absence of suffixation. The word prosodemes in Waḷuwara are most likely to deviate from the typical patterns quoted at the beginning of this sub-section for words consisting of a trisyllabic free morpheme with or without bound morphemes. The stress on many such words is variable; the main stress may be on the first or second syllable, and if the second syllable does not have the main stress it often has a secondary stress.

In such cases, addition of a bound morpheme to the stem increases the likelihood of a primary stress on the second syllable. (See rule 2b.)

A few remarks can be made about the prosodemes generated by these rules. A word can have only one primary stress, unless the following word is unstressed (cf. rules 2s and 4). Rule 2s is restricted by syntactic considerations in that it can generate the pattern in which the word has no primary stress only in a limited number of words: certain adverbs such as /ṉuṉGa/ and /watji/, emphatic particles /jaka/ and /kuṉu/, some pronouns and occasionally, the vocative form of a proper noun, such as /papa/. In all other cases, two-syllable words have the stress on the first syllable. Three-syllable words may, however, have any of the prosodemes of the types
'CVCVCV, (e.g. /ṯaṯama, kalaṉu, jarara/), 'CVˌCVCV, (e.g. /kapula, ṯaṯali, ŋaṯala/) or CV'CVCV, (e.g. /pakaru, kapiri, wumaḷu/). This applies equally to words containing syllable types other than CV. Using 1 to represent a primary stressed syllable, 2 a secondary stressed syllable, and 3 an unstressed syllable, we can abbreviate these three prosodemes to 133, 123 and 313. This system will be used below. Longer words build on these patterns; the degree of variability is decreased by the restrictions which prevent more

than two unstressed syllables from occuring in sequence (except that there can be three if two of them are realized together as a single 'phonetic syllable' - to use Pike's term - with a long vocoid), stressed syllables from occurring together (except that the first two syllables of certain three syllable words may be stressed) and stress from falling on the last syllable of a word (unless an unstressed word follows). Thus a four syllable word can only have the patterns 1323, or 3133, a five syllable word 13233, 13323 or 31323, and a six syllable word 133233, 132323, 313233, or 313323. (Patterns permissable only when one of the conditions mentioned in parentheses in the previous sentence applies are not included.) Not all of these patterns are available for any one word of the appropriate length; only the rules can show which are applicable in any case. Thus /ṯajiliṉaraŋu/ can be only ['ṯajili,ṉaraŋu], [ṯa'jiliṉa,raŋu] or [ṯa'jili,ṉaraŋu]; the first pattern, 133233, is permitted by rules 2n, 3b and 5c, the second, 313323, by rules 2n and 5a and the third, 313233, by rules 2n, 5a and 6c. No other rules apply (except rule 1, which applies to every word).

Some other examples of the operation of the rules follow:

/jarara/ 133 by rule 3b.

/warawuḷa/ 1323 by rules 3b and 6c.

/pakarupa/ 3133 by rule 2b.

/jaramanaka/ 13233 by rules 3b, 5b and 6c or 13323 by rules 3b and 5b, or by 3b, 5b, 6c and 7b.

/ŋutjanakaku/ 13323 by rules 3b and 5d.

/ḷaritjiṭa/ 1323 by rules 2i, 3b and 6b, or 3133 by rule 2i.

/pilinjtjiṇaraŋariji/ 13323323 by rules 2r, 3c, 5c and 6b,
31332323 by rules 2r, 5a and 6c or
by rules 2r, 5a, 6c, 7a and 6c, or
31323323 by rules 2r, 5a, 6c and 7d.

(Of these three realizations, only the first has been attested.)

/ŋaŋaritjaṇa/ 13323 by rules 2i, 3c and 5a or by rules 2i, 3c, 5a, 6c and 7a,
13233 by rules 2i, 3c, 5a and 6c, or
31323 by rules 2i and 6c.

(All three of these realizations are attested.)

The rules appear to have been overruled in a few cases in which the stresses on an utterance appear to follow a rhythmical pattern with no reference to the normal word prosodemes, and therefore providing no clues to the segmentation of the utterance. Examples are:

[ka'la:ka'jalu'ŋaṇa'ṇanda'ṇama'ṛalu]

/kalaaka jalu ŋaṇa ṇanGaṇa maṛalu/

long ago- yet I go -past here-to

emphatic

I came here a long time ago.

[ˈnji.na,ipaˈlaṇaˈŋaḷi:palaˈkuli,rinja]

/njina jipala ṇaŋaḷi jipala kulirinja/

sit you two what you two fight-complement

Sit down, you two; what are you fighting for?

['puḷ:u,kutiˈṇaṇin,deja]

/puḷḷukutiṇa ṇunGa jiwa/

hard-become- now that It's hard now.
past

In the first example, the only reason for the stress on the final syllable of /ṇanGaṇa/ seems to be a desire to have a stress on every second syllable of the utterance. The stress distribution and elision in the second example probably are for the same reason; the normal pattern on /jipala/ is 133 or 313, and on /ṇaŋaḷi/ 133. The stress pattern in the third example can possibly be explained by two applications of rule 4 followed by elision of a syllable from the last word; the final effect is definitely rhythmical.

2.5.3 Sentence stress.

Sentence stress is quite unpredictable and depends on what item or items in an utterance the speaker wishes to emphasize. Some examples are given. Notation, as in the previous examples, is broad phonetic; thus a non-phonemic item such as vocoid length, which is of significance in the realization of stress, is shown.

["ma:tju'jiwa'wara,wuḷa'jin,daŋu] /matju jiwa warawuḷa jinGaŋu/
bad that dog your Your dog is no good.

['mu.ka"jaka'jiwa] /muka jaka jiwa/
good emph. he He's good, all right.

['kana'ipa'n̪andan̪aŋa"t̪aŋu,ḷalu"ŋuriṇi,ḷa:lu]
/kana jipa n̪anGan̪a ŋat̪aŋuḷalu ŋuriṇiḷalu/
not you go-past my-to camp-to
You didn't come to my camp. (In the actual context the English equivalent was 'If you had come to my camp---'.)

['n̪aŋa,ḷi:wa"pirɣi] /n̪aŋaḷi jiwa pirɣi/
what that true Well, fancy that (or 'Is that so?')

In some cases a sentence stress is confined to the normal primary stressed syllable of a word (e.g. in /ŋaṭaŋuḷalu/), while in other cases it is spread over most or all of the word; thus in /ŋuriṇiḷalu/ the second and third syllables are both stressed similarly to syllables carrying secondary stress in other parts of the utterance and the fourth syllable carries the equivalent of a primary stress. So, given a different set of conventions for the representation of stress, we could have written *["ŋu:ri:ṇi'ḷa:lu]; similarly, we could have written *["pir'γi] instead of ["pirγi].

Sentence stress, unlike word stress, is often realized in a significant rise in pitch instead of, or as well as, in loudness. Further reference will be made to this in the next sub-section.

2.5.4 Intonation.

Intonation patterns observed in Waḷuwara can be grouped into four categories:

(i) declarative prosodes,

(ii) interrogative prosodes,

(iii) imperative prosodes,

(iv) exclamatory contours.

The declarative prosodes are realizations of the declarative prosodeme, and consist of a steady normal pitch throughout the utterance except in the last part, normally the last syllable, when there is a fall in pitch. Superimposed on this are the small pitch variations due to the pitch component of the word prosodes and, often, larger variations due to the sentence stress. The latter may lift the pitch into the high range.

A declarative prosode may be spread over a whole utterance, which may include a short pause between two sentences, i.e. there is no fall in pitch (or loudness) at the end of the first sentence. Alternatively , each sentence of an utterance may have a separate realization of the prosodeme.

Some examples of declarative prosodes follow. The notation is broad phonetic and [/] represents a pause; it will also be used to mark the boundaries of sequences in phonemic notation, but this should lead to no confusion. To avoid the necessity of giving all examples in both types of notation, words will be bounded by spaces in the phonetic notation, except when two words are particularly closely bound together, as [n̪aŋaḷi:pa], /n̪aŋaḷi jipa/.

n ——————— l

karali ŋaṭaŋu jiwa

child my he He's my boy.

n ——————— l n —— vh — h n —— l

kaṭu ŋaṇa inja ŋutaṇa/ jiwa kimaṇa jaka

fruit I him give- he let go- emphatic
past past

I gave him some fruit but he wouldn't have it.

h

n —— n ——— l

iwa ḷaritja: ji.na

/jiwa ḷaritjaa jina/

he hear- you (accusative) He might hear you.
potential

h n ——————— l

kana ŋaṇa inja ŋuti: kaḷa (/ŋutiji/)

not I him give- meat
purposive

I'm not going to give him any meat.

h n h

m ——————— l

ṭaŋgumaṭakari janu ŋankana:ṇa

roast- they kangaroo-accusative
habitual-
past

It was <u>kangaroos</u> they roasted.

n 1

wula kuliritji maṛaka warawuḷa / indaŋu ŋaṭaŋwaṛa kara

they fight- here- dog your my- too

two gerund loc. possess.

Your dog and my dog were fighting.

The interrogative prosodeme is realized as a steady normal pitch with a rise over the last few syllables and a drop towards normal pitch in the last syllable. A high pitch, realization of a sentence stress, is often superimposed, and is frequently on a question word, such as /ṇaŋaḷi/, 'what?' or /ŋaṛaku/, 'who?'. The interrogative prosodeme may not be realized on the interrogative clause or sentence, but on another portion of the utterance; see the third example below.

h n

n

waji ŋaṇa ṇandimaḷa

question I go-irrealis Can I come ?

h

n n-

ṇatiṇeji /ṇatiṇa jiwa/ What happened ?

n ——————— l h ——

ŋaŋaḷi:pa jaŋaiṭa ŋaṇa / papa

/ŋaŋaḷi jipa jaŋajiṭa ŋaṇa, papa/

what you look- me girl
present

What are you looking at me for, girl?

h n

n ——————————— n

ŋanŋuka ipa inja pumaṭaka mukamaṇa

how many- you it day-loc. make-past
loc. (accus.)

How many days did you take to make it?

The imperative prosodeme is realized as an initial high pitch falling to normal. It may be repeated several times in a long imperative utterance, and may be preceded by a short period of normal pitch.

h

n — n

ŋuwakama Hide it!

h h

n ——————— n

kana ŋaṇa katnama

not me push Don't push me!

vh vh h

kura ŋanda Go on, go!

The exclamatory contoureme is characterized by a rising pitch, usually to a very high level, on the last syllables. This is used to convey urgency, surprise, sympathy, agitation, etc. Distortion of the final vowel is common.

n h vh kukuwaṇa.u	/kukuwaṇa/	Poor fellow!
n h vh kul:ika ŋamau	/kulika ŋama/	Quickly, mummy!
n h waṇunda		That's enough!

An alternative realization of the exclamatory contoureme is as a uniformly high pitch.

h kaṛalija japa:	/kaṛali jiwa japaa/ child that fall-potential Be careful, the baby might fall!	

2.6 Distribution of phonemes.

2.6.1 Syllables.

Syllables in Waḷuwara are classified into four types: V, CV, VC, CVC; or, more briefly, (C)V(C). There are, however, several restrictions on the occurence of the different types and large differences in their relative frequency.

Syllable type V includes only /a/, and can occur only word-medial or word-final, and can follow only a syllable ending in /a/. Thus a vowel cannot occur word-initial. There is a single exception; the word /aṛukuṭa/, 'circumcision', which is clearly a borrowing from an Arandic language - cf. Aljawara [aruguḍa], 'initiand' (C. Yallop, private communication).

VC occurs in only one word, /kaanGi/, 'coming', and, of course, if a different decision had been made on the interpretation of nasal-voiced stop clusters (cf. 2.2.1), this word might have been segmented CV-V-CV or CV-V-CCV instead of CV-VC-CV. It is therefore quite atypical.

Most occurrences of CVC are word-initial and it cannot occur word-final; in other words, a word must end in a vowel.

Since V and VC type syllables cannot follow a CVC type syllable, a CV or CVC type syllable must follow and so a consonant cluster must occur.

In a count of syllables in five texts[3] the total was 1687. Of these, 1591, or 94.3%, were of the form CV, 80, or 4.7%, were CVC, 15, or 0.9%, were V and one was VC. Of the 80 CVC syllables, 43 were followed by a syllable beginning with /G/.

76 of the 80 CVC syllables were word-initial and they thus formed 14.4% of syllables in this position. Of the other four CVC syllables, two occurrences of /ran/ were in second position in a word borrowed from English (actually an Anglicized form of an original aboriginal word, now used as a place name, Carandotta), one (/jal/) was in third position in a reduplicated word (/jalkujalku/, realized as [jalkuwalku]) and one (/ṭan/, followed by /G/) was a fourth syllable.

[3] A traditional story told by George Age, a monologue, a traditional story, an imaginary conversation and a topical story all by Mrs. Ida Toby. They contained, respectively, 151, 198, 52, 67 and 58 words.

9 of the 15 /a/ syllables were word-final and the others word-medial.

There are no single syllable words in Waḷuwara. In the texts, about 38% of words were of two syllables, 26% of three syllables, 22% of four, 13% of five, 2% of six (11 words) and there were two words of seven syllables.

2.6.2 Consonant clusters.

It follows from the restrictions listed in 2.6.1 that the frequency of occurrence of consonant clusters is the same as the frequency of occurrence of CVC syllables (we can afford to disregard the one VC syllable).

Of the 81 consonant clusters occurring in the texts, /nG/ occurred 41 times, due mainly to the commonness of the morphemes /ṇanGa/, 'to go, to walk' and /jinda/, 'you'. /rɣ/ occurred 17 times, mainly in the morphemes /jarɣulu/, 'one' and /wurɣara/, 'to run'. Ten other clusters occurred, most of them only once or twice. A large number of clusters that do exist in the language never occurred, and therefore a count of all clusters occurring in the lexicon was made. These are classified in Table 2.7, which also gives the number of roots in which each cluster occurs.

Table 2.7

Consonant clusters

[illegible]	13	[illegible]	1	mt̪	3	nm	12	n̪w	1
[illegible]	3	[illegible]	4	np	1	nŋ	6		
[illegible]	[illegible]	nt	4	nk	13	n̪m	10		
[illegible]	25	njtj	8	n̪p	4	n̪ŋ	4		
[illegible]	7	[illegible]	1	n̪k	4				
[illegible]	11								
	101		18		25		32		1
l̪t̪	1	lp	5	lw	4	rtj	1	rw	1
ljtj	1	lk	6	lγ	11	rk	10	rγ	12
		l̪p	3	l̪w	6				
		l̪k	3	l̪γ	1				
	2		17		22		11		13
r̪γ	3	tp	1	ll	6	jj	2		
				l̪l̪	1	r̪r̪	5		
	3		1		7		7		

The clusters are grouped into fourteen classes: nasal-voiced stop, homorganic nasal-voiceless stop, heterorganic nasal-stop, nasal-nasal, nasal-glide, homorganic lateral-stop, heterorganic lateral-stop, lateral glide, flap-stop, flap-glide, heterorganic glide-glide, stop-stop, long lateral (homorganic lateral-lateral) and long glide (homorganic glide-glide). Some of these are very uncommon. There are 41 different clusters and a total of 260 occurrences. The most common clusters are, in order, nd; njG; mG; nk; nm; rɣ; ŋG, lɣ; ṇm, rk; njtj. More than half the clusters (comprising about 70% of the occurrences in the lexicon) contain a nasal as first member, and one quarter (18% of occurrences) contain a lateral as first member. Stops (especially /G/) form the second member of many clusters (25 of the 41, and 70% of occurrences) but there is only one example of a stop as the first member (in a word believed to be a borrowing from Bulaṇu). Although homorganic nasal-stop clusters are very common, homorganic lateral-stop clusters are rare.

It is not common for a stem to have more than one consonant cluster (apart from reduplicated forms such as /punGupunGu/ and /tjirkatjirka/), but there are a few examples (/purɣanGi, panGaṇmani, kumGaḷṭa, maṇṇanjGi/).

The cluster /mṭ/ occurs only in verbs derived from Pidgin words in -im by addition of the verb formative /ṭuka/, e.g. /katjimṭuka/, 'to catch', /kukimṭuka/, 'to cook', /winimṭuka/, 'to win'.

2.6.3 Phoneme frequencies.

Phoneme frequencies were calculated for the five texts referred to above, and also, as a check, for a large number of sentences which where originally extracted from the transcripts to illustrate the uses of the various noun suffixes. The texts contained a total of 526 words and 3403 phonemes, and the sentences 889 and 6124. There was thus an average of 6.5 phonemes and a little over three syllables per word in the texts, and 7 phonemes per word in the sentences.

Overall phoneme occurrences (i.e. in all positions) in the two sources are listed, as percentages, in Table 2.8, and word-initial phonemes in Table 2.9.

The most striking fact in Table 2.8 is the great predominance of /a/ over all the other vowels; it forms nearly two thirds of vowel occurrences and nearly one third of all phoneme occurrences.

Table 2.8

Overall frequencies of phonemes

phoneme	percentage in texts		percentage in sentences	
a	31.5		32.1	
i	10.6		9.8	
u	7.4		7.5	
vowels (total)	49.5		49.4	
p	1.6	(B 8.5)	1.9	(B 9.0)
b	3.0	(D 5.1)	3.0	(D 5.1)
t	0.8	(A 11.6)	0.8	(A 9.0)
tj	1.5	(P 9.2)	1.5	(P 8.5)
ṭ	0.4	(R 6.2)	0.3	(R 7.6)
k	3.5	(K 8.6)	4.4	(K 9.4)
voiceless stops	10.8		12.0	
ʒ	1.4		1.0	
m	3.2		3.1	
n	1.9		2.1	
ṇ	4.0		2.3	
nj	0.7		0.9	
ŋ	2.9		3.4	
ŋ̣	4.5		4.6	
nasals	17.3		16.4	
l	0.1		0.0	
ḷ	3.6		2.8	
lj	0.1		0.02	
ḷ̣	1.7		2.5	
laterals	5.4		5.5	
r	3.2		3.0	
w	3.6		4.9	
j	6.9		6.0	
ṛ	1.1		1.3	
γ	0.6		0.4	
glides	12.2		12.8	

Table 2.9

Frequencies of phonemes in word-initial position

phoneme	percentage in texts		percentage in sentences	
b	3.6	(B 20.3)	4.2	(B 23.2)
d	7.4	(D 14.3)	7.3	(D 13.2)
dj	3.0	(P 31.2)	2.9	(P 27.9)
t̪	0.6	(R 4.2)	0.8	(R 5.1)
k	11.6	(K 28.1)	11.2	(K 31.7)
stops	26.2		26.5	
m	10.6		8.2	
n	6.8		5.9	
nj	1.1		2.6	
ŋ	2.7		2.4	
n̪	18.4		19.5	
nasals	39.8		38.6	
l̪	1.0		1.9	
w	6.1		10.8	
j	27.0		22.4	
r̪	0.0		0.0	
glides	33.1		33.2	

The difference between the figures from the two sources are mostly not significant, and are due mainly to the large number of occurrences of certain morphemes in one or other source; for example, the suffixes /ŋuḷu, maḷu, wali, wija, [illegible], ka, ku, kaḷa/ explain the larger percentage of /ḷ/, /w/ and /k/ in the sentences. The large number of occurrences of the morphemes /n̪anGa/, 'to go' and /janu/ 'they' in the texts helps to explain the higher percentages of /n/ and /G/ in this source. A count based on the lexicon would show further differences, since, for example, three quarters of the occurrences of /ṇ/ in the texts are in the past tense suffix /ṇa/ or the pronoun /ŋaṇa/, 'I'.

The most common consonant phoneme, both overall and word-initial, is /j/, but about 55% of the occurrences of this phoneme, including about 45% of its word-initial occurrences, are in the syllable /ji/, in which /j/ is most commonly realized as zero. /w/ also, another of the most common phonemes, is often realized as zero, but not nearly to the same extent as /j/. Other very common consonants, both overall and in word-initial positions, are /ŋ, k, m/ and /t̪/. The rarest phonemes are /l̪, lj, ṭ, ɣ, nj/and /t/.

Comparison of Tables 2.8 and 2.9 shows that the following phonemes never occur word-initially: the vowels (with one

exception as noted in 2.6.1), the alveolars, /G, l̪, lj, r/ and /ɣ/. /ṛ/ is word-initial only in the word /ṛuṇa/, 'catfish', but there is no evidence so far that this may be a borrowed word. Only about ten percent of the occurrences of /ṛ/ and /ṇ/ are in word-initial position. On the other hand /ɣ/ and /j/ show a preference for this position; about [illegible] of the occurrences of each are word-initial. Most of the other phonemes which occur in this position show little bias either for or against it; roughly one third of their occurrences are word-initial (and roughly one third of all syllables are word-initial). /k/, /m/ and /n̪/ may show some preference for this position, but a larger sample would be needed to confirm this.

Table 2.10 gives the actual number of all CV combinations in the texts. A dash means that a combination did not occur but is possible; a blank means that the combination is not known to occur in that position in the language.

The sample of textual material is too small to enable any precise conclusions to be drawn from the data in Table 2.10, but some interesting points are illustrated.

Table 2.10

Consonant-vowel combinations

	Ca			Ci			Cu		
	initial	medial	final	initial	medial	final	initial	medial	final
p	14	4	22	2	2	-	3	9	-
t̪	35	29	14	-	14	7	4	-	-
t̑		13	4		3	-		6	-
tj	4	8	7	8	9	3	4	3	4
ṭ	3	3	3	-	2	-	-	-	1
k	41	17	24	1	5	-	19	8	6
G		23	6		11	1		5	-
m	47	36	3	6	5	9	3	1	-
n	30	9	20				6	-	-
n̑		36	15		2	-		1	32
nj		6	9	6	1	1			
ṇ	10	9	74	1	-	-	3	-	-
ŋ	78	23	6		2	-	19	15	9
l		-	-		2	-		-	1
l̑		32	19		13	33		4	15
lj		-	4		-	-			
ḷ	-	20	14	5	1	2	-	4	8
r		53	10		28	-		-	-
w	18	46	25	1	10	-	13	9	-
j	77	13	14	64	26	41	1	-	-
ṛ		18	15		3	-	-	4	-
ɣ		6	1		-	-		12	1
	357	404	309	94	140	97	75	69	77

(1) The only CV combinations that never occur are /ṇi/, /nju/ and /ljo/.

(2) Apart from the restrictions due to the absence of a number of phonemes from word-initial position, discussed above, the following combinations do not occur word-initial: /nja, ɽa, ŋi, ɽi/ and, of course, /ṇi/ and /nju/.

(3) Every combination that can occur word-medial can also occur word-final, and vice-versa.

(4) /ŋa/ and /ja/ are the most common word-initial combinations, followed by /ji/ (the only common Ci in this position), /ma, ka, ṭa, ṇa, ku, ŋu/ and /wa/.

(5) The most common word-medial combinations are /ra, wa, ma, na, la, ri, ji, Ga, ŋa/ and /ḷa/. (Note the preponderance of syllables beginning with an alveolar in this position.)

(6) The most common word-final combination by far is /ṇa/. Also frequent are /ji, li, nu/ (due to a large number of occurrences of /janu/, 'they') /wa, ka/ and /pa/.

(7) The only combinations that occur commonly in all positions are /ji, ka, ṭa/ and to a lesser extent, /wa, ŋu, ku/ (making allowances for the comparative rarity of /u/).

(9) /ṇ/, /ṭ/ and /ṛ/ show a very strong preference for a following /a/. No consonant is strongly biased against a following /a/.

(10) /i/ never follows /ṇ/ and rarely follows /t, ṭ, k, n, ṇ, ṛ, ṛ/. /ri/ rarely occurs word-final, but is a verbal suffix which often occurs medially.

(10) /u/ usually follows a velar consonant (including /w/). Of the common consonants, /j/ and /r/ are especially biased against a following /u/.

The frequency of word final syllables is greatly influenced by their presence in common suffixes such as /pa, ka, ṛa, lu/ and /ji/.

2.7 Texts.

Some aspects of Waḷuwara phonology are illustrated in Appendix I, in which one story and part of another are given in a broad phonetic notation, together with an orthographic (see beginning of Chapter 3) transcription of both stories and interlinear and free translations.

3. MORPHOLOGY

3.1 Introductory notes.

In the remaining chapters of this thesis an orthography differing from phonemic notation in that the appropriate allophone [b, ɟ, d, dj, ɖ] or [g] replaces the phoneme /G/ will be used. Thus /n̪anGa/ will be written n̪anda, /jinGaŋu/ will be jindaŋu, /wamGa/ will be wamba, /minjGi/ will be minjdji, and so on. This, it is believed, will make for greater ease of reading.

/ is used henceforth to indicate a break or slight pause in an utterance; // to indicate a long pause or completion (in the latter case only if another utterance follows).

A number of abbreviations for grammatical categories are used when Waḷuwara examples are translated literally. A key to these abbreviations is given below. They are grouped into two columns, showing suffixes associated with verb stems (i.e. added to verb stem, gerund, normalis or inflected verb) and suffixes associated with nominal stems. The last three items in the "verb stems" column may also be added to nominal stems.

Suffixes associated with verb stems		
mot	motive	verb stem formatives
conj	conjunctive	
hab	habitual	
ger	gerund	noun stem formatives
nor	normalis	
comp	complement	
subj	subject	
agent	agent	
imp	imperative	
opt	optative	
irr	irrealis	
pot	potential	
past	past tense	
pres	present tense	
dir	directional	
priv	privative	
purp	purposive	
emph	emphatic	

Suffixes associated with nominal stems		
caus	causative	verb stem formatives
stat	stative	
dual	dual	noun stem formatives
plur	plural	
alt	alternative	
cust	customary	
nom	nominative	
acc	accusative	
ag	agentive	
loc	locative	
inst	instrumental	
alla	allative	
ela	elative	
com	comitative	
causal	causal	
gen	genitive	
poss	possessive	
refl	reflexive	
recip	reciprocal	

A hyphen is used in the literal translation where there is a separable suffix and parentheses where the grammatical category is not marked by a separable suffix; thus

ṭawaku	(= ṭawa+-ku)	but	jina	cf. also	jipa
man-ag			you (acc)		you .

In the last example, singular number and nominative case can be assumed because nothing to the contrary is specified.

In some cases an affix may not be included in the literal translation; for example, the purposive affix is always linked to a verb stem by the gerund formative, but as this is predictable and adds nothing to the English translation it is not normally referred to in the literal translation.

3.2 The word.

The word in Waḷuwara is made up of a stem (see 3.3) with optional affixes. A preliminary subdivision is into those stems which can take no affix except an emphatic suffix - known as non-inflecting words - and other words. The stems of the latter group can further be subdivided into nominal and verbal stems, each of which is associated with its characteristic affixes. Nominal stems form words which can be classified as nouns or pronouns. Nouns can be further classified as common, proper, non-singular and genitive, and pronouns as personal and demonstrative. The only

classification of verbal stems is into the verb groups which will be introduced in sub-section 3.3.4.

A word in an utterance need not carry a primary word stress, or may carry two, the second of which may be carried by a bound morpheme (see 2.5.1, rules 2s and 4 and the remarks following the table of rules). Stress cannot, therefore, easily be used as the basis for a definition of the word. The word will therefore be defined on the basis of its freedom of occurence with respect to other words; thus a word can and often does form a minimal phrase. In practice this is not necessary; any unit whose position within a phrase is not always fixed with respect to some other unit can be regarded as a word. Any unit whose position is fixed relative to some other unit is a bound morpheme; thus, for example, -lu, the locative morpheme, occurs only as the last part of a unit which itself fulfils the conditions specified for a word, and is therefore a bound morpheme. A free morpheme is a morpheme that is not bound, i.e. can exist as a word. A free morpheme may have a bound allomorph; for example, paṭa, 'big', may exist as a separate word, but the bound form -waṭa is an allomorph of the same morpheme which exists only in the reduplicated form paṭawaṭa, 'big'.

Bound morphemes comprise

(i) stem formatives

(ii) inflections

(iii) prosodic suffixes

(iv) directional suffixes

(v) emphatic suffixes.

Stem formatives are usually suffixed to the base which they modify; there is only one prefixed stem formative, and possibly traces of a few others. All inflections are suffixed. Waḷuwara can therefore be described as a suffixing language.

A word may have from two to nine, and probably more, syllables. An example of the formation of a nine syllable noun stem is given:

jiṛaṭaaritjiṇaraŋu, 'brave', 'tame'

from jiṛaṭa, 'fright'

-a, 'having' (possessive suffix)

-ri, 'to be' (stative verb formative)

-tji, '-ing' (gerund noun formative)

-ṇaraŋu, 'lacking' (privative suffix).

There appears to be no reason why further nominal inflections should not be added to this, e.g. jiṛaṭaaritjiṇaraŋuŋuḷu, 'from the brave [man]', and much longer words even than this can be imagined.

3.3 Stem formation

A stem may comprise:

(i) a simple free morpheme,

(ii) a reduplicated free morpheme,

(iii) a compound of two dissimilar free morphemes,

(iv) a compound of a free morpheme with a bound allomorph of a free morpheme,

(v) a compound of a stem and a stem formative,

(vi) a compound of a stem and an inflectional suffix.

The simple morpheme of a stem of class (ii) may not exist in the corpus; i.e. some stems are known only in their reduplicated forms. Similarly, stems of classes (iii) and (iv) may include a morpheme that does not occur as a free morpheme in the corpus.

One or both of the elements of a reduplicated form may be modified in some way, and so may comprise a bound allomorph.

No stem has less than two syllables.

3.3.1 Reduplication of noun stems.

Some examples of simple reduplication follow. Where the unreduplicated morpheme is known to exist, either free or in combination, this will be noted.

kiljikiljl	armpit	
pukapuka	feather	(puka, 'to stick feathers on'[1] heard only in its present tense form pukarijiṭa.)
ṭaḷaṭaḷa	axe	
kuṟukuṟu	head	(kuṟuṇalγama, 'to split someone's head')
pundupundu	lizard sp.	
paṇṇapaṇṇa	flat	
jirijiri	muddy	(jiri, 'mud')
pilaŋupilaŋu	wide	(maṇkarupilaŋu, 'frill-necked lizard', literally 'wide ears')
muṇḍuŋumuṇḍuŋu	winding, crooked	(muṇḍuŋu appears to have the same meaning.)
kuṇukuṇu	phlegm	(probably no connection with the emphatic adverb kuṇu.)

[1] The English convention of giving a verb in its infinitive form: to go, to walk, to see, etc., will be followed whenever a verb in its stem form is quoted in isolation, although the stem form of Waḷuwara verbs is not an infinitive. There will therefore be no confusion between such glosses as 'bark' (i.e. of a tree) and 'to bark' (as a dog).

The following examples are more complex, the root being modified in some way; for example, the reduplication may affect only part of the root, or a bound morpheme may be added to the root.

wutjurutjuru	scattered rain	(any connection with wutjuru, 'calf of leg', is obscure.)
pukunukunu	a plant, species of Bassia	(pukunu is another plant, unidentified, similar in appearance to pukunukunu.)
pumaṯamaṯa	every day	(pumaṯa, 'day, sun')
ṯiṇḏaliṇḏala	greasy	(ṯiṇḏa, 'fat')
wataḷawataḷa	stony	(wata, 'stone')
kajukajukuma	to try	(kajuku, 'in vain'; -ma is a verb-forming suffix.)
tjiṇpiṇpi	peewee, mudlark	
kikulunjdjulunjdjulu	crimson chat (a bird)	
kukumajimaji	desert chat (a bird)	(a borrowing from the Pitta-Pitta group of dialects; kuku, 'back', majimaji, 'dirty' from maji, 'dirt'.)
kirki, kirkirkiri	plover	

In some cases a form to which the possessive affix has been added is reduplicated:

ṭalaaṭalaa	bruise	(ṭala, 'spittle', ṭalaa, 'having spittle', translated by the informant as "all spitty"(2))
kikaakikaa	red	(kikikiki, 'red'. kiki exists also in such stems as pamarakiki, 'whistler duck', literally 'red-foot'.)

The following examples show lenition of the initial consonant which in the second part of the reduplicated form is replaced by the most nearly homorganic glide.

palawala	bark	
piriwiri	beef, muscle	
paṭawaṭa	big	(paṭa, 'big'. The function of the reduplication is not clear.)
ṭawijawi	small	(ṭawiṛi, 'small'. Again the function is not clear.)
ṭiṭijiṭi	light (in weight), rotten	(as used by Fred Age, who did not accept ṭiṭiṭiṭi, the form used by his sister, Mrs. Toby.)
tjitijiti	rough	(as a rough surface)

(2) A translation is enclosed by " " only when it is the actual translation given by the informant (possibly with minor improvements in the grammar) or when it is part of a conversation in which the different roles have to be kept distinct. Other translations are enclosed by ' ' where this is necessary to separate them from the text or to make it clear that it is a translation.

An isolated case of some interest is kajaŋgaja, 'buffalo grass (Panicum decompositum)'. The suggestion here is that k > ŋg or ŋg > k; however, since there is no other evidence of such changes, no conclusion can be drawn.

Reduplication does not appear to have any consistent morphological function with nominal forms.

3.3.2 Reduplication of verb stems.

In general, reduplication of verbal stems follows the rule

$$C_1V_1C_2V_2 > C_1V_1C_2V_2\underset{\cdot}{l}V_1C_2V_2$$

where C_1 is a single consonant, but C_2 may be a single consonant or a consonant cluster. It is possible that $\underset{\cdot}{l}$ may vary freely with l as the initial consonant of the second half of the reduplicated stem. The following examples illustrate the process.

The glosses show that the meanings of the two forms are related in each case, but not in such a consistent manner that one could be predicted from the other. There does, however, appear to be some suggestion of a consistent relationship; the longer stems appear to refer to a similar action to the shorter stems, but one which is spread over a wider area.

jaŋa	to see, to look	> jaŋaḷaŋa	to follow
waṯa	to dig	> waṯaḷaṯa	to scratch
puṯa	to suck	> puṯaḷuṯa	to lick
japa	to fall	> japaḷapa	to sprinkle, to fall lightly (of rain)
winma	to tacte	> winmaḷima	to feel, to touch.

The simplification from the expected winmaḷinma in the last example may be due to careless speech, but was heard consistently. These reduplicated forms were not always recognised as such by the informants, and so a simplification such as this is not surprising.

There are a few cases of reduplication of verb stems without an accompanying change in the initial consonant, but in some of these cases the initial consonant is already ḷ, and in others only part of the stem is reduplicated.

ḷari-	to hear, to listen	> ḷariḷari	to think
ḷatji-	to dance	> ḷatjiḷatji-	to shake, to be loose
ṇumara	to chop	> ṇumaṇumara	to break into pieces.
tjiriḷama	to rattle	> tjiriḷariḷama	to rattle

3.3.3 Combination of dissimilar free morphemes.

This process is normally quite straightforward, as the following examples show.

ŋutumuṇḍuŋu, 'species of hawk', from ŋutu, 'nose' and muṇḍuŋu, 'crooked',

pilimuṇḍuŋu, 'moon', from 'coolamon' and muṇḍuŋu,

ŋaŋawaḷaḷi, 'grass sp.', from ŋaŋa, 'eye, seed' and waḷaḷi, 'long',

njiḷiṇuka, 'echidna', from njiḷi, 'needle' and ṇuka, 'many'.

Such expressions are sometimes made up on the spot if the informant does not know the correct word, e.g.

wuṭjurukika, 'red-legs', i.e. 'plover',

wumbana ṯaŋuṇaṯalwa, 'worm-eater', i.e. 'magpie',

wanŋana kurγumaṯalwa, 'fly-catcher', i.e. 'gecko'.

In some cases a stem appears to be formed by combination of a modified morpheme (i.e. a bound allomorph of the normal free form) with another morpheme. This is more common in compounds formed with a stem formative, but one example that is relevant to this sub-section is ṯawunmuṇḍuŋu, 'plain turkey', probably from ṯawullu, 'chin' and muṇḍuŋu, 'crooked'.

Many verb stems are formed by adding the morpheme ṯuka, which is the verb 'to throw', to a nominal stem. When used in this way, ṯuka has the meaning 'to make' or, occasionally, 'to call'.

mukaṯuka	to make (something) good	from muka	good
karuṯuka	to initiate	from karu	young man
waḷkaraṯuka	to sharpen	from waḷkara	sharp
maṇkaruṯuka	to listen	from maṇkaru	ear
wapaṯuka	to call (someone) mother's mother	from wapa	mother's mother

This morpheme can be used also to form a verb from an English verb, to the stem of which the Pidgin ending -im is first added, thus

winimṯuka	to win
kuwimṯuka, kukimṯuka	to cook
katjimṯuka	to catch.

There is one example of a stem formed with a morpheme which is not otherwise present in the Waḷuwara corpus, but which exists as a free morpheme of frequent occurrence in Bulaṇu. This is kurupakalji, 'tea tree', derived from kurupa, 'paperbark (Melaleuca leucadendron)' and kalji, the Bulaṇu equivalent of Waḷuwara kara, 'not'.

3.3.4 Verbal stem formatives.

Included under this heading are the only clear-cut examples in Waḷuwara of a prefix - called the negative formative - and five suffixes: the causative, stative, motive, conjunctive and habitual formatives. The status of some of the suffixes as formatives is questionable; the motive, conjunctive and habitual resemble inflectional suffixes in some ways, but are grouped with the formatives because they are added to what are regarded as nominal stems (although they can function syntactically as verbs; see 3.3.5.1 and 3.3.5.2).

3.3.4.1 The negative formative.

Three cases of a prefixed verb formative, muŋa-, which is probably no longer productive, are known. The prefixing process is similar to the common verb reduplication process, described in 3.3.2, in that it is associated with a replacement of the initial consonant of the original verb stem by a lateral, l (not, apparently, ḷ; however l and ḷ may be interchangeable in this position - cf. 3.3.2 - and if so it would be consistent to write ḷ). The function of muŋa is to denote failure or inability to perform the action denoted by the verb stem to which it is added. The examples are:

muŋalaŋa to be unable to see (jaŋa to see)

muŋalari- to be unable to hear (ḷari- to hear)

muŋalwuma to miss (e.g. with a spear).

The last is probably derived ultimately from ŋalwa, 'to enter';

muŋa- + ŋalwa + -n̪ama > *muŋalalwan̪ama > muŋalwuma

by phonological change. (See 3.3.4.2 for -n̪ama.)

3.3.4.2 The causative formative.

The causative verb-forming suffix -ma may be added to a nominal stem to form a transitive verb stem. A parallel modification to a verb stem is performed by adding one of the forms -ma, -n̪ama, -njama, the first being used with group I stems[3], the second with group II stems and the third with group III stems. Two alternative methods of

[3] The verb groups will be dealt with in detail in 3.4.8. At this stage it will be sufficient to say that the final consonant of the stem of group I verbs is a stop (e.g. japa, maṭa, wuka), that of group II verb stems is a nasal, lateral or glide (e.g. jaŋa, ṭanma, waḷa, jarɣa, jawa) and that of group III stems is r (e.g. kari-, ḷari-, matjiri-). There are many exceptions, but these need not be considered here. The stem form of group III verbs cannot exist as a word, and a hyphen is therefore used, as in kari-. The stem form of other verbs is phonemically the same as the imperative, which can exist as a word, and so a hyphen is not used.

description present themselves here: it can be postulated that the causative suffix may be added to nominal or verbal stems, and that it has allomorphs -ma, -ṇama and -njama; or it may be postulated that the causative suffix can be added only to nominal stems, and has only one allomorph, -ma. In the latter case, the suffix, though never added to the verb stem, may be added to the complement form of the verb, which is formed by adding the noun-forming suffix -Ø (to group I stems), -ṇa (to group II stems) and -nja (to group III stems). This makes it necessary to postulate an additional allomorph of the complement formative; this will be further discussed in 3.3.5.3.

The second method has been adopted: the causative formative is -ma and is added to a nominal stem.

The suffix can often be translated as 'make' and the verbs formed are transitive.

ŋalɣama	jinja	juɣuwaṇa	
split-imp	that	wood-acc	(ŋalɣa, 'split, crack')

kunma	karinjama	
humpy	erect-imp	Make a humpy!

(kari-, 'to stand', karinjaṇ, 'standing (complement)', karinjama, 'to make stand', i.e. 'to erect')

ŋuḷu jallama

grass burn-imp Burn the grass! (jalla, 'flame')

kutjama to do something twice (kutja, 'two')

mukama to make (muka, 'good')

japama to drop (japa, 'to fall')

ŋalwaṇama to put in (ŋalwa, 'to enter')

jitjala waḷuwara maṛaṇa ŋaṇa tjaṇmarinjamajiṭa

language Waḷuwara this-acc I talk- caus-pres

I am teaching him to speak Waḷuwara.

-ma may also be added to an inflected noun stem; the only examples involve the allative suffix -lu.

maṇalaluma to singe (maṇala, 'fire')

kana jinja jikaluma

not him cold-alla-caus-imp Don't let him get cold.

-ma may be added to a modified stem (a bound allomorph). Some words which are thought to have been formed in this way are:

tjaṇma to tell (jitjala, 'speech, word, language')

(The corresponding Bulaṇu stem is jitjama)

ṇaṇma to do what (as in ṇaṇmajiṭa jipa

(from ṇaŋaḷi, 'what '). do what-pres you

What are you doing?)

jatjunma to smell (transitive) (cf. jatjuwara, to smell)

3.3.4.3 The stative formative.

The stative verb formative is the suffix -ri. This is added to a nominal stem to form an intransitive verb, and is often equivalent to the English 'be' or 'become'. The verbs formed in this way belong to group III.

ŋaŋari-	to wake up (intrans.)	(ŋaŋa, 'eye')
maṛaṭuri-	to die	(maṛaṭu, 'dead')
paṭari-	to grow, to become big	(paṭa, 'big')
jikari-	to get cold	(jika, 'cold')

kuṛukuṛu	ŋaṇa	matjirijitja	
head	I	bad-stat-pres	I've got a headache.

In a single case the suffix -ri is added to a verb stem to form a group III verb. This is the verb tjaṇmari-, 'to speak, to talk', derived from tjaṇma, 'to tell', which in turn has been derived with the causative formative -ma, as described in 3.3.4.2. This exception has been disregarded in making the decision to classify -ri as a first order suffix and -ma as second order; suffix order will be discussed in 3.4.6.

In a few cases an allomorph -i of the stative suffix is used instead of the normal form.

puḷḷukuti-	to become hard	(puḷḷukutu, 'hard')
japuṇi-	to dry (intrans.)	(japunu, 'dry')
maṇkarukuti-	to lose, to forget	(maṇkaru, 'ear', kutu, 'closed', hence maṇkarukutu, 'deaf, forgetful')
kanaṭari-	to be hungry	(kanaṭara, 'hungry')

The suffix -ri is also used as a stem formative in association with group I verb stems, with no function other than to form a link between the verbal base and certain inflectional suffixes. Thus, in contrast to a group II verb stem, such as jaŋa, 'to see', which forms its present tense with the combined imperfective aspect-present tense suffix -jiṭa, thus jaŋajiṭa, 'sees', a group I verb such as japa, 'to fall', is linked to the same suffix by the formative -ri, thus japarijiṭa, 'is falling'. Similarly:

paka	to jump	pakarijiṭa	is jumping
maṭa	to hit	maṭarijiṭa	is hitting
wijapa	to call	wijaparijiṭa	is calling
waṭaḷaṭa	to scratch	waṭaḷaṭarijiṭa	is scratching.

By contrast again, a group III verb, such as jikari-, to be cold', forms its present tense with -jitja, thus jikarijitja,

'is cold'. With other inflectional suffixes the formative is not used, thus the past tense forms of the above verbs are jaŋaṇa, 'saw', japaṇa, 'fell', pakaṇa, 'jumped', maṯaṇa, 'hit', wijapaṇa, 'called', waṯalaṯaṇa, 'scratched' and jikariṇa, 'was cold'.

A few verbs, classified as group Ia, use the allomorph -i for the same purpose as group I verbs and with the same inflectional suffixes. For example:

wurγara	to run	wurγarijiṯa	runs	wurγaraṇa	ran
ṇakara	to cut	ṇakarijiṯa	cuts	ṇakaraṇa	cut.

3.3.4.4 The motive formative.

The function of the motive marker is to indicate that the action or state is associated in some way with movement from one place to another on the part of the subject or agent. Thus an action may be performed by an agent who is walking, or moving along, or who is travelling but not necessarily in motion at the time of the action, or who was travelling immediately before the action or will be travelling immediately afterwards.

There are a number of allomorphs of the motive formative. With group I verbs the forms -a, -ṇa, -nja and -ṇanda are all

used, and in all cases are linked to the verb stem by the stative suffix -ri. The -ṇa form is known only for the present tense and is the only form occurring in the corpus with the present tense affix. The other forms have a wider range of application and in some cases, at least, there are two or more alternative forms; see the table of verb paradigms (3.4.6, Table 3.4) for further details. Group II verbs use the forms -ṭa or -ṭanda, while group III verbs take -tja or -tjanda. Table 3.4 shows the combinations in which these forms occur in the corpus; further data might show that the members of a pair (e.g. -ṭa and -ṭanda) are interchangeable in all cases.

The motive suffix is probably derived from the verb 'to go', which has two roots, ṇanda and ṇata, in complementary distribution. In fact, some motive forms of group I verbs are composed of an appropriate form of this verb suffixed to the augmented (with -ri) stem of the verb; e.g.

pakariṇandaṇa, hopped along', from paka, 'to hop, to jump'. (pakaraṇa is an alternative form with the same, as far as can be seen, meaning.) ṇandaṇa, as a word in its own right, means 'went'. (-ṇa is the past tense suffix.) Apart from these special cases, there are no known examples in Waḷuwara of compounding of dissimilar verb stems.

The following examples illustrate various forms of the motive suffix, and also various aspects of its use.

juɣu maṇa ŋaṇa maṇala waḷaṭata

wood, tree (acc.) this I fire, firewood pull-mot-pres

I am dragging this log along. (waḷa, 'to pull', hence waḷaṭa, 'to drag', i.e. to pull while walking along.)

jiwa jarajanaku jalwika kaŋaṭatami

that woman-ag shoulder-loc carry-mot-pres-dir

That woman is coming here carrying (the baby) on her shoulder.

(kaŋa, 'to carry', hence kaŋaṭa, 'to carry along'. -ta, present tense, -mi, 'hither'.)

wuku jiwa tjaṇmaritjata

water that talk-mot-pres

That water is talking as it goes along. (Descriptive of a thunder cloud.)

jaraka ŋaṇa ŋunaṭaṇami

creek-loc I sleep-mot-past-dir

I camped at the creek yesterday (while on my way here).

ṭaṭali janu warawuḷaka maṭaraṇa

carney they dog- inst kill-mot-past

They killed carneys with dogs as they travelled. (A carney is a species of lizard.)

ṭuwanaku ŋaṇa wurɣararaṇa

snake-ag me run-mot-past

The snake chased me.

jamu ŋunaṇa / ŋaṇa karitjaṇa ṇunda

they sleep-past I stand-mot-past then

When they went to sleep, I went away. (i.e. I went and stood somewhere else.)

ŋaṇa pilinjtjiṇaraŋuritjaṇa

I lively -- priv-stat-mot-past

That (run) made me tired. (pilinjtji, 'lively', pilinjtjiṇaraŋu, 'tired', i.e. lacking liveliness, pilinjtjiṇaraŋuri-, 'to be tired')

wata ŋaṇa jina ŋutaraṭiji

money I you (acc) give-mot-purp

I'll give you money before I go.

wuku maṛa japariṇatami

water here fall-mot-pres-dir

The rain is coming.

jiwa paṭakaku ṭukaraṇa jinja

that big-ag throw-mot-past him

That big fellow left him behind. (ṭuka, 'to throw, to throw away', ṭukara, 'to leave (transitive)'. The meaning of this derived form has apparently undergone some extension; it could be expected to apply only to something that could be carried and thrown away, but the object in this case was a grown man.)

jinja ŋamakaku japamaṯana

him mother-ag fall-caus-mot-past

His mother dropped him. (The reference is to a joey (baby kangaroo) which has been dropped from its mother's pouch while she was fleeing.)

The examples show that the motive suffix may be used with a verb whose meaning would seem to preclude the possibility of its use, as with kara, 'to stand' in the seventh example above. Similarly, we have an example of its use with njina, 'to sit', in

njinaṯandi maṛa

sit-mot-ger this

which was translated by the informant as "he was sitting along; he was sitting all the way", i.e. he had frequent rests. (The gerund here functions as a past imperfective form of the verb.)

The examples show also that the motive suffix may be used in conjunction with either the causative stem formative (the second last example) or the stative formative (the eighth example).

In passing, it is worth noting here that there are some interesting instances of interchange between interdental and

lamino-alveolar phonemes in motive affixes. For example, Hale notes waḻatjata and waḻaṯata as variants, and gives ŋalwatjaṯa where ŋalwaṯaṯa or ŋalwaṯata would be expected, and wuryarinjaṯa where wuryariṇata is most common. Fred Age, on one occasion gave an even more variant form to the present writer: wuryaritjaṯa, and Mrs. Toby's puzzled comment, when this was repeated to her, was: "He's twisted it again." The word "again" clearly referred, not to a "twist" on some other occasion, but to a double "twist" on this occasion.

3.3.4.5 The conjunctive formative.

The conjunctive affix functions as a conjunction and has allomorphs -wara and -wa, the latter occurring only (and always) with the past tense suffix -ṇa. It may be cognate with the conjunctive adverb kara. It is attached to the gerund (see 3.3.5.1); there are, however, some doubts, arising from phonetic difficulties, whether this is always so. The vowel immediately preceding the conjunctive affix is always unstressed and is often realized as a central vocoid, in the region of [ə], and in some cases it is not at all clear that it is not a realization of /a/, rather than /i/.

The conjunctive is usually, but not always, used with the second of two verbs in an utterance; however, it is not obligatory in such a case. It is almost always used in sentences where the two verbs carry the same inflectional suffixes, but rarely where the suffixes are different. It may also be used with the only verb of an utterance. In the latter case it may have the meaning 'again' rather than the normal 'and' (see the fourth example) or, in other such cases, the verb 'to go' may be understood; see the first and eighth examples.

The examples are:

njimiŋuḷu jiwa ŋunaṯiwaṇami
fish-from he lie-conj-past-dir
Informant's translation: "He was fishing and came back and lay down."

ŋaṇa ṉandaṇa maṯiwaṇa ŋaṇa jinja / ṯuwana
I go-past kill-conj-past I it(acc) / snake
I went and killed the snake.

jiwa ṉandaṇa / njinaṯiwaṇa (Example from Hale's notes.)
he go-past / sit-conj-past
He went and sat down.

maḷalja ŋaṇa jaŋaṭiwaṇa

no I see-conj-past

No, I saw (it) again.

ṇandiwaṇa jiwa

go-conj-past he

Informant's translation: "He went out and back again."

ṇandiwariji ŋaṇa

go-conj-purp I

Informant's translation: "I've got to go for a while; I'll be back."

ŋankanaji ŋali ṇandiji maṭiwariji ṭaŋuṇaṭiji

kangaroo-purp we go-purp kill-conj-purp eat-purp

We are going to kill a kangaroo to eat

jiwa ṭawaku jina jaŋaṭiwaraami

that man-ag you(acc) see-conj-pot-dir

That man might be coming to see you.

Complete segmentation of a conjunctive purposive form shows that there are two occurrences of the gerund formative; thus maṭiwariji is maṭa, 'to kill' + -i, gerund, + -wara, conjunctive, + -i, gerund, + -ji, purposive.

The following example shows the non-use of the conjunctive in a sentence in which it could well be used. Such non-use is not common but does not appear to affect the meaning.

ŋaṇa ṉandiji jaralu pitjiṇitjiji
I go-purp creek-alla swim-purp
I am going to swim in the creek.

The conjunctive is not normally found in such a sentence as the following, where there is no agreement in inflection between the two verbs:

ŋaṇa ṉandaṇami jinda jaŋaṯiji
I go-past-dir you(purp) see-purp
I have come to see you.

However, there are rare examples, such as

ŋulariṇa ṉjinaṯiwariji
return-past sit-conj-purp
(He) went back and sat down.

3.3.4.6 The habitual formative.

The habitual verb stem formative, -ka, is added to a normalis noun stem, i.e. a stem formed by adding the normalis

formative (see 3.3.5.2) to a verb stem, or to a conjunctive verb stem. Its function is to form a stem to which an inflection for tense (past or present) is added, resulting in a past habitual or present habitual (possibly better described as a present frequentative) form of the verb. Thus this formative combines with the normalis formative to form a compound suffix functioning as a habitual aspect marker. Some examples follow:

ŋaṇa	njinaṭakari	maṛaka	wukuka	(njina, 'to sit', -ṭa, normalis, -ṛi, past tense)
I	sit-hab-past	this-loc	water-loc	

I used to camp at this waterhole.

ŋaṇa	ŋularitjakatja	jurandanjdjika	(ŋulari-, 'to return', -tja, normalis, -tja, present tense)
I	return-hab-pres	Urandangie-loc	

I often go back to Urandangie.

kaḷa janu ŋunaṭiwarakatja
meat they sleep-ger-conj-hab-pres
The cattle always go and sleep [there].

3.3.5 Nominal stem formatives.

These are more numerous than the verbal stem formatives, and are all suffixes. They can be subdivided into the foll-

owing groups:

formatives added to verb stems: gerund formative,
normalis formative,
complement formative,

formatives added to normalis noun stems (i.e. derived by the affixation of the normalis formative): subject formative,
agentive formative,

formatives added to noun stems: dual formative,
plural formative,
alternative formative,
customary formative,

added to noun or verb stems: the formative -pa.

Selection of a formative from within any of these groups appears to be disjunctive; i.e. there are no examples in the corpus of a word containing more than one formative from any group. The formative -pa, which is very rare, occurs only followed by the stative verb formative -ri.

In addition, certain of the nominal inflectional suffixes may also function as formatives; this will be discussed in sub-section 3.3.6.

3.3.5.1 The gerund formative.

The five allomorphs of the gerund formative are:

-nji (preceded by the stem formative -ri~-i), used with group I verb stems when the continuative imperative affix -ni follows,

e.g. maṯa, 'to hit' + -ri + -nji + -ni > maṯarinjini, 'keep on hitting'

-i, used with group I verb stems, with motive verbs derived with one of the bisyllabic allomorphs of the motive formative and with conjunctive verbs,

e.g. maṯa ('to hit') + -i > maṯi (see 2.4.5 for the phonological rule applying here)

-ṯi, added to group II verb stems and to motive verb stems derived from group I stems with the allomorph -a of the motive formative, and one of the two alternative forms used with motive forms derived from group II verbs with the allomorph -ṯa or from group III verbs with the allomorph -tja,

e.g. jaŋa ('to see') + -ṯi > jaŋaṯi

maṯa + -ri + -a (motive) + -ṯi > maṯaraṯi

-tji, used with group III verb stems,

e.g. ḷari- ('to listen') + -tji > ḷaritji

and -ti, the second alternative with motive verbs derived with -ṯa or -tja,

e.g. jaŋa + -ṯa (motive) + -ti > jaŋaṯati.

When used without further affixation, the gerund functions syntactically as a verb, being approximately equivalent to an imperfective, usually past tense, form of the verb from which it was derived. Examples are:

ŋunaṯi ŋaṇa wukuwaṛa ŋaṯaḷu japaṇa
sleep-ger I water-poss me-alla fall-past
It rained on me while I was asleep.

ŋaṇa jinda waramaṯi
I you(purp) search-ger
I was looking for you.

njinaṯandi maṛa ŋuṇa jinja maṯiji
sit-mot-ger here I him hit-purp
If he comes here I'll hit him.

ŋaṇa tjiritji ŋunparilaka
I sick-ger other day-loc
I was sick yesterday.

ŋaṇa njinaṯi njimi ŋaṇa jaŋaṇa wukulu
I sit-ger fish I see-past water-alla
While I was sitting over there I saw some fish in the water.

The gerund may occur also with any one of the following inflectional suffixes: purposive and privative (both of which are used with nominal stems), continuative imperative and present tense, the last two being verbal affixes. These will be discussed, with examples, in the appropriate parts of subsections 3.4.2 and 3.4.7.

3.3.5.2 The normalis formative.

The normalis suffix has as allomorphs:

-Ø, which is used with group Ia verb stems, and may be used with other group I stems when the agent formative follows,

e.g. jitala, 'policeman' (jita, 'to tie', -la, agent)

wurγarakari, 'used to run' (wurγara, 'to run', -ka, habitual formative, -ri, past tense)

-ra, used with verbs of group I, other than these belonging to group Ia, when the habitual formative follows,

e.g. maṯarakari, 'used to kill' (maṯa, 'to kill')

-nja, used as an alternative to -Ø with group I (other than Ia) verbs, when the agentive suffix follows. -nja usually is preceded by the formative -ri (see 3.3.4.3).

e.g. jitarinjala, 'policeman' (alternative to jitala)

but jitanjala also appears to be acceptable.

-ṭa, used with group II verbs,

e.g. kantamaṭa, 'windbreak' (kantama, 'to block')

-tja, used with group III verbs,

e.g. tjaṇmaritjalwa, 'speaker' (tjaṇmari-, 'to speak', -lwa, agentive formative).

There are no examples in the corpus of normalis forms derived from group I or group III verbs and carrying no further suffixation.

When carrying no further formative suffix, the normalis may function syntactically in two ways. Firstly, it may function in the normal way as a noun, such as kantamaṭa, 'windbreak'. Most nouns of this type are not simple normalis forms, but are compounds of a noun and a normalis noun. Examples are:

kunamatjaṭa, 'crow' (kuna, 'faeces, filth', matja, 'to eat', thus 'eater of filth'. Note that matja is a group II verb and so is an exception to the simplified rule given in the footnote to 3.3.4.2.)

mikipuḷumaṭa, 'whirlwind' (miki, 'dirt', puḷuma, 'to mix', to whirl')

jiriwaḷaṭa, 'crab' (jiri, 'mud', waḷa, 'to pull')

mikipuṇamaṭa, 'stranger' (miki, 'dirt, country', puṇa, 'white, dry', -ma, causative. The reasoning behind this derivation is not known.)

These normalis nouns are inflected in the usual way as common nouns, e.g.

kaḷa maṛa kunamatjaṭaku ṭaŋuṇaṭaa

meat here crow - ag eat - pot

The crow might eat this meat.

Secondly, it may function as a verb with normalis aspect, i.e. referring to an action or state that is normal or habitual. This appears to be very rare.

ŋunaṭaa watji ŋaṇa / ŋaṇa matjaṭa ŋaṭarwa / kaḷa kara ŋaṇa ṭaŋuṇaṭa

sleep-pot before I / I eat-nor tucker / meat too I eat-nor

I always have a feed before I go to bed.

(Note that there are different verbs 'to eat' depending on whether meat or "tucker", i.e. vegetable food, is being eaten.)

juyu jiwa wukulu kankaḷijariṭa

wood that water-alla top-stat-nor

That wood floats. (Note that the normalis suffix is -ṭa; -tja would be expected here.)

The other uses of the normalis stem are as a base to which the habitual verb formative (see 3.3.4.6) is added, as a base to which the subject formative is added, and as a

base to which the agentive formative is added. The last two will be discussed in 3.3.5.4 and 3.3.5.5.

There is an obvious parallel between the gerund formative and the normalis formative; the allomorphs -i, -nji, -ṭi and -tji of the former are matched by allomorphs -Ø, -nja, -ṭa and -tja of the latter. This raises the question of whether one of these formatives should be regarded as basic and the other derived from it; given the phonological rule stated in 2.4.5, the gerund could be derived from the normalis by adding -i, or the normalis from the gerund by adding -a. If we adopt the former solution, it is not at all clear what meaning should be assigned to the affix -i. If the latter solution is adopted, -a could be regarded as a form of the possessive morpheme (see 3.4.3.12); it exists in other contexts as an allomorph of this morpheme. -aa is the suffix used to form the potential mood of a verb. The potential seems to be semantically similar to a possessive; thus, for example,

ṭanmaṭaa	jiwa	He might bite
bite-pot	he	

would perhaps be more accurately translated 'he has the capability of biting' (see 3.4.7.4). The potential morpheme may therefore be a member of the possessive morpheme. If the normalis is regarded as derived from the gerund by the addition of the possessive morpheme, we must regard the

potential as formed by two successive additions of the possessive suffix to the gerund. This seems unlikely. While it is believed that one of these forms - the gerund and the normalis - is derived from the other, it is not possible at present to say which is primary.

3.3.5.3 The complement formative.

This has four allomorphs:

-Ø, used with group I verbs other than group Ia verbs in association with the causative formative. It was necessary postulate this allomorph so that the second of the possible descriptions of the causative formative (see 3.3.4.2) could be adopted; its "existence" is therefore dependent on the decision which was made in that case, and which will be further justified in a later paragraph.

-ŋu, used with group I verbs in other cases.

-ṇa, used with group II verbs, and with group Ia verbs in association with the causative formative.

-nja, used with group III verbs.

The term complement was first applied to this form of the Waḷuwara verb by Hale, because of its function as part of the predicate of a sentence containing a "sense verb",

such as jaŋa, 'to see' and ḷari-, 'to hear', e.g.

ŋaṇa jina jaŋaṭiji ṭuwaḷi ṭukaŋu

I you(acc) see-purp boomerang throw-comp

I will watch you throw the boomerang.

However, some of the following examples show that the range of functions of the complement in Waḷuwara is somewhat wider than this, and is rather difficult to define; it may even be associated with an intransitive verb.

kana ŋaṇa jaŋaṭiji wuku japaŋu

not I see-purp water fall-comp

I hope it doesn't rain.

kana jipa ŋaṇa ḷarijitja / tjaṇmarinja jindaḷu

not you me hear-pres / speak-comp you-alla

You are not listening to me.

jinja maṭaṇa / ŋunaṇa

him kill-past / sleep-comp

(They) killed him while he was asleep.

ŋaṇa tjirijitja ḷatjinjaṛa

I sick-pres dance-comp-poss

I am tired from dancing.

ŋaŋaṇa jipa ḷariṇa tjaṇmarinjaṇa
who-acc you hear-past speak-comp-acc
Who did you hear talking?

In the following example a complement form carries an agentive suffix and has a function which is normally fulfilled by a subject form (see 3.3.5.4).

ṇatinjaku jipa jinja ṭaŋuṇaṇa kaḷaaṇa
do what-comp-ag you that(acc) eat-past meat-acc
"What did you want to eat that meat for ?"

The decision to regard the causative formative as a suffix -ma attached to the complement form of a verb stem is based on the parallelism between such pairs of sentences as

ŋaṇa	jinja	jaŋaṇa	kaaṇa	I saw him crying
I	him	see-past	cry-comp	and
ŋaṇa	jinja	kaaṇamaṇa		I made him cry.

In the latter case the bound verb form -maṇa corresponds to the free verb jaŋaṇa in the former sentence, and in both cases the verb stem kaa carries the suffix -ṇa. Similarly

ŋaṇa	ḷariṇa	ṭawa	tjaṇmarinja	I heard the man speak
I	hear-past	man	speak-comp	

is parallel to

ṭawa	ŋaṇa	tjaṇmarinjamaṇa	I made the man speak.

Since group I verbs may on other occasions take a zero form of a formative suffix (compare the alternative forms jitala and jitarinjala, 'policeman'), the absence of an overt complement marker in causative forms of these verbs (e.g. japama, not *japaŋuma) is not regarded as a sufficient reason for rejecting the interpretation of causative verbs as

verb stem + complement formative + causative formative.

A sentence containing a complement, e.g.

ŋaṇa ḷariṇa kaṛali kaaṇa I heard the baby crying

appears to have the same meaning as the corresponding two-clause sentence, in this case

ŋaṇa ḷariṇa kaṛali kaaṇa
I hear-past baby cry-past.

The allomorphs of the complement formative may be cognate with the inflectional suffixes -ṇa and -nja (allomorphs of the nominative/accusative suffix for proper nouns) and the accusative marker for other nominal stems, which is variously -ṇa, -aaṇa and -waṇa.

3.3.5.4 The subject formative.

The suffix -ra is added to a normalis noun stem to form a noun stem whose function is to qualify the subject of

a verb. Although the verb concerned need not be transitive, the suffix -ku, which is, in its other occurrences, the agentive suffix used with a noun which is the subject of a transitive verb, appears to be always affixed.

The following examples show the use of the subject formative.

jaŋaṯaraku jipa maṯaṇa
see-subj-ag you hit-past
Did you mean to hit (him)?

matjaṯiji jiwa / njinaṯaraku
eat-purp he / sit-subj-ag
He is going to sit down and have a feed.

ŋunajiṯa jiwa njinaṯaraku
sleep-pres he sit-subj-ag
He is sitting down asleep.

ŋaṇa tjinaŋaṯaraku karinjamaṇa
I know-subj-ag stand-caus-past
I made (the humpy). (i.e. I, knowing how to make it, made it.)

Two forms, both irregular, of the subject formative are attested for the verb 'to go'. In the shorter form the formative is -Ø and the agentive suffix is added to the stem ṇata-.

In the longer form the final agentive form is ṇatamaṭaraku; it is not clear how this should be segmented.

3.3.5.5 The agent formative.

The agent formative is to be distinguished from the agentive inflectional suffix -ku; the agent formative is similar in function to the English formative -er, as in worker or runner. Thus it denotes the person or thing whose function it is to perform or be used in the performance of the action denoted by the verb stem to which it is ultimately affixed; it is immediately affixed to the normalis noun stem derived from this verb stem. The two allomorphs are -la and -lwa; these appear to be in free variation in most, if not all, contexts. Historically, these can be shown to be two stages in the change from an earlier *-lpa, -la being the later development but coexisting at the present time with -lwa. (See chapter 5.)

Examples of words formed with the agentive formative are:

kuwaṭala cook (kuwa, 'to cook')

jitala, jitarinjala policeman (jita, 'to tie')

kurγumaṭala handle (kurγuma, 'to hold, to catch')

pamara wandanjala tracker (pamara, 'foot, track'; wanda, 'to track')

Other examples of its use are:

puliṯi ŋunaṯalwakaka

cattle sleep-agent-loc

The cattle are at the camp.

ŋaṇa ŋuṛu njinaṯalwa

I home sit-agent

I am always at home.

ŋaṭaŋa ŋankana maṯarinjalwa / jindaŋuwaṛa jaka jiwa ŋutupuwaṇa jaṛu ṯaṇmaṭala

my-poss kangaroo kill-agent / your-poss emph he goanna only bite-agent

My (dog) is a kangaroo killer; yours is just a goanna killer.

It appears that the agent, although morphologically a noun, can function syntactically as a verb in that it may have an object in the accusative case.

maṛa ṯawa mampunuŋuḷa ṯukarinjala ṯuwaḷiwaṇa

this man good-ela throw-agent boomerang-acc

This man throws the boomerang well (or, is a good boomerang thrower).

3.3.5.6 The dual formative.

The dual affix, -wija, has the function of converting a noun into a dual number form. It is optional and is usually omitted; even if the context does not supply the information,

the numeral kutja, 'two', is more commonly used. Examples of its use are:

ṯawawija (usually [ṯa:wija]) two men

kaṛaliwija wumawija his two children

or

kaṛaliwija wuma

child-dual his-(dual)

ŋaṛawija wula Who are those two?

who-dual they two

warawuḷawija wula / ŋanjiṛawijaḷa

dog- dual they(dual) / same-dual-emph

Our two dogs are the same.

juɣuwijaṇa wulaṇa jita Tie those two sticks!

stick-dual-acc them(dual)tie-imp

3.3.5.7 The plural formative.

The plural formative, -wali, converts a noun into a plural form. Like the dual, it is optional and usually not used; it is a common feature of Australian languages that dual and plural markers are not used if the context contains this information (e.g. see Capell 1962, p.27).

Examples are:

kaṛaliwali children

kilakilawali a flock of galahs (but kilakila ŋuḷpa would be much more likely)

wamba janu ṭuṭawaliku wuwajiṭa

girl they boy-plur-ag call-pres

Those boys are calling the girls.

3.3.5.8 The alternative formative.

This affix is approximately equivalent in meaning to the English adjective 'other'. It occurs only occasionally in the corpus. The most common allomorph is -rila, but -jila and -ila have been heard, each in combination with only one noun stem.

jarγulila jiwa ṭawarila

one-alt that man-alt (jarγulu, 'one')

It was another man.

ŋaṇa ṇatajiṭa mikirilalu

I go-pres country-alt-alla

I am going to another country.

jarajanajilaji jiwa kurajiṭa

woman-alt-purp he like-pres

He likes another woman.

ṯawijawi janu juɣurila
small they tree-alt
All the other trees are small.

ṉunda janu tjaṇmariṇa jitjalarilaka
then they speak-past language-alt-loc
Then they spoke a different language.

3.3.5.9 The customary formative.

The term "customary" is applied to the suffix -kuniṇi, which has the approximate meaning "is used to", "is accustomed to", "has great ability or knowledge in connection with", "is enthusiastic about". It is very rare and the available data are not sufficient to enable its function to be determined precisely. The following examples illustrate its use.

ḷalaṇa / kaḷakuniṇi minjdji
elder brother-nom meat-cust clever
My brother is a good hunter. (According to the informant, kaḷakuniṇi means "always looking for meat".)

wamba ṉaṇa njinaṭi / jaramanakuniṇi
young woman I sit-ger / horse-cust
When I was young I was always riding horses.

3.3.5.10 The formative -pa

Only three examples of this suffix have been heard, and in all cases it is followed by the stative verb formative -ri. The function, at least in two of the cases, seems to be similar to that of the possessive suffix, to be described in the section on nominal inflections. It could be cognate with the genitive suffix, -pa. The examples are:

kaṛali	jiwa	ŋunaparijiṯa	
child	that	sleep-pa-stat-pres	The baby is sleepy.

malaraparijitja	
thirst-pa-stat-pres	(I) am thirsty.

markanaparijitja	
hand-pa-stat-pres	(He) is waving.

The stem ŋunapa, used by Fred Age (see the first example), corresponds to the word ŋunpa, 'sleepy', used by Mrs. Toby; the difference may simply be a matter of idiolect. Mrs. Toby uses a verbal form ŋunparijitja, corresponding to Mr. Age's ŋunaparijiṯa. (Cf. also ŋunparila, 'the other day', literally 'other sleep').

3.3.6 Formation of stems with inflectional suffixes.

Only nominal inflectional suffixes may be used for stem formation, and only noun stems are formed.

The allomorph -aa of the possessive suffix is frequently used as a noun formative, although in some cases this exists in the corpus only with the further addition of the stative verb formative -ri; thus jiṛaṭaari-, 'to be frightened' (from jiṛata, 'fright') and jallaari-, 'to burn' (from jalla, 'flame'). Other examples of nouns formed with the possessive include:

tjiṭaa	melon sp.	(tjiṭa	'seed')
ṭuwanaa	doctor	(ṭuwana	'snake')
ṇuḷaa	splitjack (Capparis lasiantha) (ṇuḷa 'ant'; this plant is frequently seen swarming with ants.)		

ŋamaa, a name used for two plants (Gossypium australe and Sarcostemma australe) which contain a milky fluid. From ŋama, 'milk'.

There are other examples of words which were probably derived with the same formative, but whose derivation is not known; these include such plant and animal names as matjaa, kunaa, tjilγaa, ṭarγaa and paraa.

The allomorph -ṛa of the same possessive morpheme is known in two derived stems:

tjiṭaṛaṇuka, a variant of the more common tjiṭaṇuka, a species of fruit, from tjiṭa, 'seed' and ṇuka, 'many',

tjimaraṇaṛa, a plant (Ptilotus exaltatus) from tjimara, 'friend' and -ṇa, the nominative/accusative suffix for proper nouns.

The privative suffix -ṇaraŋu is occasionally used as a stem formative, as in pilinjtjiṇaraŋu, 'tired', from pilinjtji, 'lively'; this can take a stative verb formative to give pilinjtjiṇaraŋuri-, 'to become tired'.

For further discussion of the classification of the possessive and privative suffixes see sub-section 3.4.1.

The genitive functions as a noun stem formative in the word kuṛukuṛupa, 'hat', i.e. 'belonging to the head', from kuṛukuṛu, 'head'. Other examples of cases in which a noun or pronoun in the genitive case has taken a further nominal inflectional suffix, and so functioned as a noun stem, are given below:

waramaṭata	tjipiljapaji	papuju
look for-mot-pres	duck-gen-purp	egg-purp

(we) are looking for duck eggs.

kana	jipa	ṇandaṇa	ṇaṭaṇulu	ṇuriṇiḷalu
not	you	go-past	my-alla	camp-alla

You didn't come to my camp.

ḷalapaḷaku	ŋaṇa	ṭaṇmaṇa
brother-gen-ag	me	bite-past

(My) brother's (dog) bit me. (example from Hale's notes.)

The allomorph -ŋu of the genitive morpheme, which is used with personal pronoun stems (as ŋaṭaṇu, 'my', see the second example above) may also be functioning as a stem formative in the words kalaŋu, 'new' (cf. kalija, 'now') and jaṇuŋu, 'old' (cf. jaṇu, 'long ago').

The elative suffix -ŋuḷu is used as a formative in the word panduŋuḷu, which is translated by the informants as "travelling devil". This is derived from pandu, 'butt of a tree'; the devil is said to hide among the trees and the name could be literally translated as 'he who comes out from the trees'.

4.2.7 Formation of stems with obsolete morphemes.

A number of stems appear to be composed of a free morpheme and an affix whose function is not at present known and which is not known to exist in the language as either a free morpheme or a productive affix.

An example of an apparently no longer productive stem formative is -ḷi in ṯuwaḷi, 'boomerang' (cf ṯuka, 'to throw') and in waḷaḷi, 'long' (cf waḷa, 'to pull'). This could be cognate with -li in karali, 'child' (cf kara, 'to copulate'[4]), matjali, 'step cut in tree trunk' (cf matjaa, 'river red gum, Eucalyptus camaldulensis') and wajili, 'an article of clothing' (cf wajitja, 'net'). Many other examples, more or less plausible, of tentative derivations of this type could be cited.

[4] It has been claimed of various Australian tribes, in particular those who practised the rite of subincision, that they did not know the connection between copulation and conception (e.g. see Elkin, 1961, p. 197). The correspondence between kara and karali, although possibly coincidental, does suggest that the Waluwara, who practised subincision, were aware of this connection. For further evidence see Edge, 1899 (the author is grateful to Dr. N. Tindale for drawing his attention to this article).

A few words may have been derived by prefixation; compare ṇaṭala, 'tongue', and jitjala, 'word, language', with the common Australian ʼdalaŋ, 'tongue' (cf Capell, 1966, p. 39). Compare also kulijika and jika, both meaning 'cold'.

Where there is a two syllable additive the more likely interpretation in most cases is that the word formation has involved a second free morpheme; an example of such a word is ṇamanduru, 'milk' (cf ṇama, 'mother, breast, milk').

3.4 Inflection.

Inflectional affixes in Waḷuwara are all suffixes. As indicated above (section 3.2) the words of Waḷuwara can be divided on morphological grounds into various classes and groups, as shown in Table 3.1.

Table 4.1

Classification of words

A few points of this classification are worthy of note:
demonstrative pronouns are grouped with the nouns rather than with the pronouns, due to their possession of an agentive form, which the personal pronouns lack;
there is no category of interrogative pronouns; those words which, syntactically and semantically, are interrogative pronouns are inflected as nouns (there are also two interrogative verbs);
there is no subclassification of verbs into transitive and intransitive on the morphological level;
there are few irregular verbs, and none are so irregular as to be not assignable to an appropriate group.

The membership of the various classes of words will be described in 3.4.5 and 3.4.3.

The inflectional suffixes will now be classified and described, one by one, (3.4.1 to 3.4.4, 3.4.6 and 3.4.7), and the various nominal and verbal paradigms will be given (3.4.5 and 3.4.8).

3.4.1 Classification of nominal inflections.

Nominal inflections may be classified, on rather scanty evidence, according to the order of their appearance in cases where more than one suffix is added to the stem.

Since the possessive may occur in association with, and following, the nominative/accusative suffix on a proper noun, and may occur in association with, and preceding, the purposive suffix (quite apart from its use as a stem formative), we can classify the nominative/accusative suffix as first order, the possessive as second order, and the purposive as third order. In the absence of evidence to the contrary, all other inflectional suffixes may be regarded as first order. The following examples show the use of two inflectional suffixes in combination:

papaṇaṛa
girl-nom-poss My girl

ṭulyu ṇaṇa waṭaṇa wukuwaṛaji waḷipa
sand I dig-past water-poss-purp hole
I dug a hole for water.

There is a single example of the possessive following the privative:

maṇala maṛa ṭulitjiṇaraṇuwaṛa / japunijitja
fire this hot-priv-poss / go out-pres
This fire is going out.

There is also a single example in the corpus of the use of the purposive before the possessive - wukujuwaṛa instead

of wukuwaṛaji - but as the combination of suffixes exemplified by the latter word is fairly common, this exception has been disregarded.

Although the genitive, possessive and privative suffixes all form words which can function as noun stems, they are treated with the inflectional suffixes because, in actual use, these words are not normally further inflected; contrast a word formed with a suffix such as the plural formative, -wali, which is not significantly less (or more) likely to combine with an inflectional suffix than is a simple noun stem.

Nouns in Waḷuwara have a slightly modified ergative case system in which an agentive case is used for the subject of a transitive verb, and there is no obligatory distinction between nominative (subject of an intransitive verb) and accusative (object of a transitive verb) except with demonstrative pronouns. The use of the word 'obligatory' points to the way in which the normal ergative system is modified; in the Waḷuwara system there is an optional accusative case suffix for nouns, other than proper nouns and demonstrative pronouns. The last named subclass has a mixed system with obligatory markers for agentive, nominative and accusative. Personal pronouns, however, have the accusative case system, in which a nominative/agentive case form is used for the subject of any verb and the

nominative case is used for the object of a transitive verb. Because the demonstrative pronouns (and also the possessive pronouns) have an agentive case, they have been grouped with the nouns rather than with the personal pronouns.

There is a small group of prosodic suffixes which may be attached to noun stems and which are used in combination with certain inflectional suffixes; these can conveniently be considered at this point. There is also an emphatic suffix, which occurs as the last component of a word; this will be dealt with in 3.4.4.

3.4.2 Prosodic suffixes.

Used optionally in association with, and preceding, some mono-syllabic nominal inflectional suffixes is a group of suffixes of the form C_1a, where the corresponding inflectional suffix is of the form C_1V. A suffix of this type functions as a dummy syllable whose purpose is to allow a stress pattern that is more acceptable to the speakers; it carries some stress and the vowel is frequently realized as a long vocoid. Some examples of words formed in this way, and so having, in effect, a reduplicated inflectional suffix, are now given:

ṭawapapa	man's	(normally ṭawapa)	
wukukaku	water	(agentive)	(normally wukuku)
juyulalu	tree	(allative)	
[illegible]	stone	(locative)	
[illegible]	sister	(accusative)	

There are no examples in the corpus of prosodic suffixes in association with a suffix whose consonant is a glide.

Rarely, a suffix of this type has been known to replace an inflectional suffix; for example, -la has been used twice in place of -lu or -lalu in the following sentence:

ṇatamaṭa	ṇaṇa	juɣula	waḷpatjila
go-pres	I	tree-alla	shade-alla

I'm going over to the tree to (lie in) the shade.

Included tentatively with the prosodic suffixes is another suffix which appears to have no function other than to link a suffix to a stem and possibly to contribute towards a more desirable (to the speaker) rythmical structure of the utterance. This is -ḷa, used with genitive nouns and followed by one of the inflectional affixes -ku, -ka and -lu (and probably also -pa, although this is not attested in the corpus). This seems to be almost obligatory, although such

[illegible] as paṭaṇulu and paṭaṇuku have been heard instead of [illegible] common paṭaṇuḷalu and paṭaṇuḷaku, respectively.

[illegible] Nominal inflectional suffixes.

[illegible] The zero suffix.

[illegible] uninflected nominal stem may function as a nominative, [illegible] accusative or a vocative. There are, however, some restrict-[illegible]:

[illegible] A proper noun may take the zero affix only in the vocative [illegible]; proper nouns (which include kinship terms and a few other words as well as proper names) are thus the only nominals which distinguish between the vocative and the nominative (see 3.4.3.2).

Examples are:

papa	tjanmara	Girl, talk (to me)!
girl	talk-imp	
jaṭa /	ṇandami	Hey, dad, come here!
father	go-imp-dir	

(b) Non-singular nouns, demonstrative pronouns and non-singular personal pronouns take an obligatory accusative suffix, -ṇa, which will be considered in 3.4.3.3.

The uninflected form of non-singular personal pronouns functions also as an agentive, thus:

janu	tjirijitja	They are sick.
janu	jinja matana	They killed him.

Singular personal pronouns are similar to the non-singular forms, but are so irregular in their phonemic shapes that there is no advantage in speaking of a stem (see 3.4.5).

(c) There is an optional accusative suffix which may be used with common nouns and possibly with genitive nouns (see 3.4.3.3).

The term 'nominative' refers not only to the subject of an intransitive verb, but also to the subject of most verbless sentences and to the nominals in an equational clause. Some examples of each follow.

warawula	ŋatanu	maraturina	My dog is dead.
dog	my	die-past	

jatindalu	pakarijita	ṇukara	The wind is blowing
hard	blow-pres	wind	hard.

jiwa warawuḷa ŋaṯaŋu ŋanjiṛa jindaŋu
that dog my like your
My dog is like yours.

maṛa jaṭapa ṯajiliwaṛa This is my father's spear.
this father-gen spear-poss

pata jiwa ṯawa He is a big man.
big that man

parkana tjiraṯala jaka ŋaṇa
kangaroo spear-agent emph I
I'm a good kangaroo hunter, all right!

The following examples show the use of zero suffix for the object of a transitive verb:

waḷipa ŋaṇa waṯarijiṯa I'm digging a hole.
hole I dig-pres

warawuḷaku ŋaṇa markana ṭanmaṇa
dog - ag me hand bite-past
The dog bit my hand.

3.4.3.2 The nominative-accusative suffix.

This suffix is used only with proper nouns and has allomorphs -nja, used after stem-final i, and -ṇa, used in other environments. It is obligatory if the noun is in the nominative or accusative case.

ḷalaṇa	tjiritjiṭa	My brother is sick.
elder brother-nom	sick-ger-pres	

ḷalaṇa	ŋaṇa	kaḷa	ŋutaṇa	I gave my brother
e.b.-acc	I	meat	give-	some meat
		(-Ø,acc)	past	

jipa	maṭaṇa	ḷalaṇa	You hit my brother.
you	hit-past	e.b.-acc	

makarinja	pilinjtjiṇaraŋu	My sister-in-law is
sister-in-law-nom	lively - priv	tired.

3.4.3.3 The accusative suffix.

The accusative case in Waḷuwara, as in many other Australian languages, is used for the object of a transitive verb and, in the case of ŋuta, 'to give' for what, in English,

would be an indirect object (i.e. both objects of this verb are in the accusative case - see the second example in 3.4.3.2). The allomorphs are, in addition to -Ø (see 3.4.3.1), -waṇa, -aaṇa and -ṇa. Their distribution is as follows:

-ṇa is obligatory with personal pronouns (apart from two irregular singular pronouns) and demonstrative pronouns and optional with non-singular nouns, with common nouns with stem-final aa and with verbal complements;
-aaṇa is optional with common nouns with stem-final Ca and with non-singular nouns and may also be used optionally with genitive nouns ending in a (there are no data on the latter case);
-waṇa is optional with common nouns ending in i or u and with possessive pronouns (which are the only genitive nouns with final u). There are rare and doubtful examples in the corpus of -waṇa being used after stem-final a.
If the object of a verb precedes the verb, an optional accusative suffix is nearly always omitted. If the object follows the verb, the accusative suffix, if optional, is used in a majority of cases, but is often omitted.

Some examples of the use of the accusative suffix are given below:

ŋaṇa wurṇṇa ḷarijitja I can hear you.
I you (plur)-acchear-pres

kuwaṇa ŋaṇa kaḷaaṇa ŋarkuṇuwaṇa
cook-past I meat-acc wallaby-acc
I cooked the wallaby.

juɣuwijaṇa wulaṇa waɣuluma
stick-dual-acc they(dual) join together-imp
-acc
Tie those two sticks together.

ŋaɣaṇa jipa ḷariṇa tjaṇmarinjaṇa
who-acc you hear-past talk-comp-acc
Who did you hear talking?

3.4.3.4. The agentive.

The agentive suffix, -ku is used to mark the subject of a transitive verb, with the exception that a personal pronoun is not marked in this way, but is used in its nominative form as the subject of any verb. The use of the agentive is illustrated by the following examples:

jindaŋuḷaku ŋaṇa warawuḷaku ṭanmaṇa
your - ag me dog - ag bite-past
Your dog bit me.

kanjijitja manpaku ŋaṇa / puḷḷukutuku

press down- this-ag me/ heavy - ag

pres

This is too heavy for me (to carry).

juyu jinja jiḷwaṇa miṛṛiku

Tree that (acc) hit - past lightning-ag

The lightning hit the tree.

An agentive noun need not be in any way animate or active. Thus the subject of the verb kanji-, 'to be heavy', is in the agentive case. Note also the following example:

kaḷilpuku janu ŋuḷpaku jinja ŋaaraṇa

gidgea-ag they many-ag him block-past

(plur)

All the gidgeas (trees) blocked him.

The use of -ku as a suffix on a word which qualifies the subject of an intransitive verb has been discussed and illustrated in 3.3.5.4. Another possible example of this very rare usage is given below; it may be, however, that maṇuku is simply an allomorph of maṇu.

ṇatamaḷa ŋali maṇukumiji

go-mot-opt we (dual, incl) slow-ag-emph

We'll walk along slowly.

3.4.3.5. The locative/instrumental suffix.

In many ergative-type languages, in Australia and elsewhere, the instrumental and agentive share a single marker, and so must be grouped together as an operative case (see, for example, Capell (1966), p.63-4 or Blake (1969) p.33). This applies to most of the languages geographically close to Waḷuwara, and even to its closer relative (linguistically as well as geographically), Bulaṇu. However, Waḷuwara differs in that it uses the locative rather than the agentive suffix to mark the instrument used for an action. In this it resembles the Western Desert language described by Douglas (1964, p.p. 58, 94, 107).

The locative suffix is used to mark not only location in space and location in time, but also duration.

Personal pronouns use the comitative suffix, (see 3.4.3.3.) where the locative might be expected, and probably never occur in a context that would require an instrumental form.

The following examples show the use of the locative/instrumental suffix:

maṛaka	ṇapala	ṇunaṭiji	We are camping here.
here-loc	we	camp-purp	
tjaṇmarijitja	jiwa	tjimerakaka	He is talking to his
talk-pres	he	friend - loc	friend.
pinkaka	wuku	wurṛarijiṭa	The water is running
gully-loc	water	run - pres	in the gully.

njinajiṯa pulṛaka [He is] sitting with the old
sit- pres old man-loc man.

ṭuwana jiwa kanduṛuḷa wataka The snake is under
snake that inside stone-loc the rock.

kutjaka wirilaka ṇaṇa ṇjinaṇa / wuṇarambaka
two-loc year-loc I sit-past / Carandotta-loc
I stayed at Carandotta for two years.

warawuḷa ṇaṭaṇu tjuwalaka maṛaṭuriṇa
dog my night-loc die - past
My dog died last night.

ṇaṛaku jiwa ṇaṇa jiḷwaṇaṇami wataka
who-ag that me hit -past-dir stone-inst
Who threw that stone at me?

ṇaṇa jina tjiraṭiji maṛaka waḷkaraka
I you (acc) spear- this-inst sharp-inst
purp
I'll spear you with this sharp [spear].

3.4.3.6. The allative.

The allomorphs of the allative morphems are -ḷu, -aḷu and -kaḷu, used with personal pronouns, and -kaḷu also with non-singular nouns, - kuju, used as an alternative form with some demonstrative pronouns, and -lu, used in all other cases. The range of functions of the allative is illustrated by the following examples:

marimarilu ṇula ṇendaṇa ŋutupuwaṇaji

plain-alla they go-past goanna-purp

(dual)

They went out to the plain to look for goannas.

punguwaḷilu ŋalaŋa kaḷa Put the meat into the bag.

bag - alla put-imp meat

juɣulu ŋalaŋa jinja ṭaḷaṭaḷa pandulu

tree-alla put-imp that (acc) axe butt-alla

Put the axe next to the tree.

jipa ṇaṭaḷu japaṇami You fell on to me.

you me -alla fell-past-dir

warawuḷa warandamajiṭa jararalu

dog bark - pres white man-alla

The dogs bark at the white man.

tjaṇmara ṇalu ṭawalalu

talk-imp that (alla) man - alla

Talk to that man !

3.4.3.7. The elative.

This suffix denotes motion away from or out of, and related concepts, as illustrated by the examples. The normal form of this morpheme is -ŋuḷu; -kaŋuḷu is an alternative form which may be used with personal pronouns, and is the obligatory form with non-singular nouns; the other allomorphs, -ŋiḷi, -ŋuḷa and -ŋiḷa are used with some demonstrative pronouns or the third person singular personal pronoun. Note also the use of -ŋuḷa instead of -ŋuḷu in the last example of 3.3.5.5.

kuum-ŋuḷu jiwa ŋaŋaritjaṇami

hump-ela he get out-mot-past-dir

He came out from the house.

maṛa matjaŋuḷu jipa ṉandaṇa

here bed-ela you go-past

You went the wrong way.

ŋumarilaŋuḷu [The spear was made] a couple of

other day - ela days ago.

ḷiṉinjdjiyaŋuḷu [I got it] from Lily.

Lily Clayton - ela

3.4.3.8 The comitative.

The comitative could perhaps be described as a "motive locative"; its function appears to be to define the location of a person who or object which is in motion or momentarily at rest, by reference to another person who or object which is also in motion, or at least is not confined to any one location (such as the sky, or a road). When used with personal pronoun stems, this suffix may also fulfil the functions for which other nominals use the locative suffix. The allomorphs are -ḷa ~ -daḷa, added to the first and second person singular personal pronouns, and -kaḷa, used in all other cases. Some examples are now given.

maṛakaḷa ŋaṇa ṯawakaḷa ṇatajiṯa

this-com I man-com go-pres

I'm going with this man.

jarakaḷa jiwa pakaṇa / kutuḷaṇu

creek-com he jump-past / other side

He jumped across the creek.

maṇa ṇaṭaḷa pantukaḷa wukuwaṛa

here me - com waist-com water-poss

The water is up to my waist.

tjoṇmera ṇaṭaḷa Talk to me !

talk-imp me -com

kilakila jawiṇikaḷa jiwa ṇatamaṭa

galah sky-com that go-mot-pres

The galah is flying along.

3.4.3.9 The causal.

This morpheme typically marks the cause of some state or action and can usually be translated 'because of'; occasionally it appears, at least superficially, to function as an elative.

The only allomorph is -naḷu.

kutiṇa jiwa jikamaḷu ṭuwana

go in-past that cold-causal snake

The snake went in[to its hole] because it was winter.

ṇaṇa jiraṭaarijitja ṭuwanamaḷu

I afraid -pres snake-causal

I'm frightened of the snake.

nandami maṇalamaḷu Come away from the fire.

go-imp-dir fire-causal

3.4.3.10 The genitive.

This normally has the traditional genitive function, marking the owner or possessor of some person or thing. It is not normally used to mark ownership of parts of the body, presumably because in these cases the possession is inalienable; however, it can be, as shown by the phrase wundurr ṭawapa, 'human blood' (literally 'blood man-of') and the sentence

ŋuṇumajiṭa ŋaṇa markana ŋaṭaṇu
clench-pres I hand my
I'm clenching my fist.

The more normal state of affairs is illustrated by

kuṇukuṇu ŋaṇa matjurijitja
head I bed-stat-pres
I've got a headache.

The allomorph -mu is used with first and second person singular personal pronouns, -ma with other personal pronouns and -pa in all other cases.

ŋaṇapa jiwa warawuḷa Who does that dog belong to ?
who-gen that dog
paṭapapa wuma ṭawapana jiwa ŋutjanaṇa
big-gen his man-gen she wife-poss
She is that big man's wife.

kana ŋaṇa jaŋaṇa williwaṇa ŋuṇmapapa
not I see-past vine-acc yam - gen
I didn't see any yam vines.

The genitive suffix has another, less common, function which closely resembles that of the causal suffix, -maḷu. The use of these two suffixes does appear, however, to be at least partly predictable. It seems that -pa is used in cases where some state (other than fear), e.g. sickness or some other tangible thing, has been caused. Thus:

tjiriṇa kaḷapa That meat made [me] sick.
sick-past meat-gen

kuṇukuṇarijitja ṇaṇa wuwallapa
cough - pres I smoke-gen
The smoke is making me cough.

ṇana ṭurkuṇu tjirijitja / ṭuwaḷiṇapa
I back sick-pres / boomerang-gen
[Making] the boomerang made my back sore.

-maḷu is used when a state of fear, dislike or some other intangible feeling is caused by the object or person in question, or when some action is inspired or made advisable. Thus:

kana ṇaṇa kurajiṭa jitjiṛaji / ṇaṇaḷimaḷu
not I like-pres Urandangie - purp / what-causal
"I don't like Urandangie." "Why?"

ṇaṇa ṇuwakaritjiji wumaḷu
I hide - purp him (causal)
I'm going to hide from him.

kantamata galap / jikamalu

windbreak put down-imp / cold-causal

Put up a windbreak before it gets cold.

nukarijitja ŋaŋa wamalu jaramalu

sick of-pres I that (causal) river - causal

I'm sick of that place. (The sickness in this case is intangible).

See also the examples above (3.4.3.9). There appears to be a choice in some cases, as shown by the following examples.

pilimarijitja jikapa [I am] shaking from the

shake-pres cold-pen cold.

jikamalu / pilimarijitja ŋaŋa

cold-causal / shake-pres I

I am shaking from the cold.

3.4.3.11 The privative.

This suffix denotes an absence of some person, thing or action, and may be rendered in English by various negative forms, depending on the context: lacking, not having, not, don't, etc. This is one of the two nominal affixes which may be used with the gerund. The allomorph -ŋarawa was recorded by Hale, but has not been heard by the present writer. The allomorph -ŋara is rare and occurs in free variation with the normal form of the privative, -ŋaraŋu. The following examples show the use of this morpheme.

jara wukuṇaraŋu The river has no water.

river water-priv

kaḷaṇaraŋu ŋanu We have no meat.

meat-priv we (plural, exclusive)

nara njinajiṭa kaṇali kuluwarijitja / jitjalaṇaraŋu

here sit-pres child keep still-pres/ word - priv

The child is sitting down here quietly.

tjuwalaṇaraŋu ŋaṇa njinaṭiji

night-priv I sit-purp

I am going to have a rest although it is not night time.

ŋaṇa maḷalja waṭiṇaraŋu I haven't dug [any yams]

I no dig-ger-priv yet.

karitjiṇaraŋu ṇanda Keep on going.

stand-ger-priv go

jaŋaṭiṇaraŋu --------- When he looked away ---------

look-ger-priv

3.4.3.12 The possessive.

This very commonly used suffix has a wider range of functions than the designation 'possessive' might suggest. In general, it implies that the object to whose name it is affixed is owned by or in some similar way associated with the speaker or with some other person or thing specified or understood in the utterance. It can often be translated by an expression such as 'there is' with the sense of 'belonging to that place (or person or thing)', as in the following two examples:

matjaawaṛa jiwa jaraka kaḷa

gum tree-poss there river-loc there (com)

There are gum trees along the river.

matjaaka jiwa / walawalaṛa

gum tree-loc there / goanna-poss

There is a goanna on that gum tree.

The possessive seems to have a similar function in sentences like the following:

ŋaṇa mukaṇa mukaṛa / tjiraṭalaa

I emph (?) good-poss / spear-agent-poss

I'm a good hunter.

Further examples of the use of the possessive will be given below.

The basic form of the possessive morpheme is -waṛa, but shorter forms are more common. -waṛa is confined to stems with final i, u, or aa (the only example of the last in the corpus is matjaawaṛa; since matjaa probably contains the possessive suffix as a stem formative - see 3.3.6 - this may be an example of a double addition of the suffix) or with the dual formative -wija. -aa and -aṛa may be used with any stem, with the probable exception of those ending in aa. -ja and-wa are confined to stems with final i and u, respectively, while -ṛa has been noted rarely with a final i or u. (The decision to say that -aṛa is used with stems with final a, instead of saying that -ṛa is used with these stems is, of course, arbitrary, since both would give the

the same word; see 2.4.5). -a is effective only with stem-final i or u (again see 2.4.5). Apart from the restrictions noted in the preceding sentences, the use of the various allomorphs appears to be freely variable, except that there is a preference for a shorter form of the suffix when the stem is longer than two syllables or when it occurs in the early part of a sentence. ṯuwaḷiwaṛa, ṯuwaḷija, ṯuwaḷaa and ṯuwaḷa all occur in the corpus (ṯuwaḷi, 'boomerang') and there are a number of less striking examples of the same phenomenon.

ŋatayu jiwa kaṛaliwaṛa That's my child.
my that child-poss

kanaṯaraa ŋaṇa I'm hungry.
hunger-poss I

kuṉukuṉaa ŋaṇa njiṛṛa I've got a cold in the
phlegm-poss I throat throat.

ŋaṛapa jiwa warawuḷaṛa paṭaṛa
who-gen that dog-poss big-poss
Who does that big dog belong to?

mampunu jiwa ŋ:maṛa / ŋama mampunu /ṯijiwaṛa matju
good that milk-poss / milk good /tea-poss bad
I like milk better than tea.

ṯulγu ŋaṇa waṯaṇa wukuwaṛaji waḷipa
sand I dig-past hole
water-poss-purp

I dug a hole for water.

kana maṛa japaṇa wukuwaṛa

not here fall-past water-poss

It hasn't rained for a long time.

ṭajila jiwa ṇandaṇami / ṭuwaḷija /majaŋaraa/---

spear-poss he go-past-dir / boomerang-/shield-poss/---

He came with his spear, his boomerang, his shield ---

ŋunaṭakari ŋaṇa jitjiṛaka / ṭawiṛiwaṛa

sleep-hab-past I Urandangie-loc / small-poss

I used to camp at Urandangie when I was young.

3.4.3.13 The purposive.

The purposive suffix may be added to a gerund, and in such cases the combination of the gerund formative and purposive suffix form, in effect, a verbal purposive mood marker. This may often be translated by an English future tense form, but, as will be seen from some of the following examples, this can not always be done, and the denotation is clearly purpose or intention, not future time. When used with the gerund, the purposive suffix may have one of two forms: -ji, which is the most common form and is used almost always when the suffix is word-final, and -ja, which is used when another suffix (a directional or an emphatic) follows, or occasionally word-final. The following examples illustrate this use of the purposive:

tjipiji ŋaṇa ṭura I'm going to sing a song.

sing-purp I song

jipa ḷetjitjiji / ŋaṇa jina jaŋaṭija

you dance-purp / I you see-purp

(acc)

I'm going to watch you dance.

ḷaji / ŋuja warṇṭiji

grinding / seed grind-purp

stone

Stones for grinding seeds.

kana jipa ṇandaṇa ṇaṭaŋulu ŋuriṇilalu / ŋaṇa

not you go-past my-alla camp - alla / I

jina kaḷaaṇa ŋutija

you meat-acc give-purp

(acc)

If you had come to my camp, I would have given you some meat.

ŋaḷaṭa wuku japijami It might rain.

maybe water fall-purp-dir

When added to a nominal stem (other than a gerund), the purposive marks the beneficiary of an action or feeling, or the reason for or objective of an action. -ji is again the most common allomorph, but -ju is used after stems ending in u (the only example of morphophonemic change in the vowel of a bound morphene in Waḷuwara) and -ŋa is used with non-singular nouns and with most personal pronouns. The first and second person pronouns are irregular.

-ji is used in all other circumstances, except that on three occasions -ŋa or -ŋi been used instead of -ji. An example of this is given below; in the second last example ḷalaŋaŋa has been used where ḷalaji would be expected. In all three cases the meaning is similar: A fought B on account of C. The quantity of data available does not justify any conclusions.

kaṛaliji ŋaṇa waramajiṭa I'm looking for my kids.
child-purp I look for-pres

ṇanda ṭawalaṭiji kaḷaji / ŋaṭa
go ask -purp meat-purp / me (purp)
Go and ask for some meat for me.

kana kurajiṭa ŋaṇa jitjiṛaji
not want-pres I Urandangie-purp
I don't like Urandangie.

wuṇja ṇaṇa maṇalaji Get some chips for the fire.
chip get fire-purp

ŋaṭaṇuju ŋaṇa ṇandaṇa wataji
my - purp I go-past money-purp
I went for my money.

tjiraṇa jaka jinja jiwa / ḷalaŋaŋa
spear-past him he / elder brother-purp
emph
He speared [that man] on account of his brother.

kana tjaṇmaritjini wuru jitjalaṛaji Don't talk about
not talk-ger-imp you word-poss-purp that!
(dual)

3.4.3.14 The reflexive/reciprocal suffix.

Reflexive and reciprocal actions are marked in Waḷuwara by means of a suffix which is added to the appropriate personal pronoun. Any reflexive or reciprocal clause must therefore include such a pronoun, which might have no function other than to carry the reflexive-reciprocal marker. The allomorphs of this morpheme are -aa and -wa, which are in free variation and are used with singular personal pronouns, and -pa, used with dual and plural pronouns.

ṇaṯwa wataḷaṯarijiṯa I am scratching myself.
me-refl scratch-pres

warawuḷaku wupaa wutjuru ṇumaraṇa
dog - ag him-refl leg break-past
The dog broke its leg.

warawuḷawijaku wulapa ṭanmaṇa
dog - dual-ag they-rec bite-past
(dual)

The two dogs bit one another.

The last sentence could also mean 'the two dogs bit themselves'. Such alternatives could rarely cause confusion, since in many cases - as in this one - one of the possible meanings is very unlikely and in most other cases the context would make the intended meaning clear.

5.4.4 Residue.

There are a number of occurrences of apparent suffixes added to nominals for which no explanation is at present forthcoming. Some may be simply errors on the part of the informant, although cases where this seems likely are not included here.

-nda (?) ṇandami jaṭalunda ṇaṭaaḷu
go-imp-dir father - me - alla
alla-?

Come to daddy!

On the original recording the suffix -nda is heard as [da]. On a subsequent field trip this utterance was replayed to the informant, who corrected the suffix and translated the utterance as "Come over, I'm your father". She could not explain the function of the suffix, and regarded the utterance as the same when it was omitted.

-ṭi (?) majimajiṭi jina maṭaa
dead - ? you kill-pot
(acc)

Informant's translation, "I'll kill you for dead". The informant could not explain the suffix, which again was thought to be unnecessary.

-kuṇa (-ku, agentive, -ṇa)
jiwa ṭawa paṭakuṇa
that man big-ag-?
He who hit me is a big man.

From Hale's field notes.

-ma (?) ŋaṯarwama ṇuḷḷukutiṇa ṇunda

damper-? hard-stat-past now

The damper is hard now.

The remarks made on -ṯi also apply here.

3.4.5 Nominal paradigms.

The noun paradigms are given in Table 3.2. The genitive form of the genitive noun is not included as it does not appear in the corpus and its form cannot be predicted with confidence. The words used as representative of the various declensions are: proper noun -papa, 'girl', common noun -wata, 'stone', non-singular noun - papawija, 'two girls', genitive noun noun -ŋaṯaŋu, 'my, mine'.

The membership of the noun declensions is as follows: Proper nouns - names of persons and places, relationship terms (except ṯawara, 'husband' and ŋutjana, 'wife'), the interrogative ŋaṛa-,'who' (the vocative form *ŋaṛa, is not attested) and a few other words; ṯuṭa, 'little boy', papa, 'little girl', tjimara, 'friend' and kukuwa-, 'poor fellow' (the unaffixed form *kukuwa is not attested).

Common nouns - all nouns not in another declension (including the interrogatives ṇeŋaḷi, 'what' and ṇaŋŋu, 'how many').

Non-singular nouns are those formed with the suffixes -wija, dual, and -waḷi, plural (including non-singular

demonstratives such as mali, 'these').
Genitive nouns are the genitive case forms of nouns and pronouns.

The names of the four cardinal directions - ɲuɲuṭa, 'north', karra, 'south', ɲujinda, 'east' and ɲaḷamaḷa - are not inflected regularly; see the vocabulary for irregular forms. An irregular elative of ɲaṛa - 'who', ɲaṛijɲuḷu, has been heard.

The demonstrative pronoun paradigms (apart from that for jiwa, which is also a personal pronoun) are given in Table 3.5. Also included is this table are the interrogative ɲaṛa, 'where', which is morphologically similar to the demonstrative pronouns, and bala, 'somewhere', which is morphologically similar to the common nouns, although slightly irregular.

The personal pronoun paradigms are given in Table 3.5.

Table 3.3

Noun Paradigms

	Proper	Common	Non-Singular	Genitive
vocative	papa			
nominative	papaṇa	wata	papawija	ɲaṭaṇu
accusative	papaṇa	wata~ wateaṇa	papawijaṇa	ɲataṇu~ ɲaṭaṇuwaṇa
agentive	papaku	wataku	papawijaku	ɲataṇuḷaku

	Proper	Common	Non-Singular	Genitive
locative/ instrumental	papaka	wataka	papawijaka	ŋaṭaŋuḷaka
allative	papalu	watalu	papawijakaḷu	ŋaṭaŋuḷalu
elative	papaŋuḷu	wataŋuḷu	papawijakaŋuḷu	ŋaṭaŋuŋuḷu
comitative	papakaḷa	watakaḷa	papawijakaḷa	ŋaṭaŋukaḷa
causal	papamaḷu	watamaḷu	papawijamaḷu	ŋaṭaŋumaḷu
genitive	papapa	watapa	papawijapa	
privative	papaṇaraŋu	wataṇaraŋu	papawijaṇaraŋu	
possessive	papaṇara	watawara~	papawijawara	ŋaṭaŋuwara~
	(and other	watara~		ŋaṭaŋara~
	forms?)	watna		ŋaṭaŋa
purposive	papaji	wataji	papawijaŋa	ŋaṭaŋuju

Table 3.4

Demonstrative Pronoun Paradigms

English equivalent	here, this	there, that (in sight ?)	there, that	where, which	somewhere, around
nominative	mara	ṇura		ṭara	pala
accusative	maṇa (rarely maraṇa)		ṇaraṇa~ ṇaṇa	ṭaṇa	
agentive	maraku		ṇaku	ṭaku	palaku
locative/ instrumental	maraka	ṇuraka	ṇaka		palaka
allative	maralu~		ṇalu~	ṭalu~	palalu~
	marakuju		ṇakuju	ṭakuju	palalwija
elative	maraŋiḷi~	ṇuraŋuḷu~	ṇaŋiḷi	ṭaŋiḷi~	palaŋuḷu
	maraŋila	ṇuraŋuḷa		ṭaŋuḷu	

comitative	ṇaṛakaḷa	
[illegible]	ṇaṛanaḷu	
[illegible]tive	ṇaṛapa	ṇapa
[illegible]ive	ṇaṛeji	
dual (nom-inative)	mijaṛa (= mija + possessive ?)	
plural (nominative)	mali	ṇawali

Note that the causal forms of the personal pronouns are the same as the causal forms of the corresponding genitive nouns. This has been confirmed only for the first and second person singular, but is probably correct for all.

Table 3.5

Personal Pronoun Paradigms

	singular			dual			
	first	second	third	first inclusive	first exclusive	second	thi
nominative	ŋaṇa	jipa	jiwa	ŋali	ŋajara	jipala	wul
accusative	ŋaṇa	jina	jinja		nominative plus		
purposive	ŋaṭa	jinda	wuŋa		"	"	
genitive	ŋaṭaŋu	jindaŋu	wuma		"	"	
allative	ŋaṭaḷu ŋaṭaaḷu	jindaḷu jindaaḷu	kaḷu		"	"	
elative	ŋaṭaŋuḷu	jindaŋuḷu	kaŋiḷi		"	"	
comitative	ŋaṭaḷa ŋaṭaaḷa	jindaḷa jindaaḷa	kaḷa		"	"	
causal	ŋaṭaŋumaḷu	jindaŋumaḷu	wumaḷu wubamaḷu		"	"	
reflexive/ reciprocal	ŋaṭaa ŋaṭawa	jindaa jindawa	wupaa wupawa		"	"	

dual				plural			
sive first exclusive	second	third	first inclusive	first exclusive	second	third
ŋajara	jipala	wula	ŋapala	ŋanu	wuru	janu
nominative plus			-ṇa			
"	"		-ŋa			
"	"		-ma			
"	"		-kaḷu			
"	"		-kaŋuḷu~-ŋuḷu			
"	"		-kaḷa			
"	"		-maḷu			
"	"		-pa			
"	"					

3.4.6 Classification of verbal suffixes.

Classification of verbal suffixes, either on a positional basis or on a functional basis, has proved very difficult owing to the complexity and variety ofinflections and functions and the scarcity of data on many points. After numerous revisions, a combined classification in which four orders (i.e. positional orders) of noun stem formatives and five orders of verb stem formatives are listed, in parallel, followed by all mood and tense suffixes, grouped in a sixth order, then the directional suffixes and finally the emphatic suffix appeared to be the most adequate. The classification is shown in Table 3.6 and is justified in detail below.

Table 3.6

Classification of verbal suffixes

	Noun stem formatives	Verb stem formatives
First order	-pa	stative
Second order	complement	causative
Third order	gerund, normalis	motive
Fourth order	agent, subject	conjunctive
Fith order		habitual
	Mood and tense inflections	
Sixth order	imperative, optative, irrealis, potential,	

	past,
	present
	Directional suffixes
Seventh Order	hither,
	thither
Eighth Order	Emphatic suffix

The only suffix which appears never to be preceded by any other suffix (but the data are very meagre) is -pa. The stative always follows -pa, but cannot follow any other suffix. The complement formative can follow the stative or the causative (no examples of the latter in the corpus, but it is almost certainly possible), but may also precede the causative. The gerund may follow any of the first three orders of verb stem formatives and can also follow the conjunctive, but the conjunctive must always be preceded by the gerund and can be followed only by a second occurrence of the gerund. The normalis and the gerund are mutually exclusive; the former follows second order suffixes and can be followed only by the fourth order noun stem formatives, the habitual or by a nominal inflection. The habitual can follow the conjunctive. The remainder of the ordering is straight forward. All noun stem formatives can, of course, be suffixed, to some extent at least, like a noun; these nominal suffixes are not included in Table 3.6.

3.4.7 Verbal inflectional suffixes.

3.4.7.1 The imperative.

The imperative suffix is -a, added to the verb stem. The imperative of a verb with stem-final a is therefore phonemically identical to the stem (cf. 2.4.5.)

ṭaḷaṭaḷaji ṇanda Go and get the tomahawk!

tomahawk-purp go-imp

ŋaŋara Wake up !

ŋaŋama jinja Wake him up!

njina wuru karaliwali

sit (imp) you (pl) child-plur

Sit down, you kids!

kana jikara Don't get cold.

not cold-stat-imp

wuku ṇaŋaṭa Go and get some water!

water get-mot-imp

ṭamiṇi kaŋami Bring me a firestick!

firestick bring-imp-dir

An irregular imperative in -ŋa is formed by the verb ṭaŋuṇa, 'to eat (meat)! :

kaḷa ṭaŋuṇaŋa Eat [your] meat !

There is also a continuative imperative, formed by adding -ni to the gerund:

kana wuŋa muriṇamaṭini

not him (purp) wait-ger-imp

Don't wait for him any more.

kana jinja maṭarinjini

not him hit-ger-imp

Don't keep on hitting him.

kaḷa [illegible]tini / ---

there lie-ger-imp

Your lie there --- (see example (x) of 4.2 for the context).

On one or two occasions this form has been translated as a present tense; this poses a problem whose solution is not known.

jiwa karitjini jaṭaṇa jiwa

that/ there stand-ger-? father-nom that/there

That one standing up is my father.

3.4.7.2 The optative.

The optative mood is used to express a wish or a suggestion, and is marked by the suffix -ḷa, added to the verb stem. Translations given by the informants have indicated a range of functions from imperative to purposive (see the examples below), but this is attributed to impreciseness of translation rather than wide range of functions.

kura ṇali ṇjiriji ṇandaḷa

come on-imp we (dual, incl) fish-purp go-opt

Come on, we'll go and catch a fish.

wukeḷa jaramana Hunt those horses!

hunt-opt horse

ṇutjanaku wuku kaṇaḷa

wife-ag water bring-opt

My wife will bring us water.

ṇandaḷami jiwa I hope he does come.

go-opt-dir he

ṇali ṇularilḷa We'll go home.

we go back-opt

(dual,

incl)

waji jiṇa ṇutala ṇaṇaka jinja

question you give-opt me-emph it (acc)

Would you like to give it to me ?

ṇaṇa ṇunda jaṇaḷa Let me see now!

I now see-opt

wutukalimaḷa ṇaṇa jiwa jararaku

tell - opt me that white man-ag

That white fellow should have told me.

3.4.7.3 The irrealis mood.

The usual function of the irrealis suffix is to denote an action that could have taken place but did not. In one case (see the last example) the function seems to be somewhat different; it may be similar to the English use of not (won't, don't, isn't, etc.) in questions. The irrealis suffix is -imaḷa, and it is added to the verb stem. It is presumably cognate with the negative particle maḷalja, 'no'.

jinja ŋaṇa japimaḷa/ ŋaṇa jinja maṭimaḷa

him I see-irr / I him hit-irr

If I had seen him I would have hit him.

ŋaṇa japimaḷa kuṇu I nearly fell over.

I fall-irr emphatic

ŋaṇa jinja ṭaṇaṇimaḷa kaḷaaṇa /ṇunda ŋaṇa tjirimaḷa wumaḷu

I that eat-irr meat-acc /now I sick-irr it-

(acc) causal

If I had eaten that meat I would have got sick.

ŋaṇa kamuwililu ṇatajiṭa//waji ŋaṇa ṇandimaḷa

I Camooweal-alla go-pres //question I go-irr

"I'm going to Camooweal." "Can I come ?"

(or, better, perhaps,

"Can't I come ?")

4.3.7.4 The potential mood.

The potential mood suffix is used to convey the idea of future uncertainty (also frequently conveyed by the potential adverb ṇḷḷḷa, 'maybe' together with the perfective form of the verb), to convey the idea of conditional future, or to express ability to do something. The potential mood is expressed by adding -aa (group I verbs and motive verbs), -ṭaa (group II verbs) or -tjaa (group III verbs) to the verb stem. It is probably a compound suffix and could be interpreted as gerund plus -aa or normalis plus -aa. The following examples illustrate its use.

warawuḷḷku jiwa paṭaku jina ṭanmaṭaa
dog - ng that big-ng you bite-pot
(acc)

That big dog might bite you.

kuluwa jipala / ṇaṇa jipalaṇa maṭaa
keep quiet- you I you (dual)- hit-pot
imp (dual) / acc

If you two don't stop talking I'll hit you.

kimaṭaa jiwa juɣu jinja / japaa ṇunda jiwa
let go-pot he tree that / fall-pot then he
(acc)

He might let go [of the trees] and fall.

ḷaritjaa wuruṇa ṭawaku

hear-pot you-acc man-ag

(plur)

The men might hear you.

kana ṇaṇa jarγaṭ a I can't get up.

not I climb-pot (From Hale's field notes).

(But note also kana ṇaṇa jaŋajiṭa I can't see)

(not I see-pres)

3.4.7.5 The past tense.

The past tense (or perfective aspect; there appears to be no compelling reason to prefer either designation) is normally marked by the suffix -ṇa. In association with the habitual aspect, the past tense is marked by the suffix -ri. -ṇa and -ri appear, because of their phonetic dissimilarity, to be not allomorphs of a single morpheme but separate morphemes, and should be designated past tense I and past tense 2. See also 3.3.5.I for the use of the gerund as a past tense verb. Some examples are given below; numerous examples of -ṇa have already been given in other contexts, e.g. in almost all parts of Sub-section 3.4.3.

wurγaraṇa ṇaṇa I've been running.

run-past I

ṇaṇa japaṇa kana jipa ṇaṇa kurγumaṇa

I fall-past not you me hold-past

I fell because you didn't hold me.

ṇ̪gumaṭ̪kari janu ṇ̪onkanaṇ̪a / punjdjuraṇ̪a janu

ṭ̪aguma ṭ̪kari / watalalu

roast-hab-past they kangaroo-acc / emu - acc they

(plur) (plur)

roast-hab-past / stone-ella

They used to roast kangaroos and emus on the stones.

ṭ̪wiṛiḍe ṇ̪aṇ̪a wuryaṛakari jatindalu

small-pers I run-hab-past very

I used to be able to run fast when I was young.

<u>3.4.7.6 The present tense.</u>

The present tense has presented a problem in segmentation, since some forms appear to be interpretable as a combination of two morphemes and others as only a single morpheme. The following forms appear:

-jiṭ̪a, used with group I verbs, to which it is linked by the stative suffix (see 3.3.4.3), and with group II verbs,

-jitja, used with group III verbs,

-ta, used with the motive formative,

-ṭ̪a, used with the gerund, and occasionally with the motive as an alternative to -ta,

-tja, used with the habitual aspect.

The bisyllabic forms may derive from a combination of gerund and present tense, the gerund functioning as an imperfective aspect. It may be of some significance that the main Bulaṇ̪u informant thought that Waḷuwara speakers used -jiṭ̪a with motive forms,

3.3.4.3 jaqatjita instead of jaqatata.
However, there is not sufficient evidence to justify further segmentation of these forms.

The combined gerund-present tense suffix is tentatively interpreted as a present continuous marker, on the basis of such translations as the following:

tjiritjita	jiwa	"He been [sick] long time,
sick-ger-pres	he	he might been sick in months."
tjirijitja	jiwa	"not long he [sick]."
sick-pres	he	

However, translations given by informants on other occasions do not indicate any continuative aspect, and they have stated on some occasions that the meanings of two clauses forming a similar pair to that illustrated above are "the same". It appears that any earlier distinction has been at least partly lost. Other examples of this form of the present tense are:

wirilaritjitami	Summer is coming.
summer-stat-ger-pres-dir	
laritjita yana	I'm thinking.
hear-ger-pres I	
nanali jipa pirtjitjita	What are you eating?
what you swallow-ger-pres	

Examples of present tense forms of the motive and habitual are given in 3.3.4.4 and 3.3.4.6 respectively.

Many examples of the ordinary present tense have already been given in other contexts; some more are given below.

wuku japarijiṭa It's raining.

water fall-pres

puḷḷukutu jiwa / kanjijitja It's heavy.

heavy it / press down-pres

wajika / ṇaṇuṇḍa ṇaṇa ṇatajiṭa

question / when I go -pres

I don't know when I'm going.

The last example shows a similar use to that in English of a present tense to refer to a future action.

3.4.8 Verb paradigms.

The grouping of verbs into morphological classes has been briefly referred to earlier. A more complete specification of the groups is now given.

Group 1 includes all verbs, the final consonant of whose stem is a stop, with the exception of matja and kaa (group 11) and a few in group 111 (see below).

Group 1a consists of a few verb stems of three or more syllables ending in -ra. These are pitjara, ṇakara, waryara, jatjuwara, ṇawira and warara.

Group 11 includes all verbs, the final consonant of whose stem is a nasal (other than nj), a lateral (there are only a few examples) or a glide, with the exception of piṇi-, pitjiṇi-, japuni-, ṭuli-, kalaḷi- (all in group 111) and with the addition of matja, kaa, tjira, wara, kura and kunukura.

Group lll includes all verbs, the final consonant of whose stem is r, with the exception of those listed above under group la and group ll, and also the verbs with stem-final -njV - kanji- and kunji- -and ḷatji-, ṇiṇi-, pitjiṇi-, ṭuli-, kalaḷi-, pirtji-, puḷḷukuti-, meṇkurukuti-, paḷaṭi- and japuni-. The final vowel of group lll stem is i.

In a few cases there is insufficient evidence available to assign a verb to a group, and in a handful of cases the assignment is doubtful, e.g. jutjuwara and warara, which are provisionally assigned to group la.

The verb paradigms are given as fully as possible in Table 3.7 for these groups and also for the irregular verb ṇanda- ṇuta, 'to go', which is classified as a member of group l. Other irregularities are few: the irregular imperative ṭaṇuṇaṇa, 'eat!', (see 3.4.7.1), the irregular present tense ṇutajiṭa, of ṇuta, 'to give', and the verb whose only known forms are kawa, 'come here', and kaandi, 'was coming'.

The representative verbs chosen for the table are: group l, japa, 'to fall', group la, ṇakara,'to cut', group ll, jaṇa, 'to see', group lll, ḷari, 'to hear'. Some of the forms given have not been heard or may even be impossible for the representative verb, but are included because they have been heard with other verbs of that group. Inflected forms of prefixed, reduplicated and causative forms are not given.

Directional and emphatic suffixes are also omitted.

One could easily imagine verb forms not included in the table, which could have been used only on rare and unusual occasions; for example * tjanmarinjamaṭatini jinja might mean 'keep on making him talk as you go along'.

Table 3.7 (see pages 196-199).

3.5 Directional suffixes.

Of the two directional suffixes found in Waḷuwara, -mi is very common and -ji is rare. The former normally has the meaning 'to here, in this direction, hither', and, in fact, the very frequently occurring verb 'to come' is formed by adding this suffix to the verb ṇanda-ṇata, 'to go'. In addition, this suffix can be used with verbs which would not be expected to be associated with a directional suffix, and in these cases seems to mean

Table 3.7

Verb paradigms

	group I 'to fall'	group Ia 'to cut'	group II 'to see'	group III 'to hear'	(group I) 'to go'
imperative	japa	ṇakara	jaŋa	ḷara	ṇanda
optative	japaḷa	ṇakaraḷa	jaŋaḷa	ḷariḷa	ṇandaḷa
potential	japaa	ṇakaraa	jaŋaçaa	ḷaritjaa	ṇandaa
irrealis	japimaḷa	ṇakarimaḷa	jaŋimaḷa	ḷarimaḷa	ṇandimaḷa
past	japaṇa	ṇakaraṇa (ṇakariṇa)	jaŋaṇa	lariṇa	ṇandaṇa
present	japarijiṭa	ṇakarijiṭa	jaŋajiṭa	ḷarijitja	ṇatajiṭa
gerund	japi		jaŋaṭi	ḷaritji	ṇandi
purposive	japiji (5)	ṇakariji	jaŋaṭiji	ḷaritjiji	ṇandiji
privative	japiṇaraŋu	ṇakariṇaraŋu	jaŋaṭiṇaraŋu	ḷaritjiṇaraŋu	
normalis			jaŋaṭa	ḷaritja	

(5) in all purposive forms, the final -ji may be replaced by -ja.

	group I 'to fall'	group Ia 'to cut'	group II 'to see'	group III 'to hear'	(group I) 'to go'
habitual past	japarakari	ṇakarakari	jaŋaṯakari	ḷaritjakari	ṇatakari
habitual present			jaŋaṯakatja	ḷaritjakatja	ṇatakatja
continuative imperative	japarinjini	ṇakarinjini	jaŋaṯini	ḷaritjini	
continuative present			jaŋaṯita (?)	ḷaritjiṯa	
complement	japaŋu	ṇakaraŋu	jaŋaṇa	ḷarinja	ṇandaŋu
causative	japaṇa	ṇakaraṇama	jaŋaṇama	ḷarinjama	
agent	japal(w)a	ṇakaral(w)a	jaŋaṯal(w)a	ḷaritjal(w)a	
	japanjal(w)a				
	japarinjal(w)a				
subject	japaraku		jaŋaṯaraku		ṇataku ~ ṇatamaṯaraku

	group I 'to fall'	group Ia 'to cut'	group II 'to see'	group III 'to hear'	(group I) 'to go'
motive imperative	japariṇanda		jaŋaṭa ~ jaŋaṭanda		ṇatama
motive optative			jaŋaṭaḷa	ḷaritjaḷa	ṇatamaḷa
motive irrealis			jaŋaṭandimaḷa		
motive past	japaraṇa japariṇandaṇa japariṇjaṇa	ṇakararaṇa	jaŋaṭaṇa jaŋaṭandaṇa	ḷaritjaṇa ḷaritjandaṇa	ṇatamaṇa
motive present	japariṇata	ṇakariṇata ṇakararijiṭa	jaŋaṭata	ḷaritjata	ṇatamaṭa ṇatamaṭata
motive gerund			jaŋaṭandi		
motive purposive	japaraṭiji japariṇandiji		jaŋaṭaṭiji jaŋaṭatiji	ḷaritjaṭiji	

	group I 'to fall'	group Ia 'to cut'	group II 'to see'	group III 'to hear'	(group I) 'to go'
motive causative	japarinjama				
conjunctive imperative				ḷaritjtiwara	
conjunctive potential			jaŋaṭawaraa		
conjunctive past	japiwaṇa		jaŋaṭiwaṇa	ḷaritjiwaṇa	ṇandiwaṇa
conjunctive purposive	japiwariji		jaŋaṭiwariji	ḷaritjiwariji	
conjunctive habitual present	japawarakatja		jaŋaṭawarakatja		
reduplicated	japaḷapa		jaŋaḷaŋa	ḷariḷari-	
negative prefix			muŋalaŋa	muŋalari-	

'close to here'; this meaning is not, however, well authenticated, and 'facing this way' may be a more correct translation. See the fourth example.

The suffix -ji means 'that way, away from here, thither' and may be derived from jiwa, 'that, there'. If this is so, then -mi is probably derived from maṛa, 'this, here'.

The following examples illustrate the use of the directional suffixes, which are used only with verbs and one or two adverbs (see 4.4.1.3), and always follow inflectional suffixes.

kunmapuḷu jiwa ŋaṛaritjaṇami ṭawa
hump-ole that go out-mot man
-past-dir

The man came out from the house.

kulli ṇandami Come quickly!
quick go-imp-dir

kara ŋaṇa ŋutami Give me another one!
again me give-imp-dir

ḷiṛaka karijitjami / ṭawa
mouth-loc stand-pres-dir/ man

A man is standing in front of the house.

ṇandaji Go away!
go-imp-dir

pumaṭa ŋalwaṭitaji The sun is setting.
sun enter-ger-pres-dir

ṭaṛa jindaṇu kunmaṛa /jiwa kuntiku jaṇajiṭaji
there your humpy-poss /that house-ag look-pres-dir
Where is your camp? It's over there past that house.

4.6 Emphatic suffixes.

A number of suffixes for which no other use can be established are grouped together in this section as being used simply to emphasize a word. In no case is this usage definitely established, although there is some evidence; in only one case could an informant give any worthwhile explanation of the function of one of these suffixes; in most cases the suffix was omitted if the informant repeated the utterance. The usual explanation of these suffixes was, in paraphrase, "that's the long way to say it; the short way means the same thing".

There are, in addition to these emphatic suffixes, some emphatic particles; these will be discussed in 4.4.2.

The suffix -waka~-aka can be used with any of the major classes of words - nominals, verbs and non-inflecting words. The -waka form follows i, u or aa while the other form is used when the "short way" has a final Ca (C is any consonant) and rarely with final i or u. This suffix may be cognate with the emphatic particle jaka.
The suffix -ka, used occasionally with non-inflecting words (e.g. waji, see 4.3, and ṇula, see 4.4.1.3) is probably another allomorph of this suffix.

With verbs, this suffix has been heard in association with the potential and purposive moods, sometimes with the directional suffix -mi intervening; the emphatic suffix always takes last place. Used with the potential, the meaning is, according to Mrs. Toby, "why doesn't -----". The first three examples illustrate this; in the second case the informant's own translation is quoted. The translation of the last part of the first example is also by Mrs. Toby, although the example was originally elicited from Mrs. Clayton.

ṇatiṇa jiwa wukuwaṛa / japuawaka
do what- that water-poss / fall-pot-emph
past
What's that cloud doing? "Why doesn't it rain?"

ṇatiṇa jiwa / ṇandeamiwaka
do what- he / go-pot-dir-emph
past
"What's wrong with that fellow, he won't come?"

ṇali ṇjinaṭaawaka maṛaka / ṇali jinja muṇallumaṭaa
we sit-pot-emph here-loc / we him miss - pot
(dual, incl) (dual, incl)
If we have a rest we'll lose him. (i.e. Why don't we have a rest? [Because] we'll lose him).

When used with a purposive form this suffix sometimes seems to add an element of compulsion to the meaning; e.g. ṇandijaka jiwa, 'he's got to go' as compared to ṇandiji jiwa,

'he's going to go'. In other cases it seems merely to add an element of emphasis, or to have no clear function at all.

Examples are:

jarraku jiwa ŋaŋa ŋalummaŋa ŋandijaaka
white man- that me meet-past go-purp-emph
ag

The white man met me as I was going [along the street].

ŋaŋa njinajiḷa jikaji / jikaka ŋaŋa ŋandijaaka
I sit-pres cold-purp / cold-loc I go-purp-emph

I'm stopping here until winter.

ḷalaku kaŋaŋami ṭajiliwaŋa / ŋaŋa jaṇaṭijaaka
elder carry-past-
brother-ag dir spear-acc / I see-purp-emph

My brother brought his spear so I could see it.

The following examples illustrate other uses of this suffix;

jiwa ŋaŋa maṭaŋa / ŋaŋaaka ŋunda jinja maṭijaaka
he me hit-past / I-emph now him hit-purp-emph

He hit me; now I'm going to hit him.

jaŋuwaka ŋaŋa jaraṇjiṭa I'm just looking around.
only-emph I look-pres

njimiji ŋali ŋaliji ŋupaawaka
fish-purp we go-purp tomorrow-emph
(dual, incl)

We're going fishing tomorrow.

kana jiwa jirṭaarijitja ŋaṭaŋumaḷaa waraṇuḷamaḷaaka
not he afraid - pres my-causal- dog - causal-emph
emph (?)

He's not frightened of my dog. (The final aa on the second last word may be a shortened form of the emphatic suffix, or may be a possessive suffix).

The two other suffixes interpreted as emphatics, -ḷa and -pa, are both rare. The former is most commonly used with the non-inflecting word ŋaḷaṭa, 'maybe', but has also been heard with noun stems. The latter has been heard with nominals and non-inflecting words, including the emphatic particle waṇunda.

Examples are;

kuṛukuṛuḷa jana paḷaṭinjaaṇa
head-emph they bring -past

They carried the head of the man they had killed;

(see the first story in Appendix I).

ṇunjijura ŋaḷaṭaḷa jaaṛtiji
emu maybe-emph see-purp

[We] might find some emus.

ṇanjiwijakuḷa ŋajarapa jaṇaṇa
like-dual-ag-emph we (dual, excl)-rec see-past

We saw one other.

jiwapa "That's him! That's the right one!"
that-emph

tanmaṭaa jiwa / pakarupa That spider can bite.
bite-pot that / spider-emph

wanundapa nana jina ḷarijitja

emph-emph I you hear-pres

I <u>am</u> listening to you. (In answer to the question "Why aren't you listening to me?")

wuryarrangwa jiwa

run -past-emph he

He always runs away (when ----).

4. SYNTAX

[illegible]

[illegible] made here to give generally [illegible] definitions; the following definitions are [illegible] the only [illegible] corpus, and if a more [illegible] corpus, [illegible], for example, a significant [illegible] of natural conversation, were available, they [illegible] require revision.

[illegible] which the stream of speech is [illegible] of this study, is the utterance. [illegible] of speech bounded by definite [illegible] have not given the impression of being [illegible] other pieces of speech (i.e. [illegible] person, or by the same person speaking [illegible] subject, or the same person acting a [illegible] role), or [illegible] of such.

An utterance may consist of only a single word or phrase, such as an exclamation, e.g. kukuwaṇa, 'poor [illegible]!', a vocative, e.g. ṇaṇa, '[illegible]irl!' or a brief answer to a question or response to a command, e.g. maṇa, 'here' or 'maṇaḷja', no!'. Within a longer utterance there may be brief pauses, or changes in the intonation contour which are perceived as pauses. These divide the utterance into sentences, which may be unfinished, and divide sentences into smaller units. No distinction is made between the pauses fulfilling one or other of these functions.

A clause is the smallest unit which can function as a [illegible] sentence, i.e. a sentence which is intelligible [illegible] of information from other sources. It is [illegible], two or three phrases. If information is [illegible] from outside the sentence, e.g. from a previous [illegible] from the same utterance, one or two (but not all) [illegible] may be omitted. Examples (i) and (ii) [illegible] clauses functioning as sentences.

[illegible] sentence from which all [illegible].

[illegible] other simple criterion for [illegible] and sentences, as the [illegible] all.

[illegible] clauses and associated phrases form a single [illegible] if they are covered by a single sentence prosodeme [illegible].5.4).

[illegible] The clauses and associated phrases are regarded as [illegible] sentence if one or more of a set of markers, relating one clause to the other, are present. The markers are the adverbs ṉunda and watji (see 4.4.1.4) and miji (see 4.4.1.7), the gerund (if functioning as a verb; see 3.3.5.1), the purposive form of a verb (see 3.4.3.13), the irrealis mood (see 3.4.7.3) and the conjunctive formative (see 3.3.4.5). The irrealis must occur in both clauses; the others in only one. These markers, in these cases, thus fulfil a conjunctive function in addition to their normal function.

Similar criteria could be devised for sentences of more [illegible] clauses, which would, however, be very rare. [illegible] showing the use of these markers are [illegible] (examples (xv) to (xxi).

[illegible] of distinguishing sentences from clauses [illegible] satisfactory (see [illegible]). If a sufficient [illegible] are available, a more satisfactory [illegible] based on intonation could probably be [illegible].

[illegible] a group of words which (a) form a unit [illegible], i.e. is not discontinuous; (b) contains [illegible] belonging to the same main class of words, [illegible], verbs or non-inflecting words, with the [illegible] that a group of non-inflecting words may form part [illegible] noun phrase or verb phrase; (c) contains only nominals [illegible] to the same case, if a noun phrase, or verbs [illegible] the same mood, tense and affix, if a verb phrase. [illegible], possessives and privatives are here regarded [illegible] nouns in the nominative case.

A transitive clause contains two noun phrases - the subject and the object - and a verb phrase; see examples (ii), (v) and (vii) below. An intransitive clause contains a noun phrase and a verb phrase; see (i), (vi) and (ix). A noun phrase may be omitted if the clause can be understood without it (see (iii), and, in particular, the subject is usually omitted if the verb

[illegible] relative (see xvi) and (xviii)). An equational [illegible] contains a single noun phrase and, to be complete, [illegible] at least two words (see (x) to (xii)). In [illegible], this will be some two English noun phrases, [illegible] most commonly by some form of the verb 'to be'; [illegible], neither justification nor method has been found for dividing a Wolupu equational clause into two phrases. [illegible] information might provide both. To any of [illegible] may be added a negative adverb or a [illegible] particle (see (v)).

A sentence need not contain a clause; for example, a noun phrase with an adverbial phrase can form a self-contained sentence (see (viii)).

In addition to phrases forming part of a clause, Wolupu has two other types of phrase. One is the phrase which is in apposition to one of the phrases of a clause and which, therefore, if discontinuous phrases were permitted by the definition, would be regarded as part of this phrase. Such a phrase, if in apposition to a noun phrase, often has an adjectival function, and, if in apposition to a verb phrase, normally has an adverbial function. See examples (iv), (vii) and (xiv).

The other type of phrase is that which, while not in apposition to any part of a clause, has an adverbial function; this is called an adverbial phrase. (See (vi) and (ix)).

[illegible] simple to most commonly a personal pronoun, [illegible] pronoun, a noun or a noun and a [illegible] pronoun. More complex noun phrases may [illegible] combinations of nouns and pronouns, [illegible], occasionally with one or more non-inflecting [illegible], and with very [illegible] word order. Particularly complex [illegible] are shown in examples (xi) and (xii); see [illegible].

A verb phrase is normally a single verb, but may consist of more than one verb (see the example (xiii)) [illegible] forming verb with non-inflecting words (see [illegible] (xv) and (xv')).

An adverb phrase normally consists of a non-inflecting [illegible] or more inflected nominals.

In addition to these phrases, certain other non-inflecting words, such as [illegible] or the negative particle, may form part of a sentence. The non-inflecting words are discussed in greater detail in section 4.4.

Some examples to illustrate the above definitions follow. In all examples in this chapter / represents a brief pause and // a long pause (an utterance boundary). Pauses at the beginning and end of the quotation as a whole are not marked.

[illegible] I am going.

[illegible] I

[illegible] intransitive [illegible]

[illegible] [illegible]

clause = sentence

[illegible] The dog bit me.

[illegible] bite-past

[illegible] transitive

[illegible] [illegible] VT

clause = sentence

[illegible] [They] took [them] to eat.

[illegible] carry-past

tr VP tr VP

clause clause

sentence

(iv) guripi ṭuriṇa kukuwaṇa That poor fellow's camp

camp burn-past poor fellow-son was burnt.

np intr np in apposition

vp to guripi

clause

sentence

[illegible] dina tjinanga /jipa ŋjinnti

[illegible] I you (see) know-root you sit-pr

[illegible] tr vp np intr vp

[illegible] object

[illegible]

[illegible] clause

[illegible] = sentence

I [illegible] sitting there.

[illegible] ŋjinnti-ri [illegible] ŋukuka

[illegible] sit-hel-root this-loc water-loc

[illegible] intr vp adverbial phrase,

[illegible] tive

[illegible]

[illegible]

[illegible]

I used to comment this waterhole.

(vii) kapuli [illegible] ŋaŋa jaŋanjita ṭurinja

child there (see) I see-pres play-comp

np np tr vp np in appos.

object subject with object

clause

sentence

I am watching the children playing.

[illegible] ṇuṇṭalwakaka

[illegible] -agent-loc The cattle are at the camp.

[illegible], locative

[illegible]

[illegible] jaṛajana ṇjinajiṭa wataka

[illegible] man sit-pres hill-loc

[illegible] adv p

locative

---

clause

---

sentence

My wife and I live in a hill.

[illegible] ṇuṇgarnu [illegible] I have no water.

[illegible]-priv I

np = equational clause = sentence.

(xi) [illegible] [illegible] jiwa puṭṭpuwaṇa jaṛu ṭaṛmaṭala

[illegible]-poss [illegible] that goanna only bite-agent

np = equational clause = sentence.

Your [dog] is just a goanna killer.

(xii) peṭapapa wuma ṭawaṇaṇa jiwa gutjanaṛa

big-gen his man-gen that wife - poss

np = equational clause = sentence

She is that big man's wife.

[illegible] dire jinja matjunaŋa mukamaŋa

[illegible] that in badly- make -past

[illegible] past

[illegible] tr VI

[illegible] that

[illegible]

[illegible] that [illegible] H.

[illegible] ŋandami He came here often.

[illegible] many times - he go-past-dir

past

tr (?) [illegible] intr VI

In this case it is possible to interpret the first two [illegible] forming a clause, with the second verb phrase [illegible] in apposition with the first, or to interpret the second and third phrases as the clause and the first verb phrase as being in apposition with the second.

(xv) kimṭaa jiwa juya jinja /japaa ṇunda jiwa

let go-pot he tree that (acc)/fall-pot then he

He might let go of the tree and fall.

(xvi) kulli ṇandami / japaṭaa watji jina

quick go-imp-dir/ see-pot before you (acc)

Come here quickly, before he sees you.

(xvii) ŋaŋa miji ṇatamaŋa /gaŋa maṭaraŋa jinja/kaḷaaŋa

I when go-mot-past/ I kill-mot- it /meat-acc.

past (acc)

I killed that animal while I was walking along.

(xxiii) kaṇili jinja m ṇaṇa ʼdiwa jinja njirimaṭi

child that (acc) hit-past/ he him be cheeky-ger

He hit the kid who was giving him cheek.

(xxiv) wuku kuṇj / mukaritjija jipa

water drink-imp/good -stat-purp you

Drink some water and you'll get better.

(xxv) ṇawuna ṇaṇa ṇaṇimaḷa jinja /ṇaṇa wuryarimaḷa wumaḷu

snake I see-irr that (acc)/ I run -irr him (causal)

If I had seen the snake I would have run away.

(xxvi) ṇṭanuṇju ṇaṇa ṇaṇuṇa watuji / ṇaṇa

my - purp I go-past money-purp / I

ṇaṇṭiwaṇa ṇṭanu watauṇa

get-conj-past my money-acc

I went for my money and I got it.

The verb ṇuta, 'to give', is unique among Waḷuwara verbs in that it takes two direct objects, e.g.

ṇuta jinja ṇaṇa Give it to me!

give-imp it (acc) me

ḷalaṇa ṇaṇa kaḷa ṇutaṇa I gave my brother some

elder I meat give-past meat.

brother-acc

Thus a clause containing this verb (except in its imperative form) will, if complete, contain four phrases, including two separate object phrases.

. Word order.

It was felt that only non-elicited items were suitable for a study of word order in Waḷuwara, and consequently the data available are very inadequate.

There is a great deal of freedom in the word order of Waḷuwara sentences, but certain tendencies, rarely strong enough to be called rules, can be observed. These are listed below. Reference will be made to a set of examples of unelicited and apparently natural speech, mostly by Mrs. [illegible]; these are also given below and are numbered (i) to (xxii). See also the texts in Appendix 1.

Where any one of the following "rules" contradicts another in a particular case, the lower numbered "rule" takes precedence.

(1) A question word takes first place in a sentence; see (ii), (viii) and (ix). Exceptions are rare; see the first sentence of (ix) for one.

(2) The negative adverb takes first place in a sentence; see (ii), (ix), (xiii) and (xix) to (xxii). Exceptions are rare; see (ii) for an example in a compound sentence. The precedence of (1) over (2) is illustrated only by elicited examples, e.g.

nayaḷi	kana	jipa	ṇandaṇa
what	not	you	go - past

Why didn't you go?

(3) The verb takes last place in a clause; there are numerous examples. A common exception is the intransitive clause with pronoun subject; the orders subject verb and verb subject are both very frequent and a number of examples of both will be found below. Another common exception is the transitive imperative clause, in which the verb usually precedes a pronoun object but follows a noun object; see (i), (iii), (iv), (vi) and (xv). An intransitive imperative verb is, of course, usually the only component of the clause. Examples of transitive sentences which do not follow this "rule" are given in (i), (iv), (viii), (ix) to (xiii) and - a very interesting example - (xx) (first sentence i.e. up to //).

(4) Within a transitive clause, a noun phrase that contains a noun precedes a noun phrase that does not contain a noun (the latter normally consists of a pronoun). See (viii), (xi), (xii), (xiii), (xvi), (xix) and (xxiii). For exceptions see (iv), (viii), (ix), (xvi), (xvii) and (xxiii). Probably a demonstrative takes precedence over a personal pronoun.

(5) In a transitive clause, the subject precedes the object. See (viii), (ix), (x), (xiii) and (xvii) and, for exceptions, (i), (xx) and (xxiii).

(6) Adverbial phrases and phrases in apposition with a component of a clause may precede the clause to which they refer unless there is a question word or a negative adverb, or may follow it.

There aremany examples. A common exception is the purposive form of a pronoun functioning as the object of certain verbs, such as kura, 'to like', muriṇama, 'to wait (for)', wijapa, 'to call out (to),' ṭawala, 'to ask (for)', kunukura, 'to be sick (of)'. See (ii) (two examples) and (xiv). A much larger corpus might provide statistical justification for regarding these verbs as forming a group separate from the other intransitive verbs. Contrast, for example, the word order in

jiwa	jinda	wijaparinjaṇami
he	you (purp)	call-mot-past-dir

he was calling out to you as he came.

and	ṇaṇa	kaajita	jinda
	I	cry-pres	you (purp)

I'm crying for you.

Further examples of the latter type are found in (ii), (vii), (x) and (xii). It is felt that this difference may be significant, but the proof is lacking.

Exceptions to these "rules" can often be attributed to a desire to emphasize one component of the utterance by bringing it forward. This is very clear in the first sentence of (viii) and the second sentence of (xvii).

The tendency in Waḷuwara is for sentences to be short, and two sentences, as in (xvii), are preferred to a single complex sentence.

Abbreviated sentences, in which one or more phrases of a clause are not expressed, but are understood from the context, are common. An obvious example is the answer to a question, e.g. maḷalja, 'no', in (viii) and (ix). Other examples of incomplete sentences are jita, 'tie [it] up!', in (i), aa / jindaŋu, 'oh, yours', in (ix) and ŋuta jinja, 'give [it] to him' or 'give it [to him]', in (vi). In all cases the meaning is quite clear.

Examples of unelicited speech:

(i) warawuḷa jiwa wurγarijiṯa / puliṯi ṭanmaṯiji
dog that run-pres / bullock bit-purp
jararapa / puliṯi ṭanmajiṯa warawuḷaku
white man-gen / bullock bite-pres dog -ag
jararapa / jita / warawuḷa jindaŋu
white man-gen / tie-imp / dog your
jita / matju jiwa warawuḷa jindaŋu
tie-imp / bad that dog your

That dog is running up to bite the white man's bullock. It's biting the white man's bullock. Tie it up! Tie your dog up! It's no good, that dog of yours.

(ii) jiwa ṯawa ṇatamaṯami ŋalikaḷu /
that man go-mot-pres-dir us (dual, incl)-alla /
ŋaṛaṇa wuŋa kurajiṯa ṯawaraji / matju
who-nom him (purp) want-pres husband-purp / bad
jiwa ṯawa/ jinda papa jiwa ṇatamaṯami
that man / you(purp) girl he go-mot-pres-dir

jinda kana ŋaṯa / kana ŋaṇa

you (purp) not me (purp) / not I

wuŋa kurajiṯa

him (purp) like-pres

That man is coming here to us. Who wants him for a husband? He's no good, that man. It's you he's coming for, girl, you not me. I don't like him.

(iii) ŋunaṯiji ŋali ṇapa / ŋuḷu

sleep-purp we (dual, incl) girl / grass

ṇumara wuŋa / muṯu / ŋaliŋa /

chop-$_{imp}$ it (purp) / bed / us (dual, incl)-purp /

ŋali ŋunaṯija

we (dual, incl) sleep-purp

We're going to have a sleep, little girl. Cut some grass for our bed and we'll have a sleep.

(iv) juru janiṇa ṇumara / maṇalaji /

wood something chop-imp / fire-purp /

ṭaḷaṭaḷaka ṇumara / ŋali

axe -inst chop-imp / we (dual, incl)

pitjariji maṇala

light-purp fire

Chop some wood with the axe and we'll light a fire.

(v) njimiji ŋali ṇandiji

fish-purp we (dual, incl) go-purp

ŋupaawaka / njimiji ŋali

tomorrow-emph / fish-purp we (dual, incl)

ṇandiji ṭaŋuṇatiji

go-purp eat-purp

We'll go fishing tomorrow, all right. We'll go fishing and get something to eat.

(vi) karali jiwa kaajiṭa jindaŋu / ṇaŋa jinja /

child that cry-pres your / get-imp him /

karali maṛa muka ṇaṭaŋu / matju jiwa karali

child this good my / bad that child

jindaŋu kaajiṭa / kaḷaji jiwa kaajiṭa /

your cry-pres / meat-purp he cry-pres /

ṇuta jinja

give-imp it (acc)

That baby of yours is crying. Get him! This baby of mine is good. That baby of yours is no good; he's crying. He's crying for meat. Give him some!

(vii) marimarilu ṇali ṇandiji

plain-alla we (dual, incl) go-purp

ṇutupuwaṇaji / jija / ṇali ṇandiji

goanna-purp / yes / we (dual, incl) go-purp

ṇutupuwaṇaji matiji

goanna-purp kill-purp

We're going to the plain after goannas --- yes --- we're going to kill some goannas.

(viii) ṭuwanaku ŋaṇa wurγarariṇa // ṇatiṇa

snake-ag me chase-past // do what-past

ṇunda jipa / maṭaṇa jipa jinja

then you / kill-past you that (acc)

ṭuwanaaṇa // maḷalja / ŋaṇa wurγariṇa

snake-acc // no / I run-past

wumaḷu ṭuwanamaḷu

that-causal snake-causal

"A snake chased me." "What did you do? Did you kill that snake?" "No, I ran away from that snake."

(ix) ṇaṇaṇa ŋaγami ṭajili ŋaṛapa // jiwa

get-past I-emph spear whose // that

ṭawa tjaṇmariṇa ŋaṭaŋu jiwa ṭajili //

man say-past mine that spear //

aa / jindaŋu / naŋaḷi jipa ṇaṇa

oh / yours / what you that (acc)

ŋalaŋaṇa // kaḷaji nunda ŋaṇa

put down- // meat-purp now I
past

tjiraṭiji ŋankanaji // waji jipa

spear-purp kangaroo-purp // question you

minjdjiku ŋalaŋaṇa jinja // minjdjipa

clever-ag put down-past it (acc) // clever-emph

ŋaṇa / ŋankana tjiraṭala jaka ŋaṇa //

I / kangaroo spear-agent emph I //

maḷalja / kana jipa tjiraṭata

no / not you spear-mot-pres

ŋankanaaŋa maḷalja / ṯalu ŋaŋa
kangaroo-acc no / where (alla) I
jindaŋu ṯaŋuŋaŋa ŋankanaaŋa kili //
your eat-past kangaroo-acc emph //
ŋaluwaka jipa jaralu ṯaŋuŋa
there (alla)-emph you river-alla eat-imp.
ŋaŋami tjiraŋa // aa / maŋalakaka jipa
I-emph spear-past // oh / fire-inst you
jinja maṯaŋa / kana jipa jinja
that (acc) kill-past / not you that (acc)
tjiraŋa / ṯajilika
spear-past / spear-inst

"Whose spear have I picked up?" That man said, "That's my spear". "Oh! Yours. Why did you put it over there?" "I want to spear some kangaroos." "Are you the good hunter who put it there?" "I'm the good hunter, all right! I'm the kangaroo killer, all right!" "No! You don't spear any kangaroos when you go hunting. Where have I ever eaten any kangaroo of yours? Hoh!" "Over there at the river you can eat what I speared." "Ah! You killed that with a rifle! You didn't spear it!"

Note: A possible alternative translation of minjdjipa ŋaŋa, in the fifth line of this text, is clever-gen I, i.e. I'm the good hunter it belongs to.

(x) ṇandaṇa ŋanu / maṛaŋiḷi
go-past we (plur, excl) / here-cla
jaṛalu ṇaṛa / kamuwililu /
river-alla there / Camooweal-alla /
jaŋaṭiwaṛa ŋanu --- ṭawawali ṇaka /
see-conj-past we (plur, excl) man-plur there (loc)/
<u>cafeka</u> janu karitji tawawali /
cafe-loc they (plur) man-plur /
stand-ger
jarajanawali janu / kaṛali ŋuḷpa janu /
woman -plur they (plur) / child mob they (plur)/
ṇandaṇa ŋanu <u>dancehall</u>lu ṇunda
go-past we (plur, excl) dancehall-alla then
ŋanu ṇandaṇa / ŋuḷpa jarajanaaṛa /
we (plur, excl) go-past / mob woman - poss /
<u>and</u> jararawali janu tawawalaaṇa /
and white man-plur they (plur) man-plur-acc /
<u>me</u> jaŋaṭi ŋaṇa / ṭawawija kuliriṇa /
I see-ger I / man-dual fight-past /
puḷyawija / kaṛali ŋuḷpawija / ṇikaka
old man-dual / child mob-dual / jealous-loc
wula kuliriṇa / wula jiwa
they (dual) fight-past / they (dual) there
jarajanaa ṭawawija / ṇunda / wula
woman-poss man-dual / then / they (dual)

kuliritji jarajanaŋ -- jaryulilaŋi
fight-ger woman - (purp) one-alt-purp
jarajana / jaryulila kunapuṭaaṇa maṭaṇa /
woman / one-alt stomach-acc hit-past /
japaṇa jiwa // kaḷa ŋunaṭini / ŋaṇa
fall-past he // there lie-ger-imp / I
(loc)
ṇatajiṭa wuṇa jarajanaṛaji
go -pres that (purp) woman-poss-purp

We went from here to that place, to Camooweal, and we saw --- a lot of blackfellows there. A lot of black men and women and children were standing around the cafe. Then we went to the dance-hall. I saw a lot of black men and women and white man. Two blackfellows were fighting - two old men. There were two groups of children. (?) They were fighting out of jealousy. They had a woman, those two men; then they fought on account of a woman --- on account of another woman. One hit the other in the stomach, and he fell down. "You can lie there; I'm going after that woman."

(xi) ṭuwaḷaa juyuwa ŋaṇa ṇatakari /
boomerang-poss stick-poss I go-hab-past /
ṭaḷaṭaḷaa / ṭuwaḷaa / ṭajilija /
axe -poss / boomerang-poss / spear-poss /
ṭajili ŋaṇa kaṇaṭakari / tjiraṭiji /
spear I take-hab-past / spear-purp /

kaḷaa / ŋankanaji / ṇatakari ŋaṇa

meat-poss / kangaroo-purp / go-hab-past I

tjitjiji ṭaŋuṇaṭiji / maṭarakari

budgerigar-purp eat-purp / kill-hab-past

njinja / kaḷa ŋaṇa ṭaŋuṇaṭakari njinja /

waxbill / meat I eat-hab-past waxbill /

tjitji / ṭaṭali

budgerigar / carney

I used to walk along with a boomerang and a stick and an axe and a spear. I used to carry the spear for killing animals, kangaroos. I used to hunt budgerigars to eat. I used to kill waxbills (type of finch). I used to eat waxbills, budgerigars and carneys (bearded dragon - a lizard).

(xii) kaḷaṇaraŋu ṇandiji ŋali /

meat-priv go - purp we (dual, incl) /

kaḷaṇaraŋu ṇunda maḷalja ṇandiji ŋali

meat-priv now no go-purp we (dual incl)

kaḷaji / kaḷa maṭiji ŋali //

/ meat kill-purp we (dual, incl) //

meat-purp

kaṭariṇa kaḷa ṇandaṇa

complete-past meat go-past

We have no meat, and we're going. No, we have no meat, and we're going hunting. We'll kill some animals. The animals have all gone.

(xiii) jiwa tjaṇmarijitja / jarajana jinja
he say - pres / woman that (acc)
wurɣaraṇamaṭiji / jiwa ṭawa jinja maṭiji
run-caus-purp / that man him hit-purp
ṇambaaka // ṇaṇa ḷariṇa // ṇaṛaṇa
axe-inst // I hear-past // whom
jipa ḷariṇa tjaṇmarinjaṇa // ṇaṇa
you hear-past speak-comp-acc // I
ḷariṇa jinja ṭawa jiwa wurɣaraṇamaṭiji
hear-past it (acc) man that run-caus-purp
jinja jarajana // jiwa jarɣulilaku
that (acc) woman // that one-alt-ag
ḷariṇa ṇunda / jiwa maṭiji jinja
hear-past then / he hit-purp him
tjiraṭiji
spear-purp

"He says he's going to run away with that woman. That man is going to him him with an axe. I heard about it".

"Who did you hear saying that?"

"I heard that that man is going to run away with that woman. The other fellow heard then; he's going to spear him."

(xiv) kana wuna muriṇama / ṇandd wumaḷu

not him (purp) wait-imp / go-imp him-causal

Don't wait for him; leave him!

(xv) ṇutami ṇaṇa jinja

give-imp-dir me it (acc)

Give it to me!

(xvi) ṇuṇa ṇaṇa riṇiṇa maṇala ṇaṇa

that (acc) I chop-past firewood I

kaṇaṇami / maṇala ṇaṇa kaṇaṇami ṇaṇa

carry-past- / firewood I carry-past- I

dir dir

pitjariji / ṇaṇa ṇaṭarwa kuwaṭiji / kaḷa

light-purp / I damper cook-purp / meat

ṇaṇa kuwaṭiji / kaṇaliji ṇaṭaṇuju /

I cook-purp / child-purp my-purp /

jarajanaji ṇaṭaṇuju

woman-purp my-purp

I chopped that wood and brought it here. I brought it here and I'm going to light it. I'm going to cook a damper and some meat, for my baby and my wife.

(xvii) ṇaku ṭawaku maṇala piṇijitja / jiwa
that (ag) man-ag firewood chop-pres / he
ṇuwakemaṇa jinja wata
steal-past that (acc) stone
That man over there chopping wood is the one who stole the money.

(xviii) palaka janu njinajiṭa jitjiṛaka //
somewhere-loc they (plur) sit-pres Urandangie-loc //
kana ṇaṇa jaṇaṇa / ṇaṇa ḷariṇa / janu
not I see-past / I hear-past / they (plur)
njinajiṭa / jiwa ṭawaku wuṭukalimaṇa ṇaṇa
sit-pres / that man-ag tell - past me
They are living somewhere around Urandangie. I didn't see; I heard they were living there. That man told me.

(xix) ṇajara ṇandaṇami / kamuwiliṇuḷu /
we (dual, excl) go-past-dir / Camooweal-ela /
ṭurinjaṇa jaṇaṭiji / jaramanaaṇa /
play-comp-acc see-purp / horse-acc /
pakirinja ṇajara jaṇaṇa / ṇaṇa
buck-comp we (dual excl) see-past / I
tjiritjiwaṇami maṛaka / maṛa ṇandaṇa
sick-conj-past-dir here-loc / this go-past
jarṛulu / jaṇaṭiji / ṇaṇa njinaṇa / ṇaṇa
one / see-purp / I sit-past / I

maṛaka kuṛukuṛaa ŋunaṭi / matjuriṇa
here-loc head-poss lie-ger / bad-stat-
past

ŋaṇa kuṛukuṛu // kana ŋaṇa jaŋaṇa
I head // not I see-past

ŋaṇa njinaṇa maṛaka jalu / kana ŋaṇa
I sit-past here-loc yet / not I

ṇandaṇa / ṭawa maṛa ṇandaṇa jaṛulu / ŋaṇa
go-past / man this go-past one / I

njinaṭi maṛaka / warawuḷa ŋaṭaŋuwa
sit-ger here-loc / dog my-poss

We came from Camooweal to see the rodeo. We saw the horses bucking. I came and got sick here. This fellow went on his own to watch. I stayed. I've been lying here with my head. I've got a headache. I haven't seen anything; I've stayed here all the time. I didn't go; this man went on his own. I've been staying here with my dog.

(xx) ŋajaraṇa njinaṇamaṇa jipala njina
us (dual, excl) sit-caus-past sit-imp
you (dual)

maṛaka / muriṇama / ŋaṇa ŋularitjijami /
here-loc / wait-imp / I return-purp-dir /

jiwa jaḷwikaku (?) ŋamaka maṛamaḷaka //
that old woman-ag mother-ag this-gen-ag //

maṛa ŋajara muriṇamajiṭa / kana
here we (dual, excl) wait - pres / not

ṇandaṇami yet / kana ṇandaṇami

go-past-dir yet / not go-past dir

That old woman, the mother of this fellow, left us behind: "You two stay here and wait; I'll come back." We're waiting here. She hasn't come yet.

Note: The agentive suffix, -ku, has been omitted from the first two words of the third line, but the corresponding prosodic suffix is retained (see 3.4.2). In the second of these words the suffix -ma is used instead of the normal -pa; -ma is the genitive suffix used with non-singular personal pronouns (see 3.4.5).

(xxi) kaḷaji ŋaṇa ṇandiji ŋankanaji

meat-purp I go-purp kangaroo-purp

ṭaŋuṇaṭiji / kamuwililu / njimiji kara /

eat-purp / Camooweal-alla / fish-purp too /

wukuwaṇaṇa / wukuwa jiwa paṭa jalu /

water-poss-acc / water-poss that big yet /

kamuwiliṇa // kana ŋaṇa tjinaŋajiṭa

Camooweal-nom // not I know-pres

ṭawapapa / jinja kamuwilṭukarijiṭa /

man-gen / it (acc) Camooweal-make-pres /

ŋaṭaŋu jara jitjiṛaṇa / waṛyaṇa kara

my river Urandangie-nom / Marion too

Lake-nom

I'm going to Camooweal for some kangaroo to eat. Fish, too, at that waterhole. That's still a big waterhole, Camooweal. I don't know the blackfellows' name for it, so I call it Camooweal. Urandangie is my waterhole; Marion Lake too.

(xxii) maṛa ṭawawaṛa wuku kutji / wukuwaṇa
here man-poss water drink-ger / water-acc
maṛa kutji ṇunda maṛa tjirijitja /
here drink-ger now here sick-pres /
matju // kana maṛa kutjarijiṭa maḷalja
bad // not this drink-pres no
ṇunda / muka
now / good

The men here have all been drinking, and now they're sick. That's no good. This fellow doesn't drink any more. That's good.

Note: Although the word wuku, 'water', is used, the reference is to alcoholic drinks. Waḷuwara has no word for alcoholic drinks, although wuku matju, 'bad water' or kaŋa, 'poison' might be used. None of the four informants is a drinker.

(xxiii) maṛa ŋaṇa miṛimaḷa matjurijitja / ŋaṇami
this I knee bad - pres / I-emph
japaṇa jaramanaŋuḷu // kalaaka
fall-past horse-ela // long ago- emph
jalu / wamba ŋaṇa njinaṭi /
yet / young woman I sit-ger /

jaramanakuniṇi / ṭukaṇa ŋaṇa

horse-cust / throw-past me

jaramanakaku / ŋuḷulalu / japaṇa ŋaṇa

horse-ag / grass-alla / fall-past I

kala jalu

long ago yet

This knee of mine is no good. I fell off a horse. It was a long time ago, when I was a young woman and always riding horses. The horse threw me onto the grass. That was a long time ago.

4.3 Juxtaposition of sentences.

Simple juxtaposition of two sentences may have any one of a number of functions in Waḷuwara. Firstly, of course, there may be no special relationship between the two sentences, the second following the first simply because it expresses the next thing the speaker wants to say. In many cases, also, a two-sentence utterance may function similarly to two-clause sentences of the types illustrated in 4.1, examples (xv) to (xxi), the only difference being the omission of a marker such as ṉunda or miji. Such utterances, as well as others to be considered below are not regarded as sentences mainly because of the difficulty of defining the term sentence to include them. Examples of such utterances are:

jatjunma	jinja	kaḷaaṇa	/	waṛγa	ŋaḷaṭa	jiwa
smell-imp	that(acc)	meat-acc	/	rotten	maybe	it

Smell that meat; it might be rotten.

wurγaraṇa	jiwa	/	wutjuru	jiwa	malakariṇa
run-past	he	/	leg	he	sore-stat-past

He hurt his leg while he was running.

ŋaṇa	kaḷa	maṭalwa	njinaṭiji	/ ŋaṇa	paṭaritjija
I	meat	kill-agent	sit-purp	/ I	big-stat-purp

I'm going to be a butcher when I'm big.

Contrast sentences such as the following, which are covered by a single sentence prosodeme (i.e. the clauses are not separatedby / or //). The second sentence cannot easily be translated except as two sentences in English.

jiwa ŋunaṇa ŋaṇa jinja jaŋaṇa
he sleep-past I him see-past
He was asleep when I saw him.

ṇaŋaḷi jipa ŋaṇa ṭuparijiṭa kutuma jindaa ŋaŋa
what you me stare-pres shut-imp you-refl eye
Why are you staring at me? Shut your eyes!

The function of a relative clause in English may be fulfilled in Waḷuwara by a juxtaposed sentence or by a second clause in a sentence; an example of each is given.

ṇaku ṭawaku maṇala piṇijitja / jiwa ṇuwakamaṇa jinja wata
that(ag) man-ag fire chop-pres / he steal-past that (acc) money
That man chopping wood over there stole the money.

jaŋaṇa ŋaṇa jipa jinja maṭaṇa ṭawa ṇaṇa
see-past I you him hit-past man that(acc)
I saw the man you hit.

An indirect statement, such as a quotation, is made by juxtaposition of two sentences. Often, as in the first example, the first sentence contains a transitive verb phrase whose only object is the second sentence.

ŋaṇa ḷariṇa / kanjdjapulu wuruṇa wata ŋutaṇa
I hear-past/ policeman them(plur)money give-past
I heard that the policeman gave them some money.
(Note that the agentive suffix is missing from kanjdjapulu, possibly because it is a borrowing from English - constable.)

ṭawala jinja / jawaŋgalu jiwa ṇandiji
ask-imp him / the bush-alla he go-purp
Ask him if he is going to the bush.

A further use of this syntactic process is to make a comparison of unequal things, there being no comparative or superlative construction in Waḷuwara. For example:

njinŋa jiwa ṭawiṛi / ṭuṭuwaṛa wawaṛa paṭawaṭa
waxbill he small / bird-poss other-poss big
The waxbill is the smallest bird of all.

punjdjura jiwa paṭa / ṭawunmuṇḍuŋu jiwa ṭawiṛi jaka
emu that big / plain turkey that small emph
Emus are bigger than turkeys.

In the following case, however, a single sentence was used.

ṯaṛa	paṭa	jindaŋu	warawuḷaa	ŋaṭaŋu
which	big	your	dog--poss	my

Which is bigger, my dog or yours?

It is clear that there is no fundamental difference between juxtaposed sentences, where the juxtaposition fulfils some syntactic function, and complex or compound single sentences.

4.4 Non-inflecting words.

These words have been classified according to function, as adverbs, emphatics and particles. Adverbs may be sub-divided into negative adverbs, the interrogative adverb, adverbs of place, time and manner, the potential adverb and the conjunctive adverb.

An alternative classification of non-inflecting words, according to the type of phrase in which they occur, was considered, but seemed to offer some difficulties. This classification would, for example, separate the two adverbs of time; kalija, 'now', which forms an adverbial phrase, and ṉunda, 'now', which is intimately connected with the word to which it refers and usually can be regarded as part of a phrase in a clause.

4.4.1 Adverbs.

The term "adverb", as used here, covers a slightly wider range of functions than does an adverb in English. In addition to qualifying a verb, a Waḷuwara adverb can be used to qualify a phrase in a verbless sentence; see the last example of 4.4.1.1, or the examples of ŋamuṇu in 4.4.1.5.

4.4.1.1 The negative adverbs.

There are five methods used in Waḷuwara to express negation: the irrealis mood (see 3.4.7.3), the privative noun suffix (see 3.4.3.11), the negative particle (see 4.4.3) and the two negative adverbs, kana and wili. kana is the common negative adverb and is normally equivalent to the English 'not'; see the examples (ii), (ix), (xiv), (xviii), (xix), (xxi) and (xxii) of 4.2. It has also been given as equivalent to 'nobody':

kana	ṇandaṇami	Nobody came.
not	go-past-dir	

It almost always takes first place in a sentence.

The other negative adverb, wili, is very rare, and is approximately translated by the phrase 'supposed to be' or 'said to be'; thus it has the effect of denying something said

on another occasion, or something which the speaker had previously had reason to believe. There are four examples in the corpus; three were directly elicited after the other (the first example given) had been noticed.

matju	wili	ŋaṇa	He says I'm no good.
bad	negative	I	

jipa	wili	maṛaṭuriṇa	You were supposed to be dead.
you	negative	die-past	

4.4.1.2 The interrogative adverb.

The interrogative adverb is waji~wajika, which will be discussed below (4.6).

4.4.1.3 Adverbs of place.

Since the locative affix marks location in time and duration as well as location in space, a separation of adverbs of place from adverbs of time does not seem to be justifiable except as a matter of convenience in description. It would be expected that some words might fulfil both functions, and one which appears to do so is ŋula~ŋulaja~ŋulaŋula, 'close', or 'after', and possibly also 'behind'.

jipa kapiri ṇanda / ŋaɣa ŋulami ṇandiji
you first go-imp / I after-dir(?) go-purp
You go in front and I'll come behind.

jiwa ŋulami ṇatamaṇami
he behind-dir(?) go-mot-past-dir
He came up behind me (in the sense of 'creeping up behind me').

ŋulaŋula punaṛa Not far away.
close close

warawuḷa jiwa wurɣaraṇami ŋulaja / kapirija ṇakuju
dog that run-past-dir after / first there-alla
The dog ran this way and that way (i.e.'to and fro').

In the following example it may occur with an emphatic suffix; alternatively the -ka might be a locative suffix, in which case ŋula should be regarded as a nominal. If the latter is so, ŋulaja (and also kapirija) in the last example above may be an allative (cf. kaarija and ŋujindija, allatives of kaara, 'south' and ŋujinda, 'east', respectively).

ŋulaka jipa ṇandaṇami You came last.
after-emph you go-past-dir

The stem kapiri~kapirija, which occurs in two of the above examples, is a converse of ŋula in some cases, and was originally regarded as an adverb of place/time. However, a single occurrence of an inflected form, kapiriŋuḷu, 'before', makes it necessary to regard it as a nominal.

The word kaṇḍila, 'next to, alongside', is used in association with a noun which may be in the locative case or uninflected. Since the adverb follows the noun, it may be that the occurrence of an uninflected noun in such a phrase is due simply to elision of one of two identical contiguous syllables (the locative affix is -ka). Examples:

jara kaṇḍila, 'alongside the waterhole' (see 4.4.1.4 for the complete utterance)

jiwa	jarajana	karijitja	ṭuwanaka	kaṇḍila
that woman		stand-pres	snake-loc	alongside

That woman is standing close to a snake.

The function of an adverbial phrase of place is normally fulfilled in Waḷuwara by an inflected noun or a demonstrative pronoun, and there are very few words which can be classified as adverbs of place - possibly none at all apart from those (including punaṛa, third example) exemplified above.

4.4.1.4 Adverbs of time.

Generally, time is expressed in Waḷuwara by a noun, usually in the locative case, such as waraparaka, 'at sunset yesterday', ŋunparilaka, 'a couple of days ago, the other day', wirilaka, 'in the summer'. Other similar concepts are expressed by adverbs which, like the inflected nouns, function as adverbial phrases, e.g. ŋupaa, 'tomorrow', kalija, 'now, today', jandawu, 'soon, wait a minute, for a while'. The last named almost always precedes the clause and does not refer so specifically to time; it is often translated with no overt temporal reference, e.g.

jandawu	ŋaṇa	njinaḷa	/	pilinjtjiṇaraŋu
wait	I	sit-opt	/	lively - priv

Let's sit down, I'm tired.

A group of adverbs including puṭi, kala and jaṇu are rarely heard except in association with jalu, 'yet, still, enough, right'; thus puṭi jalu, 'always, for a long time', kala jalu (or, more commonly, with the emphatic suffix -aaka, kalaaka jalu), 'a long time ago, for a long time', jaṇu jalu, 'a while ago, a long time ago'.

jalu is often used alone as an adverbial phrase, e.g.,

puḷɣa	jiwa	waka	jalu	jiwa
old man	that	alive	yet	he

He's very old, but he's still alive.

maṛa	jalu	[I'm] right here (with apparent connotation of place as well as, or instead of time).
here	yet	

ŋuḷpa	jalu	jiwa	There is plenty there yet.
much	yet	there	

ŋulajala has approximately the same meaning as puṭi jalu and may be originally a compound of the same type: * ŋula jalu. However, any connection with ŋula, 'close, near', is obscure.

The adverb ṇunda, 'now' or, with past tense forms of a verb, 'then', is usually realized without stress and closely associated with the verb to which it refers, and, in fact, was originally regarded as a suffix. However, it has been heard as the first word of a sentence. It appears, in many cases, too carry a connotation of consequence as well as time. However, this is not clear, as the word is not usually translated and, if the informant repeats the sentence slowly, it is always omitted from the repetition; in fact, it seems often to be used unconsciously. Some examples of its use are:

pumaṯa ŋalwaṯata ṉunda

sun enter-mot-pres now The sun is setting.

kaḷa waɣɣa ṯaŋuṇaṇa / tjirijitja ṉunda ŋaṇa

meat rotten eat-past / sick-pres now I

I am sick because I ate rotten meat.

kaṛaliwali janu njinajiṯa ṉunda ṯuritjiṉaraŋu

child-plur they (plur) sit-pres now play-ger-priv

The children have stopped playing.

jiwa ṯawa pariṇa ṯajilaa tjiraṯiji

that man creep-past spear-poss spear-purp

punjdjuraji / tjiraṇa ṉunda jiwa

emu - purp / spear-past then he

That man crept up on the emus and speared them.

watji, 'before', is another adverb which was originally regarded as a suffix; in fact, no compelling reason for regarding it as a separate word has been found and it is so regarded mainly for ease of description. It carries no stress, and occurs in only two contexts; immediately following the potential mood form of a verb, or immediately following the causal form of a nominal. Although watji is translated by the informants as 'before', it could perhaps be better

described as having, in association with the preceding mood or case suffix, a negative conditional meaning, '"if not A, then not B", e.g. "if A had not happened then B would not have happened". Some examples will illustrate this:

ŋaṇa kutjiji / maṛaṭuritjaa watji
I drink-purp / die - pot before
I must have a drink or I'll die.

maṛaka ŋaṇa ŋunaṭiji / jara kaṇḍila / ŋaana
here-loc I sleep-purp / river alongside / flood
ṇandaami watji
go-pot-dir before
I am camping here, but my camp was alongside the waterhole until the flood came.

ŋaṇa ṭaŋuṇaṇa kaḷaaṇa warawuḷamaḷu watji
I eat-past meat-acc dog - causal before
I was eating some meat, but the dog took it.

jiwa ṇandijami / ŋaṇaaka ṇandiji karitjaṭiji
he go-purp-dir / I-emph go-purp stand-mot-purp
kalija jalu / wumaḷu watji
now yet / he-causal before
When he gets here, I will be already gone.

Several of the adverbs of time have been heard with an emphatic suffix; the case of kala was mentioned above and other examples are jaṇuwaka, ŋupaawaka and jandawuḷa.

4.4.1.5 Adverbs of manner.

The adverbs jaṛu, 'just, only, as well as possible', jatindalu, 'much, very', and ŋamuṇu, 'like' (also used with an adjectival function) are grouped under this heading. The last behaves in many cases as a noun suffix (it does not normally carry any primary stress) and was originally thought to be so (cf. also Hale, 1960). However, this is not consistent with its use in a small minority of cases, as shown by the last two examples.

The use of these adverbs is illustrated by the following examples:

jaṛu	ŋanu	tjaṇmarijitja
just	we (plur,excl)	talk - pres

We're just talking, that's all.

jiwa	kaḷa	jaṛu	maṭarijiṭa	/	minjdji	jiwa
he	meat	as well as possible	kill-pres	/	clever	he

He is the best hunter [in the camp].

jaɣu ŋaṇa kuṉu tjiraḷa

as well as possible I emph spear-opt

I'll do my best [to make a spear].

Note: the verb tjira means 'to make (a weapon)' as well as 'to spear'.

jatindalu ŋaṇa jina tjinaŋajiṭa

much I you(acc) know-pres

I know all about you.

wurɣaraṇa ŋaṇa / ŋaṇa ŋaḷajiṭa jatindalu

run-past I / I breathe-pres much

"I've been running; I'm blowing hard now".

jatinṭalu ŋaṇa matjamaṇa ŋaṭarwa

much I eat-past food

I had too much to eat.

pulɣa waḷaḷi ṭawa jiwa / jarajana ŋamuṉu

hair long man that / woman like

That man has got long hair like a woman.

jipa ŋamuṉu jiwa

you like he He looks like you.

maṇalaka ŋamuṇu jiwa kuwaṭaa jina
fire-loc like that cook-pot you(acc)
It's too hot; it might burn you.

jitjiṛalu jiwa maṛaŋiḷa ṇandaṇa / ŋamuṇu
Urandangie-alla he here-ela go-past / like
He went towards Urandangie. (I.e. he went from here as if he were going to Urandangie.)

4.4.1.6 The potential adverb.

The word ŋaḷaṭa has approximately the same function as the potential mood suffix of a verb, and can be translated 'maybe'. It is often used in preference to a potential mood form of a verb, the purposive form of a verb usually being used with it. The third example, however, shows its use in a verbless sentence. The emphatic suffix -ḷa is often added to ŋaḷaṭa.

ŋupaa wuku ŋaḷaṭa maṛa japiji
tomorrow water maybe here fall-purp
It might rain tomorrow.

punjdjura ŋaḷaṭaḷa jaŋaṭiji
emu maybe-emph see-purp
We might see some emus.

ŋankana	ŋaḷaṯa	jiwa
kangaroo	maybe	that

It could be a kangaroo.

4.4.1.7 The conjunctive adverbs.

The word kara has a wider range of meanings than the English conjunctive adverb 'also', and may function also as the equivalent of an English pronoun ('another one'), an adjective ('more') or a conjunction ('and'). On one occasion (see the fourth example) a reduplicated form has been heard.

kutja	wula	ṇatamaṭami	/ jarajana	kara	ṯawa
two	they(dual)	go-mot-pres-dir	/ woman	and	man

There are two people coming, a man and a woman.

kara	ŋaṇa	ŋutami	
another	me	give-imp-dir	Give me another one!

kara	ṇaŋa	maṇala	
more	get-imp	firewood	Get more wood for the fire!

karakara	ŋaṇa	jinja	jaŋaṇa	
more	I	him	see-past	I saw him again.

ŋaṭaa	jawaṭiji	kara
I(refl)	rub-purp	also

I am going to paint myself too.

matjaawaṛa	jiwa	jaraka	kaḷa	/	kutuḷamukaka	/
gum tree-poss	there	river-loc	there	/	other side-loc	/
kawaṇaka	kara					
to here-?	also					

There are gum trees on both sides of the creek.

Note: the suffix -ka on the second last word could be a locative, or may be an emphatic. kawaṇa is not thought to be a noun, but it is a very irregular word and it is not impossible that it could take a nominal inflection. The known forms of the root kawa are: kawa, translated as 'come here!', i.e. as a verb imperative; kaandi, 'coming', apparently a motive gerund; kawaṇa, 'to here' or 'this way'; and kawaṇaka, as above.

A form which was at one time tentatively identified as a bound morpheme is now regarded as a free form, miji. The decisive factor leading to the decision to classify it as an uninflected word was an incomplete utterance - miji ŋaṇa - by Mrs. Toby, who then stopped and began the sentence again in a different way. Normally miji closely follows another word, usually a pronoun, is unstressed, and often is reduced

to an unstressed short syllable [mi].

Its classification as a conjunctive adverb is quite tentative, as it is uncommon and no explanation of its meaning has ever been obtained from an informant. Like ṉunda (see 4.4.1.4), it is usually omitted if the utterance is repeated; in fact, the speaker may not even realize it has been said, and Mrs. Toby appeared to have no knowledge of its existence, although she has been heard to use it. When, for example, the first of the examples below was repeated to her, she interpreted the miji as an English 'me'; this was not an impossible interpretation in this case, but it is in some others.

miji can sometimes be translated as 'when', 'since' or 'while'; see the first four examples. Its function in the other three examples is quite unclear; it may be functioning as a conjunction linking the two subjects of comparison in two cases, and linking the utterance to a previous one in the other.

ŋaṇa	miji	ṉandaṇa	punjdjuraji	/	ŋaṇa	jaŋaṭiwaṇa	
I	when	go-past	emu-purp	/	I	see-conj-past	
punjdjuraa							
emu-poss							

When I went out for emus, I saw an amu. (Example from Hale's field notes.)

tjakija ŋaṇa / ṭukijaaka ṭuwaḷiwaṇa / ŋaṇa miji
clever-poss I / throw-purp boomerang-acc/ I since
jawaŋgaka tjakiriṇa
the bush-loc clever-stat-past

I know how to throw a boomerang; I've been learning in the bush.

tjiriṇa ṇunda ŋaṇa / kaḷaaṇa jinja miji ŋaṇa
sick-past then I / meat-acc that(acc) when I
jatjunmaṇa
smell-past

The smell of that meat made me sick.

ŋaṇa miji ṇatamaṇa / ŋaṇa maṭaraṇa jinja / kaḷaaṇa
I when go-mot-past / I kill-mot-past it(acc)/meat-acc

I killed that animal while I was walking along.

jindaŋu warawuḷa ŋanjiṛa jaṭapa miji
your dog like-poss father-gen conj(?)

Your dog is like my father's.

ṭawa ŋanjiṛa jipa miji jiwa
man like-poss you conj(?) that

That man looks like you.

ŋaṛaku miji
who-ag conj(?) Who [says so]?

4.4.2 Emphatics.

In addition to the emphatic suffixes discussed previously (3.6), there are several non-inflecting words which function as emphatics. These include jaka, kuṉu and waṉunda, which have a straightforward emphatic function, and kili, which indicates derision or disbelief. Another word, mukaṉa, whose function is not known, may be an emphatic and will be discussed here.

jaka is rarely realized with any stress and thus resembles a suffix: however, it appears to be regarded by the informants as a separate word and has, on one occasion, been heard in a reduplicated form. jaka and kuṉu are usually omitted if a sentence is repeated slowly. These two and waṉunda have been translated at various times by Mrs. Toby as "oh, yes", "yeah", "you see", "all right" or "that's right". Some examples of their use follow.

ŋaṭaŋa	ŋankana	maṭarinjalwa	/	jindaŋuwaṛa	jaka	jiwa
my-poss	kangaroo	kill-agent	/	your-poss	emph	that
ŋutupuwaṉa	jaṛu	ṭaṉmaṭala				
goanna	only	bite-agent				

My dog is a kangaroo killer; yours only kills goannas.

waŋunda kuŋu / ŋuḷpa jalu jiwa

emph emph / much yet there

That's right, there's plenty there yet.

ŋaṇa japimaḷa kuŋu

I fall-irr emph I nearly fell over.

waŋundapa ŋaṇa jina ḷarijitja

emph-emph I you(acc) hear-pres

I am listening to you. (in answer to the question "Why don't you listen to me?")

japunumaṇa jaka ŋaṇa maṇalaaṇa

put out-past emph I fire-acc

I have already put the fire out.

maṇa kuŋu wata jindaŋu

here emph stone your

"Here's your money, you see."

kili occurs only twice in the corpus, and could be described as a negative emphatic. In one it was translated by the informant as an expression of disbelief and derision, "hoh!", [hɔʔ]. In the other case it was not explained, but a somewhat similar meaning appears to fit. The two examples are:

ṯalu ŋaṇa jindaŋu ṯaŋuṇaṇa ŋankanaaṇa kili
where(alla) I your eat-past kangaroo-acc hoh
Where did I ever eat any kangaroo of yours, hoh! (The speaker was ridiculing another person's claim to be a good hunter; see example (ix) of 4.2, which is an imaginary conversation acted out by Mrs. Toby.)

jandawu ṇjina // ŋaṇa kili / ŋaṇa tjaṇmariḷa /
wait sit-imp // I hoh / I speak-opt /
jipa ṇjina
you sit-imp
"Sit down for a minute!" "Me? No! You sit down and let me speak'"

There are four examples of mukaṇa in the corpus. It is realized without stress, and its use could not be explained by the informants, except for an explanation of the type "that's the long way to say it; the short way (i.e. without mukaṇa) is just the same". The examples are given below.

ŋaṇa mukaṇa mukaṛa / tjiraṭalaa
I ? good-poss/ spear-agent-poss
I'm a good hunter.

mikipuṇamaṭa jiwa / ṭandaḷa mukaṇa ŋaṇa kana jina
stranger that / how ? I not you(acc)
ḷarijitja
hear-pres

What does 'mikipuṇamaṭa' mean? (ḷarijitja here means 'understand' rather than 'hear')

jaṭaṇa jiwa jarɣulilaṛa / taṛa mukaṇa jiwa
father-nom that other-poss / which ? he

Which one [of those two men] is your father?

ṭaka mukaṇa / tjila waji
where (loc) ? / point-imp question

Where [are they]? Point [to them]!

4.4.3 Particles.

The two particles jija, 'yes' and maḷalja, 'no' are used in the same way, in general, as their English counterparts. maḷalja may on some occasions be better translated as 'nothing', but it does not have the nominal or adverbial functions of this English word. jija is often used to emphasize or confirm a statement that has just been made (by the same speaker), as exemplified in example (vii) of 4.2. A similar use of maḷalja is shown in example (xii) and other examples of maḷalja in (viii) and (ix) (all examples in 4.2).

The particles, as shown by some of these examples, need not be separated from other parts of the utterance by any noticeable pause or change in intonation.

4.5 Substitution for unknown or forgotten words.

The root ŋawija is used in a similar way to the English er or um, to fill in a pause while trying to remember a word. In such cases it will be unstressed and often almost inaudible.

A second function is similar to that fulfilled by English words or phrases such as whatsisname, thingummybob or what do you call it; i.e. it replaces a root which has been forgotten by the speaker, or which he just does not know. In such cases it is usually inflected and stressed in the same way as the nominal or verbal root it replaces; nominal inflections are added directly to the root ŋawija while verbal inflections are added to the derived verb ŋawijama (transitive) or ŋawijari- (intransitive).

ŋawija has been translated by the main informant as "what you call that?" or "what that word now?". Coate and Oates (1970) use the term 'hiatus filler' for similar words in Ngarinjin; this seems appropriate for the first use described above of ŋawija, but not for the second.

ŋawija / jitjala ŋaṇa kaḷu wandaṇa
er / word I him(alla) tell-past
Er, I told him a story.

ŋawijaŋuḷu / jiḷataŋuḷu
whatsisname-ela / Tobermory-ela
---- from whatsisname ---- from Tobermory

ŋawija kuṇu jiwa / wataka / wankaṭa
whatsisname emph there / stone-loc / blue-tongue lizard
There's that whatsisname, among the rocks, that blue-tongue lizard!

ŋawijarijitja ŋaṇa / kunukurajiṭa
whatsisname-pres I / worry-pres
I'm-what do you call it?- worried.

4.6 Interrogatives.

There is no separate class of interrogative words in Waḷuwara; the various question words belong to various classes of words, and can be distinguished only by semantic, syntactic (word order)and phonetic (intonation) criteria.

The interrogatives include:

A proper noun, ŋaṛaṇa, 'who?'; this is the nominative/accusative form. The base form, the vocative *ŋaṛa, is unattested. The agentive, ŋaṛaku, and the genitive, ŋaṛapa, 'whose?', are common.

Two common nouns, ṇaŋaḷi, 'what?', and ṇanŋu, 'how many?'. The question 'why?' is expressed by the purposive form of ṇaŋaḷi, viz. ṇaŋaḷiji, or the causal, ṇaŋaḷimaḷu. Frequently, ṇaŋaḷiji is replaced by ṇaŋaḷi; this is probably due to the very common juxtaposition of ṇaŋaḷiji and jipa, 'you', or jiwa, 'he, she, it' with subsequentdropping of one of the ji syllables, e.g. [ṇaŋaḷijijipa] > [ṇaŋaḷi:pa].

A demonstrative pronoun, ṭaṛa, 'where?', with several inflected forms; see 3.4.5.

Two verbs, ṇaṇma and ṇati-, both usually meaning 'to do what?'.

Two non-inflecting words, ṇaŋaṇḍa, 'when?', and ṭandaḷa, 'how?'.

The interrogative adverb, waji~wajika, (the latter possibly an emphatic form) can also be discussed here. This particle has the function of signalling that the sentence which it begins, or of which it forms a part, is a question. The longer form has on occasions been translated by the informant as "I don't know". It does not adhere as strictly as the other question words to the "rule" regarding word order.

Some examples of the use of the question words will be found in the collection of unelicited utterances above (4.2); see nos. (viii) for ṇati-, (ix) for ŋaṛapa, waji and ṭaṛa (in the allative form ṭalu) and (xiii) for ŋaṛaṇa. Further examples, from elicited material, are given below.

ŋaṛaṇa	jipa	jiniwaṛa	What's your name?
who-nom	you	name-poss	

ṇaŋaḷi	jiwa	What's that?
what	that	

kaṛali	jiwa	jarɣajiṭa	juɣuka /	ṇaŋaḷiji	
child	that	climb-pres	tree-loc/	what-purp	

Why is that child climbing the tree?

ṇanŋu	jindaŋu	kaṛali
how many	your	child

How many children have you got?

ṇanŋuka	jipa	jinja	pumaṭaka	mukamaṇa
how many-loc	you	it(acc)	day-loc	make-past

How long did it take you to make it?

ṭaṛa	jindaŋu	ḷalaṇa	Where is your brother?
where	your	elder brother-nom	

ṯaka jipa Where are you?
where(loc) you

ṇatijitja ṇunda jipa What are you doing now?
do what-pres now you

ṇatiṇa jiwa What happened?
do what-past that

ṇaṇmaṇa jipa jínja How did you do that?
do what-pres you that(acc)

wajika / ṇaŋaṇḍa ŋaṇa ṇatajiṯa
question / when I go-pres
I don't know when I'm going.

ṯandaḷa jipa tjaṇmariṇami What did you say?
how you say-past-dir

waji jipa ḷarijitja jitjalaaṇa waḷuwaraaṇa
question you hear-pres word-acc Waḷuwara-acc
Do you understand Waḷuwara?

wajika / ŋaṛaṇa jiwa jiniwaṛa wajika
question / who-nom he name-poss question
I don't know who he is.

ṇatajiṭa ŋaŋa waji jaralu
go-pres I question river-alla
Can I go to the river?

4.7 The stems ŋanji and jinŋandalu.

These two stems, which are, to some extent, converses, fulfil a variety of functions in Waḷuwara. ŋanji is variously translated as 'thing, something, like, alike, this way'; the possessive form, ŋanjiṛa, is sometimes translated by the informants as "so-and-so" (thus ŋanjiṛa jini, 'that's so-and-so', in answer to the question ŋaṛaṇa jiwa, 'who is that?'; jini means 'name'). jinŋandalu, translated 'alone, independently, byaccident', was originally regarded as an adverb of manner; however, as a dual form, jinŋandaluwija, occurs, it is now regarded as a nominal.

A common function of ŋanji in its possessive form is to denote similarity; in this it resembles ŋamuṇu (see 4.4.1.5), and the two may be used together.

jiwa warawuḷa ŋaṭaŋu ŋanjiṛa jindaŋu
that dog my like-poss your
My dog is like yours.

ŋanjiṛawija wula jitjalawijawaṛa /
like-poss-dual they(dual) word-dual-poss /
waŋga jutjuruwaṛa wula piṭapiṭaaṛa kara
Wangka-jutjuru-poss they(dual)Pitta-pitta-poss also
Those two languages, Wangka-jutjuru and Pitta-pitta, are the same.

ŋanjiṛa ŋamuṇu maṛa ŋuwaŋuwaṇa
like-poss like here Walgra-nom
This place is just like Walgra.

. . . . . .

The combination of the negative adverb, kana, with ŋanji denotes, as expected, dissimilarity. Note that the unaffixed stem is used instead of the possessive form in one of the following examples.

kana ŋanjiṛaṇa jaŋaṯi / kalaŋu jaka jiwa
not like-poss-acc see-ger / new emph that
We've never seen anything like that before.

paṭa jiwa / kana ŋanji ṯuṯuwaṛa wawaṛa ṯawijawi
big that / not like bird-poss other-poss small
It's the biggest bird of all.

However, jinŋandalu may also function as a converse to ŋanji; compare the following examples:

warawuḷawija wula / ŋanjiṛawijaḷa
dog - dual they(dual)/ like-poss-dual-emph
Those two dogs are alike.

jinŋandaluwija
alone - dual Those two are different.

When the similarity is between verbs rather than nominals, the unaffixed form ŋanji is used, and the translation 'like this'or 'thus' is appropriate.

jipa jinja matjuwaṇa mukamaṇa / ŋanji mukama
you it(acc) do wrong-past make-past / thus make
jinja
it (acc)

You made it the wrong way; make it like this.

jawaṭi jinja ŋanji / jalaku ṇaŋaṭiji
rub-ger it(acc) thus / flame-ag get-purp
While you were rubbing it like that, it would light up.

ŋanjilamuka (or possibly ŋanjiḷamuka) is variously translated 'behind, at the back, beside', and comparison with

ŋanji ḷiṛaka, "something at the front" (ḷiṛa means 'mouth' or 'front') suggests that there should be a word *ḷamu, meaning 'back' or something similar. However, no such word was known to the informants.

A dual agentive form of ŋanji, which, together with an emphatic suffix, appears to have become a fixed form - it never appears without the emphatic suffix - is used in some reciprocal sentences and means 'one another' or 'each other'.

ŋanjiwijakuḷa	ŋajarapa	jaŋaṇa
like-dual-ag-emph	we(dual, excl)-rec	see-past

We saw one another.

ŋanjiwijakuḷa			ŋajarapa		ŋutaṇa / ŋaṇa	
like-dual-ag-emph			we(dual, excl)-rec		give-past/ I	
jinja	kaḷa	ŋutaṇa /	jiwa	ŋaṇa	ṉuwuṇu	ŋutaṇa
him	meat	give-past /	he	me	honey	give-past

We swapped some meat for some sugar.

A further use of the possessive form of ŋanji is exemplified in the following conversation.

ŋaṇa ṭawawijaku maṭaṇa / ṇaŋaḷimaḷu / wula(ŋa)
me man-dual-ag hit-past / what-causal/ they(dual/purp)-

ŋaṇa ṭala ṭukaṇa / aa / ŋanjiṛaŋi
I spittle throw-past / ah / thing-poss-purp

maṭaṇa
hit-past

"Those two men hit me." "What for?" "I spat at them."
"Ah! They hit you because of that."

jinŋandalu is much less common than ŋanji, and generally occurs with no suffixation and functioning as an adverbial phrase. In the second example, jinŋandalu seems to have the meaning 'unhindered'; this example also illustrates two other idioms: the use of piḷaḷa, always translated by the informants as "anyhow" but perhaps better 'uncaring' and here used with njina in a phrase meaning 'don't worry'; and the use of maṇkaru, 'ear', in connection with thinking - maṇkaru pamaṭiṇara means 'not thinking' or 'forgetting'. Compare ḷari-, which means 'to think' as well as 'to hear' and 'to listen'.

jinŋandalu ŋajara tjaṇmaritjandaṇa
alone we(dual,excl) talk-mot-past
We were walking along on our own, talking.

jinŋandalu jiwa kaŋaḷaji / piḷaḷa njina /
alone he carry-opt-dir / anyhow sit-imp /
maṇkaru pamaṭiṇara
ear think-priv

Let him take it away; don't worry about it, forget it.

jinŋandalu jiwa njinaḷa / kana ŋaṇa wuŋa kurajiṭa
alone he sit-opt / not I him(purp) like-pres

He can stay on his own; I don't like him.

jinŋandalu jinja maṭaṇa
by accident him hit-past

I hit him accidentally.

5. SOME DIACHRONIC NOTES ON WAḶUWARA

5.1 The Wakayic Language Group.

The languages most closely related to Waḷuwara are Bulaṇu, formerly spoken to the north of Waḷuwara country, and Wagaja, formerly spoken over a large area north-west and west of Bulaṇu territory, mainly in the Northern territory. In Bulaṇu there are only two informants; Didgeroo Jack, who has a fair but, in some ways, superficial knowledge and is an enthusiastic informant, and his sister, Mrs Ivy Monkhouse, less knowledgeable and usually very drunk. About eleven hours of recording have been made and probably almost all the available information has been collected. Little more than half of the tapes had been properly transcribed at the time of writing and much analysis of the language remained to be done.

In Wagaja the main informants have been Didgeroo Jack (it is not his native language) and Mrs Mabel Cargaty, both fair informants. Less recording has been done than in Bulaṇu and less progress has been made in transcription and analysis. Less reference will therefore be made to Wagaja in this chapter.

A comparison of several hundred vocabulary items shows that Waḷuwara and Bulaṇu share about 60% as cognate. In bound morphemes the number of cognate items amounts to about 80%. A preliminary count of a much smaller number of items suggested that Wagaja shares a little over 50% with Bulaṇu and about 25% with Waḷuwara, but that in morphology it is much less closely related. It is tentatively concluded, despite the figure of over 50% for Wagaja/Bulaṇu cognates, that Waḷuwara and Bulaṇu form a linguistic subgroup[1] (which, following the procedure used by O'Grady, Voegelin and Voegelin (1966) is named Thawa after the word for man, ṯawa in Waḷuwara and [ṯawaji] in Bulaṇu) and that with Wagaja these two languages form a group. The name Wakayic, formerly used for the postulated group containing only Wagaja, is proposed for this group, as Wagaja is its most important member (in terms of number of speakers and area over which it was spoken).

In the following sections, Bulaṇu and Wagaja examples will be given in a broad phonetic notation which, at least in the case of Bulaṇu, approximates to the probable phonemic system. The tentative Bulaṇu inventory differs from that of

(1) See O'Grady and Klokeid (1969) for the criteria used in classifying the Australian languages.

Waḷuwara in that it lacks the velar glide, and possibly in having a full set of voiced stops (there is a minimal pair [ma:ṭu / ma:ḍu]). Bulaṇu also lacks long consonants, and there are some differences in the list of permitted consonant clusters. It is not known whether vowel length is phonemic.

5.2 Consonant change.

According to Hale (private communication), the major sound changes which have characterized Waḷuwara are the lenition of stops and the reduction of nasal-stop clusters. The former process is amply illustrated by a comparison of Waḷuwara with Bulaṇu - a language which was unknown to Hale - while the latteris illustrated by a comparison of some Waḷuwara and Wagaja equivalents. The reduction of clusters has been more extensive in Bulaṇu than in Waḷuwara.

Table 5.1 gives examples of reduction of nasal-stop clusters in Waḷuwara as compared with Wagaja, while Table 5.2 gives a similar comparison of Bulaṇu and Waḷuwara. The process illustrated is by no means universal; Bulaṇu retains many such clusters in words such as [unduru, puṇṭapuṇṭa, wankaḍa, tjinditjindi]. No attempt is made in this study to explain such exceptions.

Table 5.1

English	Wagaja	Waḷuwara
you (sing)	imbu	jipa
tongue	ŋəṇḍal	ŋaṭala
ground	mi:ŋgu	miki
to give	ŋunda	ŋuta
to fall	inpa	japa
good	mu:ŋgu	muka
crow	unguḷu	wakuḷa
to smell	injdjama	jadjunma
to tie	inda	jita
alive	wangulu	waka

Table 5.2

English	Waḷuwara	Bulaṃu
butt of tree	pandu	pa:du
kidney	kamaṇḍili	kamaḍili
milk	ŋamanduru	ŋamaduru
deep	kaṇṭi	kaṭi
pigweed	winda	wi:da
to break	ḷunda	ḷuda
up	kaṇkaḷija	kakuḷitja
near	kaṇḍila	kaḍila
you (sing,purp)	jinda	ji:da

These comparisons seem to show that the change has indeed been from an earlier nasal-stop cluster to a stop, and not in the reverse direction. This is shown by the fact that heterorganic clusters are reduced, as well as homorganic clusters. If the change were from stops, presumably via prenasalised stops, to nasal-stop clusters, only homorganic clusters would be formed. Note also that the change applies to both nasal-voiced stop and nasal-voiceless stop clusters in Waḷuwara and that the Bulaṇu stops agree in voicing or lack of it with the corresponding Waḷuwara stops.

Nasal-nasal clusters may also be reduced; compare the Waḷuwara words jatjunma, 'to smell', tjanmari- or tjaṇmari-, 'to speak', with their Bulaṇu equivalents, [jadjima] and [idjamari-], respectively. Other interesting pairs are ṇanŋu - [ṇadaŋu], 'how many', minjdji- [mi:ŋi], 'clever' and ŋujinda- [ŋuḍiḍa], 'east' (Waḷuwara form first in each case).

Table 5.3 gives examples of an intervocalic or initial stop in Wagaja and Bulaṇu corresponding to a glide or zero in Waḷuwara. The probable processes are:

p > w

ṭ > j

tj > j

k > γ > ø

k > γ > w or k > kw > w

The same processes are illustrated by the Waḷuwara reduplicated forms paṯawaṯa, palawala, ṯawijawi, ṯiṯijiṯi and tjitijiti, by the word ṯuwaḷi, 'boomerang' (cf. ṯuka, 'to throw') and by the language name Waḷuwara (some neighbouring tribes use the form waḷukara). There is no evidence of corresponding changes for the apical stops [t] and [ṯ] except in the pair [miljitka] (Bulaṇu) -miljirka (Waḷuwara), 'salt'. However, this is counteracted by an apparent change in the reverse direction; ŋutu, 'nose' in Waḷuwara, corresponds to [ŋuru] in Bulaṇu and Wagaja.

Table 5.3

English	Wagaja	Bulaṇu	Waḷuwara
they (dual)	buluwi	bula	wula
to dig	biḍi	baḍa	waṯa
to bathe	ŋubara	ŋapura	ŋawira
east	ŋudjil, ŋuṯalu	ŋuḍiḍa	ŋujinda
up	gungala (?)	kakuḷitja	kaṇkaḷija
star	(not cognate)	madjini	majini
to laugh	gudjiri	kudjiri-	kujiri-
to bury		bidjiwa	pija
south	gigiril(a)	gagara	kaara
to cry	gigi, gaga	gaga	kaa, kaγa
honey	(not cognate)	ṇuguṇu	ṇuwuṇu
boomerang	ḍugul	ḍugaḷi	ṯuwaḷi
his	juguda	juguma	wuma

Table 5.4 compares the Waḷuwara and Bulaṃu reflexes of what are clearly earlier (i.e. Proto-Thawa) *lp, *lk and *rk clusters. In Waḷuwara the stop members of these clusters have undergone lenition, sometimes to zero, while in Bulaṃu the other member of the cluster has disappeared.

Table 5.4

English	Bulaṃu	Waḷuwara
to enter	ŋapa	ŋalwa, ŋala
agent suffix	-pa	-lwa, -la
shoulder	japiji	jalwi
yam species	tjikanji	tjilγaa (2)
one	jakulu	jarγulu
to run	jukuwara	wurγara
to climb	jaka	jarγa

Wagaja appears to have retained the earlier clusters unchanged, to judge from [irka], 'to climb' and [gurguma] 'to hold' (cf. Waḷuwara kurγuma), but the evidence here is very inadequate. There are some apparent anomalies; compare Bulaṃu [wupa] with Waḷuwara wurγa, 'to clear', and Wagaja

(2) The suffix -anji in Bulaṃu corresponds to the suffix -aa (allomorph of the possessive suffix) in Waḷuwara.

[ṯulpu] and Bulaṇu [ṯupuju] with Waḷuwara ṯulyu, 'sand'. Corresponding to Waḷuwara jiḷwaŋa, 'to hit by throwing', Bulaṇu has [ḷiwaŋa]; this may result from borrowing by Bulaṇu followed by metathesis to eliminate the foreign consonant cluster [ḷw]. The same explanation may apply to Bulaṇu [gajiwali], 'far'; the corresponding Waḷuwara word is kajalla, probably formerly *kajaiwa and Proto-Thawa *kajalpa.

There seems to be some evidence of a correspondence between a stop in Wagaja and a nasal in the other two languages; some examples are shown in Table 5.5. The number of examples is far too low to allow any rule to be formulated.

Table 5.5

English	Wagaja	Bulaṇu	Waḷuwara
tooth	guṯit	guṯani	kuṯana
bone	muŋgud	ṃukaṇi	(not cognate)
genitive (personal pronouns)	-ba	-ma	-ma
causal	-balu	-maḷu	-maḷu

Unfortunately, no data throwing light on the voiced stop-voiceless stop opposition in Waḷuwara or Bulaṇu have yet been obtained. Nor is there much indication of how the Waḷuwara fricatives jj and ṛṛ came about. Waḷuwara miṛṛi, 'lightning',

is cognate with Bulaṇu [miṛi], and Waḷuwara miṛimala, 'knee', with [mi:mala]. There is some internal evidence in Waḷuwara (viz. the fluctuation between [waṛɣa] and [waṛ^a] for the place name, Marion Lake) to suggest that ṛṛ may derive ultimately from *ṛk, but the other languages of the group have so far not provided any corroboration for this. Similarly, the realization of pirtji- as [piçi] by two of the Waḷuwara informants suggests that jj may derive from an earlier *rtj. The Bulaṇu equivalent of pirtji- is pitji-, but unfortunately there are no known (to the writer) Bulaṇu or Wagaja cognates for pijji or pajja.

No attempt will be made at this stage to postulate a Proto-Thawa or Proto-Wakayic consonant inventory.

5.3 Vowel change.

The only frequently recurring difference noted in vowels between Waḷuwara and Bulaṇu is a correspondence of final a on many three-syllable roots in the former with final [i] on the corresponding roots in the latter. Examples are shown in Table 5.6. Wagaja, on the other hand, differs considerably in the incidence of the high vocoids, especially the high front vocoids. Compare the Wagaja verb forms [iŋiṇi] and [giriḍi] with the corresponding Bulaṇu [jaŋaṇa] and [garidjara]

and Waḻuwara jaŋaṇa and karijitja, and see some of the earlier tables in this chapter for other examples. Particularly noticeable is the correspondence between Wagaja initial [i] and [u] and ja and wa, respectively, in Waḻuwara (and Bulaṇu). This is illustrated in Table 5.7. Word-initial [wa] is uncommon in Wagaja, and word-initial [ja] is almost non-existent apart from a few pronominal forms. There may be evidence here for an early stage in which there was only one vowel phoneme.

Table 5.6

English	Waḻuwara	Bulaṇu
tongue	ŋaṯala	ŋaṯali
tooth	kuṯana	guṯani
word	jitjala	idjali
young woman	kuṭala	gudali
far	kajalla	gajiwali
snake	ṯuwana	ḏuwani
adze	kumbaḻṯa	gumbaḻṯi

Table 5.7

English	Waḷuwara	Wagaja
to climb	jarγa	irka
to fall	japa	inpa
to see	jaŋa	iŋi
to smell	jatjunma	injdjama
appearance / face	jaṇinjdjiri	ininjdju
left (hand)	wakuṇu	uguṇu
crow	wakuḷa	ungulu
dog	warawuḷa	wura

English	Bulaṇu	Wagaja
wild orange	waldadji	udadju
stomach	waḍuḷu	wudaḍ

5.4 Addendum.

More recent comparative work carried out by the writer suggests that the Wakayic languages belong, not to the Pama-Nyungan Family as hitherto classified, but to the Yanyulan Family. However, since no study has yet been made of the relationship between the Wakayic Group and its northern and

western neighbours and other intervening languages, and no more than a cursory comparison of the Wakayic and Yanyulan languages (using vocabulary items extracted from papers by Kirton (1967) and Hale (n.d.)), no further details will be given at this stage.

APPENDIX I

Two Waluwara stories.

1. The travelling devils; told by George Age.

panduŋuḷuku maṯiji ṯawa / ŋuḷpa panduŋuḷu ṉandaṇami /
devil-ag kill-purp man / mob devil go-past-dir/

jinja maṯaṇa / ṯawa / jiwa ŋunaṯiji / jaraka /
him kill-past / man / he sleep-purp / river-loc/

jinja maṯaṇa ŋunaṇa / ṉandaṇa janu karandajalu /
him kill-past sleep-comp/ go-past they(plur) Carandotta-alla /

karandajalu ṉandaṇa janu / ṯawaaṛa / panduŋuḷaṛa /
Carandotta-alla go-past they(plur)/ man-poss / devil-poss /

kana janu ŋulariṇami / puṯi jalu janu ṉandaṇa /
not they(plur) return-past-dir / long time yet they (plur) go-past /

kaḷa janu maṯaṇa / ŋankana / jarγuluka janu
meat they(plur) kill-past / kangaroo / one-loc they(plur)

tjuwalaka ṉandaṇa / tjuwalaka / maṛaŋiḷa / puṯi jalu /
night-loc go-past / night-loc / here-ela / long time yet/

ḷikinatjilu / kana janu ŋulariṇami // jarajana janu
Lake Nash-alla / not they(plur) return-past-dir // woman they(plur)

jarγula wuwaṭaṇa / wuwaṭaṇa jarajanaa / jarγulaa/
one-poss call-mot-past / call-mot-past woman-poss/ one-poss /

warawuḷaa jarγulaa / warawuḷaa jarγulaa / ṭaṭali
dog-poss one-poss / dog-poss one-poss / carney

janu warawuḷaka maṭaraṇa / ṭaṭali / jinja
they(plur) dog-inst kill-mot-past / carney / it(acc)

janu ṭaŋuṇaṭandi / ṭaṭala // kuγukuγula janu
they(plur) eat-mot-ger/ carney-poss// head-emph they(plur)

paḷaṭinjamaṇa /kuγukuγuḷa / ḷikinatjilu / kuγukuγuḷa //
carry-past / head-emph / Lake Nash-alla/ head-emph //

kana jiwa ḷikinatjiṇa jararapa jiwa jitjala /
not that Lake Nash-nom white man-gen that word /

jararapa / jaṇu jiwa jilpiriḷilama / jilpiriḷilama//
white man-gen/ long ago that Ilbirilhilama / Ilbirilhilama//

njima janu ṭaŋuṇaṭi / njimaa // ŋaṇa / kana
fish-poss they(plur) eat-ger/ fish-poss// I / not

ŋaṇa tjinaŋajiṭa jara jarɣulu jarɣulu jitjala
I know-pres river one one word

ŋaṭaŋaa / waḷuwara / ḷikinatjiṇa jarɣulilaṛa /
my-poss / Waḷuwara / Lake Nash-nom one-alt-poss /

[waḍulu baṇṇadji] / kana ŋaṇa tjinaŋajiṭa / maḷalja
(not Waḷuwara words) / not I know-pres / no

ŋaṇa // maṛa janu / ŋawija / maṛawaka(?)
I // here they(plur)/ whatsisname / this-emph

ṇandaṇami / tjuṇḍuṇa jilpiriḷi--- / ŋawijaŋuḷu /
go-past-dir / Djuṇḍu-nom Ilbirilhi--- / whatsisname-ela/

jiḷataŋuḷu // kana janu jitjala waḷuwara
Iḷada-ela // not they(plur) word Waḷuwara

tjinaŋajiṭa / ŋawijaa ŋaṭaŋaṛa jitjalaṛa / jarɣulila /
know-pres / whatsisname- my-poss word-poss / one-alt /
poss

januma jarɣulila // kaŋaṭiji / ŋaṇa jipa
their(plur) one-alt // carry-purp/ me you

kaŋaṭiji / ŋawijalu / tjuwanjinirila / ŋaṇa
carry-purp/ whatsisname-alla/ Djuwanyiri-alla/ I

jindaḷa ṇandiji / panduŋuḷaa jalkujalkuwa /
you-com go-purp / devil-poss man eater-poss /

jalkujalku // jiṛaṭaarijitja ŋaṇa / jiṛaṭaarijitja /
man eater // be afraid-pres I / be afraid-pres /

matju jana ṭawaṛa / matju / ṭawa janu matju /
bad they-poss (plur) man-poss/ bad / man they(plur) bad /

ḷikinatjika // ŋutupuwaṇa / ṭaṭaliṇaraŋu /
Lake Nash-loc // goanna / carney-priv /

ŋutupuwaṇaa / njimi / ḳamamara / kutaŋu
goanna-poss / fish / centipede / rat

The devils wanted to kill a man. A mob of devils came here and killed him. He wanted to sleep at the river and they killed him while he slept. They went to Carandotta and didn't come back here. They went for good. They killed animals - kangaroos. They went one night, from here, for good, to Lake Nash, and didn't come back here.

They picked up one woman while they were going along. They had one dog. With the dog they killed carneys (bearded dragons - a species of lizard) while they were travelling,

and ate them as they walked along. They carried the dead man's head to Lake Nash. Lake Nash is the white man's name; it used to be called Ilbirilhilama. They used to eat fish.

I only know one language, my own, Waḷuwara. Lake Nash has another. (The next two words are in Buḷamu, the original language of Lake Nash, and appear to mean 'swollen stomach'.) I don't know it. They came here. Djuṇḍu came from whatsisname - from Iḷada (Tobermory). They don't know Waḷuwara, my language. They have another.

Will you take me to whatsisname - to that other place, Djuwanyini (Austral Downs) I want to go with you. There are devils and they are maneaters, and I'm frightened. They are bad men at Lake Nash. All they eat is goannas. No carneys. Goannas, fish, centipedes and rats.

Note: Djuṇḍu is the name of the woman and was, according to Mrs Toby, the wife of the man who was killed.

The following is a broad phonetic notation of part of this story. Pauses are notated as in the orthographic version above. The sign [---] is used on one occasion where the informant began to say a word, stopped, and said another word.

The voiced stop symbols are used for lenis voiceless stops as well as for the voiced stops belonging to the phoneme /G/. The vocoid symbols used are [i, u, ɐ̱, a, a̲, ə]. [ɐ̱] is used for all low front vocoids, [a] for low central vocoids and [a̲] for low back vocoids. Note that, for the first two and a half lines, up to and including the word ŋunaṇa, the informant was speaking very slowly and carefully; after that the speech is more natural.

['bandu,ŋuḷugu'maṭii'ṯa̲.wa̲:/'ŋuḷpa'bandu,ŋuḷu'ṇanda,ṇami/
'inja̲.'maṭaṇa/ 'ṯa̲wa̲:/'i:wa'ŋunaḍi:/'jɐ̱ra̲.ka/
'i.nja'maṭaṇa'ŋunaṇa/'ṇanda,ṇanu'garanda,jɐ̱lu/
'garanda,jɐ̱lu'ṇanda,ṇanu/'ḍa̲.wa̲ɹa/'pandu,ŋuḷaɹa/
'gana'jɐ̱nuŋu''lɐ̱ri,ṇami/''uṭi'jɐ̱li'jɐ̱ninja---'ṇandaṇa/
'gaḷa'jɐ̱nu'maṭaṇa/'ŋan,kana̲:/'jɐ̱rɣula'ga̲:ni'dju,walaga'ṇandaṇa/
'djuwala,ga̲./'maɹaŋi,ḷa./'uṭi'ja̲lu/
'ligi,na̲.djilu/'gana'jɐ̱nuŋu''lɐ̱ri,ṇami//
'jɐ̱ɹa,jɐ̱na'jɐ̱rɣulau'waḍaṇa/'waḍaṇa'jɐ̱ɹa,jɐ̱na̲./'ɐ̱rɣula̲./
'wara,wuḷa̲.'jɐ̱rɣula̲:/'wara,wuḷa̲.'jɐ̱rɣula̲:/
'ṯa,ṯa.li'jɐ̱nu'wara,wuḷaga'maṭa,ɹaṇa/'ṯa,ṯa.li/
'inja̲:nə'ḍaŋuna,ḍandi/'ṯa,ṯa̲.la//'guɹu,guɹu'ḷaja̲nu'bəḷaɹ,ḍinja,maṇa/
'guɹu,guɹuḷa/'ḷigi,na̲.djil/'guɹu,guɹuḷa//]

2. The woolly people; told by Mrs Ida Toby.

njinaṭi	watakaka /	ṇandaṇa	/ kanaṭarawa	ṇandaṇa /	
sit-ger	stone-loc /	go-past	/ hunger-poss	go-past /	

ṇandaṇa	janu	ŋaṭarwaaṛaji	waramaṭi	matjaṭijaka /
go-past	they(plur)	food-poss-purp	look for-ger	eat-purp-emph /

kajallalu	ṇunda	janu	ṇandaṇa	/ jaralu	/
far -alla	then	they(plur)	go-past	/ river-alla/	

wukuwaṛa	ṇatamaṇami	/ ṇukara	jiwa	kaandi/
water-poss	go-mot-past-dir	/ wind	that	come-ger/

jarγuluka	waḷuwaraka	janu	tjaṇmaritji	jitjalakaka/
one-inst	Waḷuwara-inst	they(plur)	speak-ger	word-inst /

ṇunda	/ miṛṛikaku	jiḷwaŋaṇa	/ ah	/
then	/ lightning-ag	hit-past	/ uh	/

ṇunda	janu	tjaṇmariṇa	jitjalarilaka	ṇunda /
then	they(plur)	speak-past	word-alt-inst	then /

janumaḷaka	jitjalaka	/ janu miji	tjaṇmariṇa	/ aa	/
their(plur)-inst	word-inst	/ they (plur) then	speak-past	/ ah	/

ŋulariṇa janu / jaṭala ŋamalalu / waṭalalu /
return-past they(plur)/ father-alla / stone-alla/
mother-alla

jaŋaṇa janu / matju maṛa /
see-past they(plur) / bad this /

kana maṛa jaṭaṇa kana maṛa ŋamaṇa
not this father-nom not this mother-nom

They were living in the hills. They were hungry, so they went to look for food. They went a long way, to a waterhole. The wind was blowing and clouds came up. They were speaking in one language, Waḷuwara. Then, lightning struck. Ah! Now they spoke a different language. They spoke their own language. Ah! They went home to the hills, to their fathers and mothers. They saw them. "This is no good! These aren't our fathers and our mothers!"

Note: In her English version of this story, Mrs Toby gives further information. Originally, they people were all covered with "wool" i.e. fur. When the lightning struck the young people, their fur all fell out. When they returned to the hills and saw and heard the old people, who were still woolly, they (the young people) did not recognise them, became frightened, and ran away into the bush.

A phonetic notation of this s tory, using the same system as for the other story, is given below.

'njinaḍi'wạta,gạ:ga/'ṇandaṇa/'ganaṭa,ɹawa'ṇan,daṇa/
'ṇandaṇa'jạṇuwa :'ŋaḍa,rạ:ɹại'wara,maḍi'madja,ḍijạ:g/
"gaiạd,lali'ṇunda'jạnu'ṇandaṇa/'jaɹạ:lu/
'uku,waɹa"ṃata,maṇami/'ṇukwija'gạandi/
'jar,ɣulagu"waḷu,waraga'jạnu'djạṇma,ɹidji,i"tjala,gạ:g/
'ṇunda/"miṣi,gạ:gu,id"ḷaŋaṇa/'ah/
'ṇunda'jạni'djạṇma,ɹiṇai"tjala,ɹila'gaṇanda/
'jạnu,maḷagai'tjalagạ:/'jạnmi'djạṇma,riṇa/ạ.h/
'ŋula,riṇa'jạnu/'jạṭalạ:'ŋama,lạ:lu/'wata,lạ:lu/
'jaŋaṇaja"nạ:h/'matju'maɹa/
'gana'maɹa'jạṭaṇa'gana'maɹa'ŋamaṇa

APPENDIX II

The Paṇkara Dialect.

A single poor informant in Paṇkara, Mr Jack Wilde of Dajarra, born at Rochedale, was interviewed but not recorded in 1967. A list of 24 words was obtained from him; these are given below in the orthography used for Waḷuwara. Of these words, 21 were the same as the corresponding Waḷuwara words and six were the same as the corresponding Bulaṇu words (three were common to both). Clearly, his idiolect belonged to a dialect of Waḷuwara, probably a little more closely related to Bulaṇu than is Waḷuwara proper.

water	wuku
man	jarara (=white man)
woman	jarajana
fire	maṇala
dog	warawuḷa
kangaroo	ŋankana
bird	ṭuṭu
emu	punjdjura
corella	ŋaŋapuṭaŋu
galah	ṭiŋkili (this word does not occur in Waḷuwara, but was given by a Bulaṇu informant as meaning 'corella')

head	kuŋukuŋu	
eye	ŋaŋa	
ear	pinali	(Bulaŋu; the Waluwara word is maŋkaru)
nose	ŋutu	
mouth	ḷiŋa	
teeth	kuṯani	(Bulaŋu; kuṯana in Waḷuwara)
meat	kaḷa	
tucker	ŋaṯaru	(possibly a mishearing; Waḷuwara ŋaṯarwa)
eating	ṯaŋuŋaṯi	(this is the gerund; or it may have been the purposive form ṯaŋuŋaṯiji)
liver	kamaŋḍili	
leg	wutjuru	
foot	pamara	
hand	markana	
arm	ḷimbi	

APPENDIX III

Waḷuwara Social Groupings.

A number of statements on this subject have been obtained from the main informants, but unfortunately both Fred and George Age appear to confuse the Waḷuwara system with that of other tribes (from which they have obtained wives), and their statements contradict those of Mrs Toby at some points; Mrs Toby herself has been questioned on this subject on several occasions and has made several contradictory statements. The system described below has been chosen to minimise the number of statements rejected as incorrect and is, of course, a highly unreliable solution to the problem. However, it is given in the hope that, in conjunction with similar information from other parts of Australia, it may be of some use. The system used seems to have been the subsection system described by Elkin (1964), and the data have accordingly been fitted into this system.

The names of the subdivisions, or "skins" as they are called by the informants, are:
pilarinjdji (abbreviated to pil in the chart below), wiḷwiḷaa (wiḷ), ŋamaljaku (ŋam), ŋunaṭalwa (ŋun), ṭuṇimili (ṭuṇ), piŋarinjdji (piŋ), ŋutirila (ŋut) and warki (war). kaŋila seems to be an alternative for wiḷwiḷaa.

The chart shows the suggested system; x means 'marries', the name on the left of an x is the subsection of the husband and that on the right is the subsection of the wife. The line beginning below each x goes to the children of the marriege.

APPENDIX IV

Plant Names.

A number of plant specimens for which names were given by Mrs Toby were sent to the Queensland Herbarium for identification. The results are given below, together with some comments. The writer is grateful to the Queensland Government Botanist, Mr S L Everist, and members of his staff who made the identifications. Other plants identified by the writer are also included in the list, but are marked (B). A single identification made by Mr John Power Jnr of Mt. Isa is marked (P) and a single identification by Mr A B Court, of the National Herbarium of Victoria, is marked (C). Plants not identified except by a common name or in some other vague way are not included here, but are included in the vocabulary (as are those listed here, apart from a couple that are almost certainly incorrectly named by the informant). About one fifth of the Waḷuwara names were confirmed by one or more of the other informants.

Botanical name	Common name	Waḷuwara name
Acacia ancistrocarpa		ṯaja

(This has an edible gum, called ŋayaṯa.)

Acacia aneura mulga ŋaḷaku
(A narrow leafed form.)

Acacia chisholmii turpentine bush minaritji
(This is probably not a Waḷuwara word; it is a name used as a common name in other areas - not necessarily for the same species - by white people. An edible grub, called in Waḷuwara jindirkiri, is found in the roots.)

" coriacea kunjdjima
(Called kunjdjima paṭa, "big kunjdjima", to distinguish it from Hakea chordophylla,q.v.)

" cowleana janjula, walirija
(The two names may apply to two different habits of this tree; the two trees from which the specimens were taken were superficially different.)

" farnesiana needlebush tjanara

" georginae (C) gidgea kaḷilpi

Acacia georginae	gidgea	kijalpari

(The difference between kaḷilpi and kijalpari is one of habit; it appears that the former grows along the creeks - although on on one occasion Mrs Toby referred to it as growing on a ridge - and the latter grows away from the creeks.)

" holosericea		mirinjdja
" salicina	willow wattle, cooba	pukaṭika

(This name is also used in the languages immediately south of Waḷuwara; Roth (1897) refers to it as "sp. of wattle used in the preparation of pituri".)

Atalaya hemiglauca	whitewood	wukalpara,milawu

(The second name is almost certainly incorrect.)

Bassia sp.		pukunukunu
Bauhinia sp. (B. caronii or B. cunninghamii)	bean tree, bauhinia	ŋaṭalaŋu
Calandrinia balonnensis (?) (B)	parrakeelya	ṇaŋaṭalwa

(Identified by the informant only from a photograph. It was said to have been rubbed on the body and face and used as a charm by women, to attract a man.)

Calocephalus platy-cephalus (?) (B)	button grass, billy buttons	mikiṇuka

(Identified by the informant only from a photograph.)

Canthium latifolium		warandiṇa
Capparis lasiantha	splitjack	ṇuḷaa
Capparis sp.		maṇṇanjdji
Carissa lanceolata	congaberry	jilaryaḷa

(The root is said to have been used for medicine; it was scraped, the scrapings soaked in water, and the affected part bathed in the water. It was used for sores and burns. See also Palmer (1884) p.320, for reference to a plant (Carissa brownii) with the same common name.)

Cassia notabilis		wiṛimanimani
" oligophylla		ŋaṛawali

(The leaves were used for medicine.)

" planitiicola		janjdjaṭa
" pruinosa		jambukutu

Chenopodium auricomiforme lignum		kunjdji
Datura stramoneum (P)		puruwana
Echinochloa colonum		ŋawiraṇamaṭalwa

(The seeds were ground and used as flour.)

Eremophila mitchellii	fuchsia, sandalwood	miljaṛa
Eremophila sp. (?) (B)		willi

(The yam, ŋuṛma, was obtained from this plant.)

Erythrina vespertilio	corkwood, bean tree batswing coral	pili

(Coolamons - also called pili - were made from the bark of this tree.)

Eucalyptus brevifolia (B)	snappy gum	tjilumaṭala

(This name was obtained from Fred Age. Mrs Toby did not know it.)

"	camaldulensis (B)	river gum, river red gum	matjaa
"	microtheca	coolibah	kaḷatja

Eucalyptus microtheca (B) coolibah njiraa, kuŋuwa

(The name kuŋuwa was used by Fred Age; he did not use the word njiraa because, according to Mrs Toby, a grand-uncle of his had been called Njiraa. As Mrs Toby, being much younger, had not known this man, she was free to use the old name. The difference between kaḷatja and njiraa/kuŋuwa is one of habit; the former grows in the hills and has, apparently, a bigger leaf, while the latter grows along the rivers and creeks. The seed of the coolibah is called kutulukutulu. See also Palmer (1884) p.322.)

" papuana (B) carbeen, ghost gum pirɣipuṛa, pirupuṇa

" pruinosa silverleaf box janjawali

(See Palmer (1884) p. 321)

" terminalis (B) bloodwood kuṭipiri

(Its gum is called ṇatpaŋu and was used in tanning skins. See also Palmer (1884) p.315 and 319.)

Grevillea striata (B) beefwood walanjdji

Gossypium australe ŋamaa

(The name ŋamaa, 'having milk', was also given

to Sarcostemma australe. Both plants contain a milky fluid.)

Hakea chordophylla	corkwood	kunjdjima

(ṭawiṛi kunjdjima, "little kunjdjima", cf Acacia coriacea. In both of these cases there is some doubt about the name.)

Heterodendron oleifolium	dogwood	kujamara
Kochia sp.		wurijala
Lysiana spathulata ssp spathulata	mistletoe	tjimbuḷaku
Melaleuca leucadendron	tea tree, cajeput tree, paperbark	kurupa

(Compare the words for paper, including paper money - kurupa - and the word for blanket or clothing - kurupaṭa - and see also Palmer (1884) p. 321.)

Mentha australis	pennyroyal, tea bush	wimiṇi

(wimiṇi paṭa, "big wimiṇi", cf Pterigeron odorus.)

Muehlenbeckia cunninghamii	lignum	juŋguru

Panicum decompositum buffalo grass kajaŋgaja

(See Palmer (1884) p.316.)

Parsonsia eucalyptophylla (?) wild banana wiṯambara

(There was no specimen available; it was identified tentatively from the informant's description. The fruit is called ŋunja.)

Psoralea cinerea kunaa

(A reed, from which a fibre was obtained and used for making string for fishing nets, in particular, apparently, for the black bream, which is also called kunaa.)

Pterigeron odorus wimiṇi

(ṯawiṛi wimiṇi, "little wimiṇi", cf Mentha australis.)

Ptilotus schwartzii waṇinjdjara

Sarcostemma australe ŋamaa

(See also Gossypium australe.)

Securinega virosa wulawu, wilpijara

(One of these names is probably incorrect.)

Sida fibulifera		ŋaḷaa
Tinospora smilacina		maṛaka
Trioidia sp. (B)	spinifex	paṭandi

(The gum, called ṭuṇa, was used as an adhesive.)

Tristania grandiflora	myrtle	jandawula
Ventilago viminalis	supplejack	ṭamuru, wukalpara

(The second of these names is certainly incorrect. See Palmer (1884) p.324.)

References.

The following list of references is not intended to be a complete bibliography, but includes items referred to in the text and a few other items which, although not specifically referred to in the text, were found useful.

Blake, Barry J. (1969) The Kalkatungu Language: a brief description, Australian Aboriginal Studies No. 20, Australian Institute of Aboriginal Studies, Canberra

Capell, A. (n.d.) Linguistic Materials for Fieldworkers in Australia, Australian Institute of Aboriginal Studies, Canberra

Capell, A. (1963) Linguistic Survey of Australia, Sydney

Capell, A. (1956) A New Approach to Australian Linguistics, Oceania Linguistic Monograph No 1, University of Sydney, Sydney.

Capell, A. (1962) Some Linguistic Types in Australia, Oceania Linguistic Monograph No 7, University of Sydney, Sydney

Catford J.C. and Ladefoged, Peter (1968) Practical Phonetic Exercises, UCLA Working Papers in Phonetics II, Los Angeles, California.

Cayley, Neville W. (1966) What Bird is that? (4th edition) Angus and Robertson, Sydney.

Chippendale, Thelma M. (1968) Wildflowers of Central Australia Jacaranda Press, Brisbane

Coate, H.H.J. and Lynette Oates, (1970) A grammar of Ngarinjin, Australian Aboriginal Studies No 25, Australian Institute of Aboriginal Studies, Canberra

Douglas, W.H. (1964) An Introduction to the Western Desert Language, Oceania Linguistic Monograph No4(revised), University of Sydney, Sydney.

Dutton, H.S. (1906) Aboriginal place names with their meanings, Science of Man, 8, No 1, 14-16.

Edge, J.G. (1899) Letter to the Editor, Science of Man, 2, No 4, 69

Edge, J.G. (1899) The Mika ceremony, Science of Man, 2 No 6, 102-3

Elkin, A.P. (1964) The Australian Aborigines: How to understand them, Fourth Edition, Angus and Robertson, Sydney

Hale, Kenneth L. (1960) Some notes on Waluwara (Maule), unpublished.

Hale, Kenneth L. (1969) Private communication, enclosing field notes on Waluwara

Hammarström, U.G.E. (1966) Linguistische Einheiten im Rahmen der Modernen Sprachwissenschaft. Springer-Verlag, Heidelberg.

Hammarström, U.G.E. and Jernudd, B.H. (1969) Outline of Linguistics, 3rd Edition, Monash University, Melbourne

Hercus, Luise (1969) The Languages of Victoria: A Late Survey, Australian Aboriginal Studies No 17, Australian Institute of Aboriginal Studies, Canberra

International Phonetic Association (1949) The Principles of the International Phonetic Association, London.

O'Grady, G.N. (1957) Statistical Investigations into an Australian Language, Oceania, 27, No 4, 283-312

O'Grady, G.N., and Klokeid, T.J. (1969) Australian Linguistic Classification: a Plea for Coordination of Effort, Oceania, 39, No 4, 298-311

O'Grady, G.N., Voegelin, C.F. and F.M. (1966) Languages of the World: Indo-Pacific Fascicle Six, Anthropological Linguistics, 8, No 2

Roth, W.E. (1897) Ethnological Studies among the North-West Central Queensland Aborigines, Government Printer, Brisbane

Smythe, W.E. (1948) Gumbainggar Grammar, Oceania Monograph, 8, University of Sydney, Sydney

Strehlow, T.G.H. (1945) Aranda Phonetics and Grammar, Oceania Monograph, 7, University of Sydney, Sydney,

Tindale, N.B. (1940) Distribution of Australian Tribes: a field survey, Trans. Royal Society of South Australia, 64, 140-231

Wurm, S.A. (1967) Linguistic Fieldwork Methods in Australia, Australian Institute of Aboriginal Studies, Canberra.

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