

Thesis submitted by Mr. J.G. Breen  
for the degree of  
Master of Arts

"A description of the Waluwara Language"

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A DESCRIPTION OF THE

WALUWARA LANGUAGE

J. G. Breen

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

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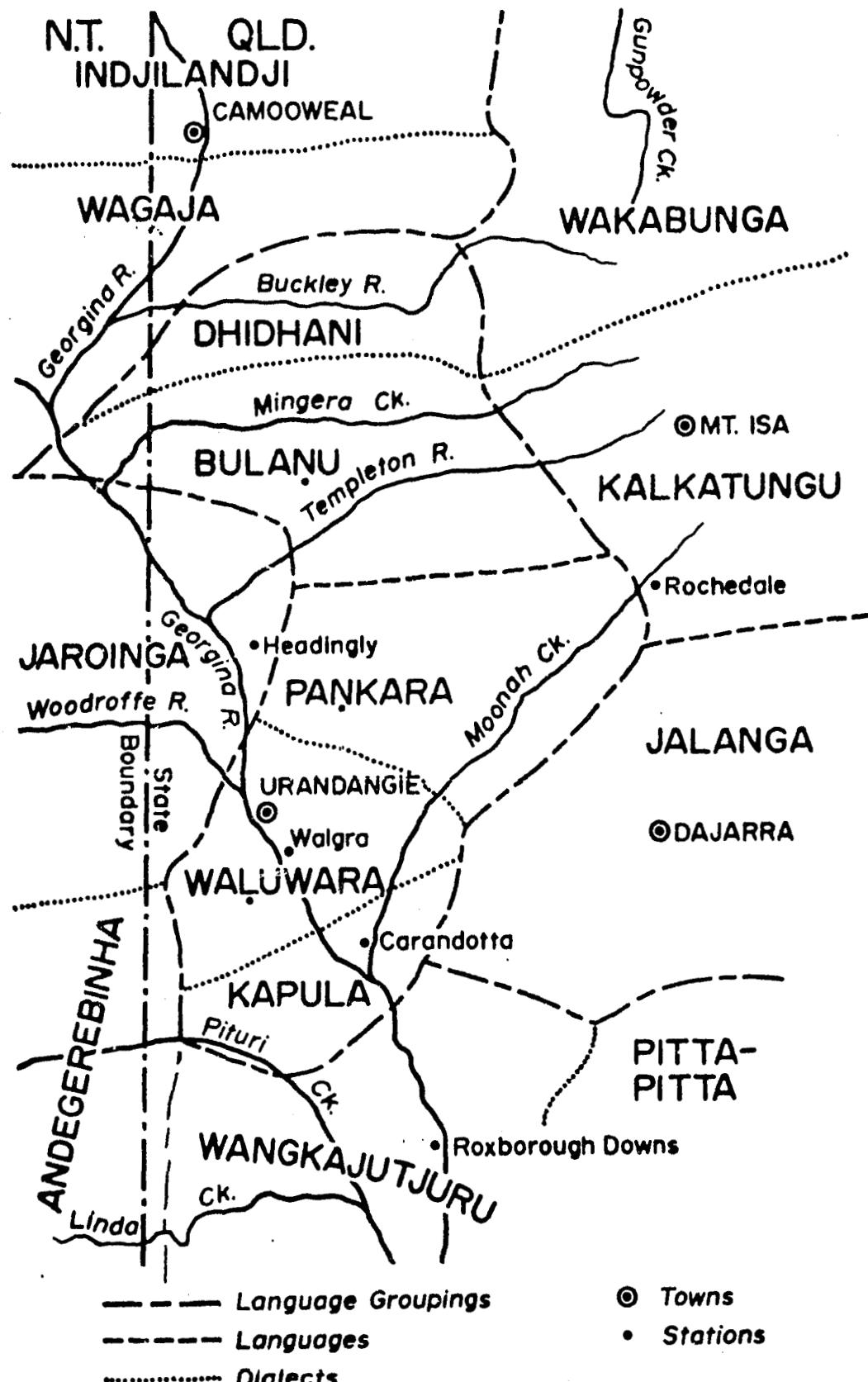
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# LINGUISTIC MAP OF MT. ISA-URANDANGIE AREA



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

## 1. INTRODUCTION

### 1.1 The Waluwara and their country.

First published reference to the Waluwara 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 Caranotta 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 Waluwara (the name used by the members of the tribe themselves) and Walukara (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 Bulanu 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 Bulanu spoke a closely related language; this language formed a link between Waluwara and Wagaja, spoken further to the north and west.

The Waluwara tribe appears to have been made up of three sub-tribes or hordes: the Kapula at Carandotta, the Pankara at Rochedale and west towards Headingly, and the Waluwara 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 Waluwara informants; Yunnalinka, said by Roth to have been at Carandotta; and Wonganja, mentioned by Capell (1963) as an extinct language once spoken east of Waluwara. The last two names are not recognised in the area at the present time.

#### 1.2 The linguistic affinities of Waluwara.

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

forms a link between Wajuwara 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, Wajuwara appears to have little in common with its immediate neighbours (except, of course, Bulanu). 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 Wajuwara country, and the first part of

the list is clearly of words from this area; the second part, however, is certainly Waluwara, 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 Urandingie, 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 Waluwara 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 Jermudd, 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 Waluwara.

## 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 Waluwara, 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 ṭawa ᯥandiji jitjiralu/  
tomorrow that man go- Urandangie-  
purpose to

Tomorrow that man is going to Urandangie  
the first and last words are adverbial phrases, /jiwa ṭawa/  
is a noun phrase which forms the subject of the sentence,  
/ḥandiji/ is a verb phrase and /jiwa ṭawa ᯥandiji/ 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 /jitjiralu/, 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 Waluwara language and at the same time provides a key to the phonetic symbols used throughout this section.

Table 2.1  
Inventory of phones

		apico-		lamino-		retroflex			
		alveolar		alveolar		palatal		(apico-domal) velar	
voiceless fortis stop	p	t	tʃ	t	tʃ	c	t	k, kʷ	
voiceless lenis stop	b	d	dʒ	g	dʒ	g	ɖ	g, gʷ	
voiced stop	b	d	dʒ	ɖ	dʒ	ɖ	ɖ	g	
nasal	m	n	ɳ	n	ɳ	ɳ	ɳ	ŋ, ŋʷ	
lateral	l	l	l, l:	l	l, l:	l	l, l:	l, l:	
flap	r	r	r	r	r	r	r	r	
voiceless fricative				ʂ	ʂ				
voiced fricative				ʐ	ʐ			h	
frictionless continuant		j	j	j̥	j̥				
(b) <u>Vocoids</u>								ɤ, ɤʷ	
	front	central	back						
high	i, i:, I, y	ɪ, ɪə	u, u, u, ui						
mid	e, ε	ə	ɔ						
low	ɛ, a	ə	a, a:						

The list in this table is not intended to be exhaustive; for example, phones such as [β , ɣ], 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 <sup>Δ</sup>, 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	t̪	t	tj	t̫	k
G					
m	n̪	n	nj	n̫	ŋ
l̪	l	lj	l̫		
r					
w		j	r̪	y	

(b) Vowels

i	u
a	

The symbol 'G' is used for the phoneme which has as allophones the voiced stops: [b, d, ð, dj, ɖ, g], heard only in homorganic nasal-stop sequences. The symbol 'r' is used for the phoneme whose chief realization is [ɹ]; 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: /jalwi, jalwi, jalkitjara; pulya, pulya, puryandi; kankalija, kampalija; panpa, panmatala; nyalwa, nalya/. (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

	t̪	t	tj	t̪	k	m	n
p	pawa t̪awa	x	pila t̪jila (tanuru t̪janara)	panmatala tanmataia (tura) t̪uru	paka kaka t̪ara mara	pala māla t̪awa mawa	paka nakal t̪aku naku
t̪	tupu t̪utu	t̪	x		x	x	x
t̪	wapa	wata	t	x	x		x
tj	wata	wata					
t̪	jipala	mata	jitala	tj	tanma		
tj	jitjala	matja	jitjala		tjanma		
t̪	papa	(mata)	mutuka	(matja)			
t̪	pata	pāta	mutuka	pata	t̪		
k	wapa	wata	wata	-katja	tuta	k	
m	waka	waka	waka	kaka	fuka		
m	kipa	ŋata	kuta	kutja	pata	miki	
m	kima	ŋama	kuma	kuma	pama	mimi	m
n̪	t̪upu	ŋata	wata	matja		waka	ŋama
n̪	t̪unu	ŋana	-wana	mana		-wana	ŋana
n̪	jipa		kuta	kutja		kaka	kuma
n̪	jina		kuna	kuna		kana	kuna
n̪j	jipa		jita	-katja		kaka	kuma
n̪j	jinja		jinja	kanja		kanja	kunja
n̪	matjapa	ŋata	wata	matju		puka	ŋana
n̪	matjana	ŋana	-wana	maru		pupa	ŋana
n̪	japa	ŋata		-katja	jata	kaka	ŋana
n̪	jaya	ŋana		kāja	janya	kaja	ŋana
l̪			ŋutu				(jira)
l̪			ŋulu				jira
l̪	papa			matja	paputu	-ku	mana
l̪	pala			mala	papuli	-lu	māla
lj	jarapa			latja		jaraka	
lj	jaralja			jalja		jaralja	
l̪	papa	wata	ŋutu	matja	kātu	waka	ŋamaa
l̪	pala	wāla	-iulu	māla	kalu	wāla	māla
r̪	papu	wata	kuta	latja	tūta	waka	-wai
r̪	paru	wara	kura	lara	fura	wara	waru
w	papa		jita	matju	pāta	taka	tana
w	pawa		jiwa	mawu	pawa	tawa	tāwa
j̪	jipa	puta	jita	watji	paputu	taka	jaramana
j̪	jija	pūja	jija	waji	papuju	taja	jarajana
r̪	wapa	wata	wata	matja	kātu	kaka	jamu-
r̪	-wara	-wara	-wara	mara	karu	kara	jaru
γ				-katja		kaka	
				kaya		kaya	
	p	t̪	t	tj	t̪	k	
						m	
							n̪

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

n	m	n	n	nj	n	n	ŋ	l	l	lj
paka	pala	paka	x	x	puka	pama	y	x	x	x
naka	maļa	naka	x	x	nuka	nama	x	x	x	x
taku	tawa	takuju	x	x	tuka	tana	x	x	x	x
naku	mawa	nakuju	x	x	nuka	nana	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
			x	(tjira njiraa)			x	x	x	x
kaka	ṭala	kaka	x			ṭala	x	x	x	x
naka	mala	naka	x			nala	x	x	x	x
kaṇa	kara	kaṇa	x			kaṇa	x	x	x	x
naṇa	mara	naṇa	x			naṇa	x	x	x	x
maṇa	māna	maṇa	x	mimi	muka	maṇa	x	x	x	x
naṇa	naṇa	naṇa	x	njimi	nuka	naṇa	x	x	x	x
wapa	ŋama	ŋama	x			ŋama	x	x	x	x
wapa	ŋana	ŋana	x			ŋana	x	x	x	x
kuma	kuma	wapanā	n	x	x	x	x	x	x	x
kuna	kuna	wapanā	x							
kuma	kunja		kana	nj			x	x	x	x
kunja	ŋama	ŋana		-nja		ŋana	x	x	x	x
ŋana	ŋana	ŋana		-na	n	ŋana	x	x	x	x
ŋana	ŋama	ŋana	kana	kanja	ŋana	ŋana	x	x	x	x
ŋana	ŋana	ŋana	kana	kanja	ŋana	ŋana	x	x	x	x
(jira		(jiranāju)				ŋ		l	x	x
jira		jiraļāla								x
mana	pama	mana	janu	ŋanji	ŋana	maṇa	(wamalamala)	l		
maļa	pala	maļa	jalu	ŋali	ŋala	maia	(jamalamala)		x	x
				kanji				lala		
				-kalji				ļalja		lj
mana	ŋamaa	maṇa	kana	kanja	ŋana	njiņi	ŋulu	mala		
maļa	ŋalaa	maļa	kaļa	kaļa	ŋala	njiļi	-ŋulu	mala		
-wai	kuma	-wana	jini	ŋunja	tuna	njiņi		wili		
warā	kura	wara	jiri	ŋura	tura	njiři		wiri		
tana	kuma	tana	kana	jinja	manu	kaṇa		pala		
tawa	kuwa	tawa	kawa	jiwa	mawu	kawa		pawa		
tana	jaramana	tana	jina	jinja	puna			-wali		
taja	jarajana	taja	jija	jija	puja			waji		
mane	jamu-	mana	kana	kanja	-wana	kaṇa	ŋulu	jalu		
marā	jaru	maṛa	kara	kara	-wara	kara	ŋuru	jaru		
			kana	kanja		kaṇa				
			kaya	kaya		kaya				

<u>l</u>	<u>l</u>	<u>lj</u>	<u>l</u>	<u>r</u>	<u>w</u>	<u>j</u>	<u>r</u>	<u>r</u>	<u>r</u>	<u>r</u>	<u>r</u>
v	x	x	pala	x	paka	para					
x	x	x	lala	x	waka	jara				x	p
x	x	x	x	x	tuka	tawa				x	t
x	x	x	x	x	wuka	jawa	(tunu)	(runa)	x	x	t
x	x	x	x	x	x	x	x	x	x	x	t
x	x	x	x	x	tjinGa	tjipa				x	tj
x	x	x	x	x	winGa	jipa				x	t
x	x	x	tala	x	turu	tala				x	t
x	x	x	lala	x	wuru	jala				x	t
x	x	x	kara	x	kuma	kipa				x	k
x	x	x	lara	x	wuma	jipa				x	m
x	x	x	mala	x	mawu	mala				x	n
x	x	x	lala	x	wawu	jala				x	n
x	x	x	nurGa	x	nanGa	naJa				x	nj
x	x	x	funGa	x	wanGa	janJa				x	n
x	x	x	x	x	x	x	x	x	x	x	l
x	x	x	njiri	x	njiri	njiri				x	l
x	x	x	liri	x	wiri	jiri				x	lj
x	x	x	x	x	nuka	nika				x	l
x	x	x	ŋala	x	wuka	jika				x	ŋ
x	x	x	lala	x	ŋupaa	ŋaja				x	ŋ
x	x	x	x	x	wupaa	jaja				x	ŋ
malamala)	l				x	x	x	x	x	x	l
maiamaia)	l				x	x	x	x	x	x	l
lala					x	x	x	x	x	x	lj
jalja		lj	x	x	x	x	x	x	x	x	l
mala					x	x	x	x	x	x	lj
mala		(kiljikiljima)	l	x	lara	liri					l
wili		(kilima		x	wara	jiri					
wiri		jaralja	njili	r	x	x	x	x	x	x	
pala		jarara	njiri		x	x	x	x	x	x	r
pawa		kala	jara		w	wiri					w
-wali		kawa	jawa		tawa	jiri					j
waji					ṭaja	j					j
jalu					tawa						
jaru					ṭara	taja					
ŋulu					kara	ṭara					
-ŋulu					kara	kawa					
ŋula					kara	kawa					
ŋura					kara	kaya					
ŋaiata					kara	kaya	(kajata)				
ŋayata					kaya	kaya	kaya				
l	l	lj	l	r	w	j	r	r	r	r	r

Table 2.4Minimal pairs -- vowels

a/i/u

ŋakara : nikara : nukara  
 wara : wiri : wuru  
 mawa : mawi : mawu

a/i

wanGa : winGa  
 -wali : wili  
 pala : pila : pili  
 para : pira  
 taja : tiji  
 tjirana : tjirina  
 kulara . kulira  
 makari : makiri  
 kuta : kuti  
 njima : njimi

a/u

paka : puka  
 palu : pulu  
 ŋaju : -ŋulu  
 ŋanji : ŋunji  
 waka : wuka : wuku  
 -ka : -ku  
 kalā : kalu  
 papa : papu  
 ŋuta : ŋutu

i/u

miti : muṭu  
 piṇa : puna  
 janina : januna

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, latja, 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 Waluwara (except /tanjanja/, and the regular form /tanjuna/ 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
janina	possessions
jamu	they (plur)
januna	them (plur)
jana	look {imperative}
japa	fall "
jara	river
jarajana	woman
jaraka	at the river
jaralja	rogue
jaramana	horse
jarapa	of the river
jarara	white man
jaru	just, only
jata	father
jija	yes
jika	cold
jina	y <u>u</u> (accusative)
jini	name
jinja	him, her, it (acc.)
jipa	you
jipala	you two
jiralala	lung
jiranaju	wild
jiri	mud
jita	tie (imperative)
jitala	one who ties
jitjala	word
jiwa	he, she, it, that
-ka	locative suffix
kaya	cry (imper.)
kajata	younger sibling
kaka	mother's brother
-kalji	not
kala	meat
kaiju	there (allative)
kana	not
kanja	step on (imper.)
kanji	daughter's child
kanya	carry (imper.)
kara	also
kara	copulate (imper.)
karu	young man

-katja	present habitual suffix
katu	fruit
kawa	come here (imper.)
kiljikiljima	tickle (imper.)
kilima	prepare (imper.)
kima	let go (imper.)
kipa	raw
-ku	agentive suffix
kulara	care for (imper.)
kulira	fight (imper.)
kuma	sandhill
kunukunaa	cough, cold
kuna	faeces
kunja	melt (imper.)
kura	come on (imper.)
kuta	go in (imper.)
kuti	swan
kutja	two
kywa	cook (imper.)
-lu	allative suffix
lala	elder brother
jalja	awake
jara	listen (imper.)
latja	d <sup>n</sup> nce (imper.)
liri	high
lunGa	break (imper.)
makari	sister-in-law
makiri	murderer
mala	sore
mala	burrow
mana	this (accusative)
manu	slow
maŋa	fin
mara	this
mata	hit (imper.)
matja	pituri
matjana	ate
matjapa	of the pituri
matju	bad
mawa	hang (imper.)
mawi	cave
mawu	witchetty grub
miki	ground
mimi	mother's father
miti	forehead
muka	good
muna-	soft
mutuka	motor car
mutu	nest

mutuka	in the nest
naka	there (locative)
naku	that (agentive)
naku.ju	there (allative)
nana	that (accusative)
nanGa	go (imper.)
nanya	get (imper.)
nunGa	now
-nja	complement formative
njili	burr
njima	having fish
njimi	fish
njinji	march fly
njiraa	coolibah
njiri	skin
-na	past tense suffix
nakara	cut (imper.)
nana	son, daughter
rika	jealous
nikara	be jealous (imper.)
nuka	many
nukara	wind
nula	ant
nura	there
nyavata	gum (from tree)
nyala (~nalwa)	go in (imper.)
nyali	we (dual, inclusive)
nyala	breathe (imper.)
nyaiia	herb sp.
nyaiata	maybe
nyalu	subincised penis
nyama	mother
nyamaa	having milk
nyana	me
nyanji	something
nyana	I
nyana	eye
nyata	for me
nyulu	grass
-nyulu	elative suffix
nyunja	fruit sp.
nyunji	old
nyupaa	tomorrow
nyura	string
nyuru	home
nyuta	give (imper.)
nyutu	nose
paka	jump (imper.)
pala	theresabouts

pala	elder sister
palu	daughter
pama	pass wind (imper.)
panmatala	single men's camp
papa	little girl
papu	egg
papuju	for the egg
papulu	to the egg
paputu	a few
para	creep (imper.)
paru	yellow
pata	big
pawa	son's child
pila	anus
pili	coolamon
pina	chop (imper.)
pira	stick (imper.)
puja	seeds, flour
puka	stick feathers on (imper.)
pulu	testicles
puna	white
puta	suck (imper.)
runa	catfish
taja	tree sp.
taka	where (locative)
takuju	where to
tana	which (accusative)
tamuru	supplejack (tree)
tara	where
tawa	man
tiji	tea
tuka	throw (imper.)
tumu	anthill
tuna	spinifex gum
tupu	penis
tura	song
tutu	bird
tuta	little boy
tjanara	needlebush
tjanma	tell (imper.)
tjila	point (imper.)
tjinGa	lie, untruth
tjipa	sing (imper.)
tjira	spear (imper.)
tjirana	speared
tjiriña	was sick
tala	spittle
talatala	axe
tanma (~tanma)	bite (imper.)

tanmatala	bitter
turu	honeyeater
waji	question particle
waka	alive
-wali	plural formative
wala	pull (imper.)
wamalamala	small
-wana	accusative suffix
wanGa	track (imper.)
-wana	past conjunctive suffix
wapa	mother's mother
wapana	mother's mother (nominative)
wapana	copi
wara	grind (imper.)
-wara	possessive suffix
wata	dig (imper.)
wata	stone
watji	before
wawu	the rest, the others
wili	negative adverb
wi <sup>n</sup> Ga	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 [t̪] 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 [γ] as a phoneme;
- (c) some phonemic distinctions which are made in Wåluwara, but are not made in some other Australian languages. These involve the pairs [t̪] and [t̪j], [n̪] and [n̪j], [l̪] and [l̪j], which are allophones of the phonemes /t̪j/, /n̪j/ and /l̪j/, 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]<sup>(1)</sup> and [wampa / wa:m̩ta]. 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:p̩ta].

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
tintini	ti:n̩da	vagina	fat
kunti	kundiri:dja	house	are thick (as flies)
kunti	kundibida	house	shrimp
pinjtji	mi:n̩dji	nest	clever
kan̩ti	kandila]	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 Waluwara 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 separate /t/ from /t̩/, /n/ from /n̩/, /l/ from /l̩/, why should the phones [d] and [d̩], 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], [nd] 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 [gajangaja] (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], [nd] etc., but not before any other cluster (except in [ka:n̩ta], which will be explained in 2.2.1).

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 [γ] 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 /r/.

It should be pointed out that /kaya/, which figures in most of the pairs involving /γ/ 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 [γ] as an allophone of /k/, but he has since rejected this solution.

It is clear, as will be shown in a later chapter, that [γ] 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:

[juγu : uku ; jaryulu : karkuru ; jarya : markana ;  
 urγara : t̪urkumu ; γayada : kakana ; warγuluma : warki ;  
 birγibuna : 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.)

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

Sub-minimal pairs for [γ] with [j] and [r] are provided by /γayata, γajara, γarana/ (gum (from tree), we (dual, exclusive), who (nominative)) and by /juγu, mujuŋunu, kurukuru/ (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 [γ] are separated by a difference that is very distinctive in Waluwara; 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, [maryuluma : warγuluma] but these may be different words.) The pairs /ŋayata, ŋajara/ (gum (from tree), wake up (imperative)) and /juγu, juŋuta/ (tree, north) provide further grounds for their separation.

Articulatorily and auditorily, [γ] is very close to [w], and, in fact, they are to some extent interchangeable in certain environments in Waluwara. 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 /kaya : kawa/ (from Table 2.3) and /ŋalγa : ŋalwa/ (crack, go in (imperative)), as well as the contrast between [uγu] in /juγu/, 'tree', and [u:] in [nu:nu], 'honey', (phonemically /nuwunu/) 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 Waluwara 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 /tipili ~tipilji ~tjipilja/ 'duck' and /tapukutu ~tjapukutu/ 'small', occasional uses of the verbal tense suffix /-jitja/ where /-jita/ is normal (and vice versa) and rare cases of such realizations as [djadami] instead of the normal [dadama] and [dilaida] for [djilaida]. Also there is a morphophonemic alternation between the allomorphs /-na/ (after /a/ and /u/) and /-nja/ (after /i/) of a noun suffix, and /nj/ and /n/ 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. /mukana/), /janjula/, /titititi/ (cf. /tjitji/), /tilila/ (cf. /jiljiri/), tjulya/ (cf. /tulyu/), /tjalki/ (cf. /talva/), /tinga/ (cf. /tjinga/), /małalja/, /kalatja/, /matja/ and /matju/. (The English equivalents of these words are respectively: stand on (imperative), conjunctive adverb, tree sp., soft, budge-igar, 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. [kal:a, ɲul:u] instead of a much more common [kala, ɲulu]. Certain words, however, are regularly realized with a long apical lateral. In two cases, this has been found to contrast with a short lateral:

[tawul:u], 'chin, jaw' : [tawulu], '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:

[il:aŋa~~ilwanya-], 'to hit (by throwing)'

[ŋal:a~~ŋalwa-], 'to enter'

[wal:ari~~walyari-], '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 [ly] to [l], and [l:] is an intermediate stage in the corresponding changes involving clusters with [l]. An attempt was therefore made to find out whether other frequent occurrences of a long lateral in a word were simply realizations of a cluster with /w/ or /y/. 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. /tawullu/, /willi/, /wuwalla/ ('smoke'), /pullukutu-pulukutu/ ('strong, hard').

The palatal fricatives [j<sup>A</sup>] and [ç] were heard consistently in the two morphemes realized as [pij<sup>A</sup>i-pi:j<sup>A</sup>i-piçi-pi:çi] (meaning 'blunt') and [pj<sup>A</sup>a-pɔga-pajə] (the exact meaning is not known, but the reference is to a certain dance movement). [ç] was used by Mrs. Toby and the other forms, [j<sup>A</sup>] and [ju], by Fred Age. These phones clearly are not realizations of the phoneme /j/; /miji/ (conjunctive adverb) and /tiji/ ('tea') are normally realized as [mi:] and [ti:] respectively, and the /j/ in such words as /majanara, taja, kajata, kajalla, najara, wajata/ (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 /pitjipa, tjitji, jitjira, witjipakani/ (swim (imperative), budgerigar, place name (Urandangie), cormorant) for the first case and by /matja, latja, katjalara/ (pituri, dance (imperative), lizard sp.) for the second case.

Auditorily, the voiced fricative [j<sup>A</sup>] is very similar to [j], being distinguished mainly by its greater length. The voiceless form [ç], 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 Waluwara, 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 occurred in words of three or more syllables (/pirtjina, pirtjijitja, pirtjitjita/), was heard variously as [pijtji], [piç1] (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, occurring 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/	/t̪/	/r/
mirṛi	mirimala	miti	wiri, mirinjdja
njirṛa, wirṛaa	lira	tjiṭa	njiraa, tjira
purṛa	nura	tuta	rura, tura
warrunju	-wara, karu, jaru kaṭu		wara

### 2.2.5 Vowel length.

Long vocoids are frequent in Waluwara. 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 [ŋajarina], 'woke up'; [pa:ndu], 'butt of tree', from which is derived [pandujulu], 'a devil'; and [na:nda], 'go', but [nandana], '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', [nu:nu], 'honey', [irata:ri:tja], 'frightened', [kanatara:], 'hungry'.

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

/kanaṭara/ + /-a/ > [kanaṭara:]<sup>(2)</sup>

/jirata/ + /-a/ + /-ri-/ + /-jitja/ > [irata:ri:tja]

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

\* /kakara/ > \* /kayara/ > [ka:ra]

\* /nukunu/ > \* /nuγunu/ > /nuwunu/, [nu:nu]

Type (c) examples include:

[ma:malu] ( /mara/ + /-malu/ )

[ta:wali] ( /tawa/ + /-wali/ )

In these cases the glide would be heard in slow and careful speech and the logical phonemic interpretations are /maramalu/ and /tawawali/. Diphthongs such as [ai] (/aji/) and [ɛɪ] (/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, iranju, 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 [iŋata: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 [mati:] and [matiji], 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/, /nuwunu/, /jirataarijitja/ (the initial /j/ will be justified below) and /kanataraa/. [ka:n̩ta], referred to in 2.2.1, is thus /kaanta/.

On morphological grounds, the insertion of /r/ between the two vowels of /au/ could possibly be justified, e.g. \*/jiratarararijitja/, \*/kanatarara/, and in other cases /γ/ could be justified on diachronic grounds, e.g. \*/kayara/. 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 [kaya] and the diachronic evidence favours the interpretation /kaya/. However, because of its rarity, this is regarded as an alternative form, /kaa-kaya/. The same solution is adopted, for the same reason, for the reflexive forms of the three singular personal pronouns: /nataa-natawa/, /jindaa-jindawa/ and /wupaa-wupawa/. The /awa/ forms in each case are rare. Contrast the interpretation given above of [ta:wali]; in this case [ta:] is an unusual form of the morpheme /tawa/, 'man', and [tawa] 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. /jilwaŋa, wuwalla, wunŋa, 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, Weluwara 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:] > [vvv] >> [v]	/VVV/
	all	[v:] > [vv] >> [v]	/VV/
(c)	all	[vvv] >> [v:]	/VVV/
(d)	word initial	[v] ~[v:] ~[vv]	/VV/

## 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. [wal∅adji] for /walpatji/, glides or zero, e.g. [wutjalu] or [utjalu] for /putjalu/. These may be attributable to the advanced age of the informants, but are of some interest in view of the tendency in Waluwara for stops to undergo lenition. This will be discussed in Chapter 5.

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

/t/ 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, d̪, d̪, t̪, d̪, d̪]. A weak voiced fricative [ð] sometimes replaces a more common [d̪], for example in some realizations of the vowel suffix /-jita/. /t/ has less tendency to be voiced than do the other voiceless stops, especially in the word-initial position. The dental allophones, in particular [t̪], 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 /-tata-tata/, /tat̪iji-tat̪iji/, /-tjata-tjata/. This may be due to a bias against two such similar stops in successive syllables, although the suffix /-tjita/ and words such as /tat̪ali/ and /tit̪it̪iti/ are not known to undergo such a change.

/t/ is one of the less common phonemes and occurs only intervocally or in the intervocalic clusters /nt/ and /tp/. The latter occurs in only one word, /natpanju/, which is probably a borrowing from Bulamu, and is the only known example in Waluwara 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 /t/, this phoneme has a somewhat fricative release. The common allophones are [tj, dj, d̪j]. 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 /t/ and /tj/ has been referred to above (2.2.3).

/ʈ/, 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 /ʈ/ may be fronted towards [t]. As /t/ does not occur in this position,

this does not lead to confusion. The other common allophones are [ t̪, d̪, ð ].

/k/ is a velar stop, and is released without noticeable friction. Labialized varieties occur in the environment /u-a/, e.g. [nukwara, tukwa]. 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, ð, 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 [di:n̪a] for /tin̪Ga/.

/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, n̥, n, nj, n̄, ɳ] -- the nasal phonemes have few allophones. /n̥/ and /nj/ have in most environments, but especially intervocally, a noticeably longer duration than the other nasals. The transition from [n̥] 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 [n̥t̥] and [nt̥], [n̥t̥j̥] and [nj̥]. However, there are no contrasts between such pairs, and they are therefore interpreted as homorganic clusters /n̥t̥/ and /n̥t̥j̥/.

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 [wunarā.ba] for /wunaramGa/, [wā:pa] for /wampa/ and

[məŋā.dji] for /məŋanŋgi/. In /pəŋapanna/ the /ŋ/ 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, occurring after a short stressed vocoid, for example in [utnamaid̪a] (/wunamajit̪a/), [put̪na] (/puna/) 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 [tat̪mana] for /tan̪mana/.

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

There are some indications that the opposition between /n/ and /ŋ/ 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 /tjanŋma/, /tanma/ and /tanŋma/. A suspected sub-minimal pair was /kunma : ŋunma/, but when this was checked with the main informant the realization [nunma] was heard. The situation is, therefore, still not clear.

#### 2.3.4 The laterals.

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

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

An occasional realization of /l/ and /ɺ/ in careless speech is as the corresponding glide, [ɹ] (which is also a very common allophone of /r/) and [ɻ] (which is, of course, the normal realization of /ɺ/). For example, [maniɻiga] for /manilika/.

#### 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 [ɸ], often accompanied by a distinct aspiration [ɸh]. 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 lengthening 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<sup>A</sup>].

/jj/ is realized as a voiced palatal fricative [j<sup>A</sup>] (by Fred Age, in both morphemes in which it occurs) or as a glide-glide cluster [j<sub>J</sub>] (by Fred Age, in /pajja/) or as a voiceless palatal fricative [ç] (by Mrs. Toby, in both morphemes. [j<sup>A</sup>] is distinguished auditorily from [j] chiefly by its longer duration.

/ṛ/ is a retroflex frictionless continuant [ɻ] 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 [ijata:ri:dja] for /jirataarijitja/ and [tawiji] for /tawiri/. /ṛṛ/ is a voiced retroflex fricative, but with considerably less friction than [z] and distinguished auditorily from the glide [j] mainly by its greater length; or (in most realizations by Mrs. Toby) a voiceless fricative [ʂ], sometimes with some voice initially and thus approaching [z].

/γ/ 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 /jarγulu/ 'one'. It has been heard as a labial also in the word /juγu/; 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 [ɸ], used intervocally after a stressed vocoid, e.g. [juxu], [ŋaxada] for /juγu/, /ŋayata/. In consonant clusters where /γ/ 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

ccnsonant, 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 a		æ <sup>J</sup>		æ		a
P			æ		æ <sup>J</sup>	æ		a
A					a			
preceding consonant	R	ɛ ɔ	æ	a		æ ɔ ə		ə
D								
B			a		a <sup>J</sup>			
/w/								
K	ɔ					c a		

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], /kamandili/ is usually [kɔmaydili].

The anomalous appearance of [ɛ] and [æ] in the environment R-D is exemplified by [ir æta.ji:dja] for /jirataarijitja/ and [lilɛda] for /lilata/, '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 [j], e.g. [bj̪tawj̪ta].

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 [a:] or [a:<sub>+</sub>]. A following lamino-alveolar may be preceded by a palatal on-glide, e.g. [ma:<sub>+</sub>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. ['n<sup>g</sup>andau], 'go on' (said with urgency), but sometimes in the direction of [i], as in ['dara' jiwai].

Word-final /a/ (and other vowels) may occasionally be reduced to a voiceless form, e.g. [p], 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 [ɛ], or may, in addition be rounded to [œ]; /jiwa/ may be [i:wa], [jɪwa] or [jœwa]. 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. [itjə̯ja] for /jitjira/.

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 [u] when short, and slightly higher, [ʊ:], in its long realization. Before /w/ it may be realized as zero, as in [nwɔkamaida] (/nuwakamajita/) or [kuŋwa] (/kuŋuwa/). Before /j/, [ʊ] has been heard, as in [ŋui: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/ ([tjewala]) and /wunjdjumuru/ ([wunjedjemuru]). This is also heard, unpredictably, in other environments, e.g. ['kalu'na.nda] for /kalu nangga/, 'go over there', [u:lanŋalu] for /wulanŋulu/,

'from those two' and [wupamalu] for /wupamalu/, 'because of him'. Unstressed /u/ may be lowered and centralised to [ə], e.g. [wurəna] (/wuruna/, '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 VVV (e.g. /awa/ and /ara/) 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, /ŋanGa/ is, in slow speech, [na:nda]. According to rule 7, it would be [nanda], but since rule 6 has applied, no later rule is relevant, and the final form specified by the rules is [na: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 ['nu:numa'ŋa:u], /nuwunu mara/, '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 , nunda , jaka].
6. A vowel is long in two syllable words when it precedes a nasal-voiced stop sequence, as in [wi:nda, na:nda, wa:mba, mi:njdji].

7. A vowel is short before (i.e. immediately before) a consonant cluster, e.g. [puŋγa, kunma, ŋunti].
8. A vowel is short before /t/ or /l/, e.g. [muṭu, kaṭa, tjita, njili].
9. /u/ is short if the next vowel is also /u/, as in /tuṭu, wuku, juγu/.
10. A vowel is long in a two syllable word before a stop, /l/, /r/ or /n/, e.g. [ma:la, pi:li, wa:ta, ku:ti, tu:ra, ma:ṭa, ma:tju, wa:ka, pa:pu, mu:ka, bi:n̩a].
11. A high vowel is short before /ŋ/, e.g. [njini , 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, na: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:kamaida] for /pililu, mukamajita/.
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<sup>1</sup> 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.  $v \rightarrow [v] /$  rapid speech
2.  $v \rightarrow [v:] / -//$
3.  $v \rightarrow [v(:)] / -//$
4.  $v \rightarrow [v(:)] //$  prosodic suffix,  
    C-
5.  $v \rightarrow [v], (CV) C-C$
6.  $v \rightarrow [v:] //C-NGV//$
7.  $v \rightarrow [v] / -CC$
8.  $v \rightarrow [v] / -\dot{t}.$
9.  $/u/ \rightarrow [u] / -Cu T$
10.  $v \rightarrow [v:] //C- \begin{cases} n \\ i \\ r \end{cases} v //$
11.  $/i, u/ \rightarrow [i:, u:] / -\eta V //$
12.  $/i/ \rightarrow [i(:)] / j-$
13.  $/i/ \rightarrow [i:] //P-CV//$
14.  $/u/ \rightarrow [u:] //w-CV//$
15.  $/a/ \rightarrow [a:] //C-\eta V//$
16.  $[v:] //C-C^1V// \rightarrow [v(:)] //C-C^1V/C$
17.  $v \rightarrow [v]$

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:lwi]. There are no consistent exceptions.

## 2.4 Inter-phonemic fluctuation.

### 2.4.1 Vowel harmony.

Vowel harmony is not a prominent feature of the Waluwara 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, jaŋatiji, ŋankanaji/, while /ju/ follows /u/, e.g. /wukuju, ɲuwunuju/.

### 2.4.2 Interdental-lamino-alveolar fluctuation.

This has already been discussed in 2.2.3. Examples showing the distribution of the suffix /na~-nja/ are /papana, ŋamana, wuruna, januna, miminja, makarinja/. There is, however, no prohibition against the sequence /ina/, and the suffix /-naraju/ regularly follows /i/, e.g. / jaŋatiniaraju/.

There is an alternation between /t/ and /tj/ in certain verb suffixes; thus we have /jaŋatiji/ but /karitjiji/, /janajita/ but /karijitja/, but also /matarijita/. The choice of /t/ 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 /tjirajita/) 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. [jurjuna] for /junuta/, [katjipa] for /kanjina/. 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 /-ta/ and /-ña/ in a verb suffix; /janatata/ but /pakarinata/. (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/

[jawinuŋulu] for /jawiniŋulu/

[nan'da.mu'karali] for /nanGami karali/

[nanjal'i'pali'djanma'ri.dja] for /nanjal'i jipala tjanmarijitja/

[ 'takuja'ñandaña] for /takuju ñanGaña/  
 [ 'ñajanji'janjana] for /ñaña jinja janjana/

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,ñuña'ñari,djanya] for /kuntiñulu ñajaritjapa/ and [ 'kaña,ñapaka'ji:da] for /kaña ñaña ñakarijita/.

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. /kuñukunu/ becomes /kuñukunaa/; /tuwali/ may become /tuwalija/, but may also become /tuwala/ or /tuwala/. 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. For example, when the irrealis mood suffix, originally phonemicized as /mala/, is added to a verb stem, the final /a/ of the stem becomes /i/. Thus /janya/ becomes /janimala/, /mata/ becomes /matimala/, and so on. This can now be explained if we regard the irrealis suffix as /imala/, thus bringing the rule into operation.

However, a change in the rule then became necessary, because, for example, /lari-/ + /-imala/ is not \*/lariimala/ but /larimala/. 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 /janjimala/:

suffixation	/jana/ + /-imala/	> /janaimala/
assimilation		> /janjiimala/
elision		> /janjimala/

This rule necessitates a change in the phonemicisation of a few suffixes; for example, the allomorph of the accusative case suffix previously represented as /-ana/ must now be /-aana/. So, for example, /jankana/ + /-aana/ > /jankanaana/.

## 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 Waluwara, 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 , 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 Waluwara 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,CVCV and so on.

This pattern is adhered to by many words in Waluwara, but there is a large and complex set of exceptions, often with more than one permissible 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

$$V \rightarrow [V] / X-Y$$

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 [;V], 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 [(,)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.

[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/,

[V:]  
 -ka would mean that /ika/ was realized as [i:ka],

[V:]  
 -ji would mean that /iji/ was realized as [i:], or if -

[V:]  
 represented /a/, -ji would mean that /aji/ was realized as

[V:]  
 [ai]. -V means that the vowel concerned and the following vowel are realized together as a long vocoid, e.g.

[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

$$V \rightarrow [{}'V] \quad X-Y//$$

and       $V \rightarrow [{}'V] \quad X-Y/$

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         $v \rightarrow [v]$
- 2a       $v \rightarrow [v] // k_{\text{kurujalyama}}$   
           /kurujalyama/
- b         $v \rightarrow [<:>v] // CVT-rV/</>$   
           /pakaru, kapiri, jikiri, wutjuru/
- c         $v \rightarrow [:v] // CVC-(/)V(CV)//$   
           /kalaaka, matja, mataa/
- d         $v \rightarrow [<:>v] // \begin{cases} T \\ W \end{cases} VNG-\begin{cases} T \\ L \end{cases} V /</>$   
           /kunGatji, tumGaki, kañGila, janjGaña/
- e         $v \rightarrow [<:>v] // CVC-L \begin{cases} W \\ : \end{cases} V </>$   
           /tañwullu, kajalla, kulalwa, munjallumana/
- f         $v \rightarrow [(')v] // CV \begin{cases} L: \\ LW \end{cases} - /CV/CV$   
           /jallarina, wurvaraña, walvaritjana/
- g         $v \rightarrow [(')v] // jVT- \begin{cases} N \\ L \end{cases} \begin{cases} V \\ r \end{cases}$   
           /japunu, jitjala, jipala, jikarijitja/
- h         $v \rightarrow [(<:>)v] // CVC^L- \begin{cases} N \\ r \end{cases} \begin{cases} [v] \\ V \end{cases} </>$   
           /mañana, ñangana, mukamana, ñataju, mañarakari/

- i V → [(')V] // CVC- / CV / CV  
 /kunpatutami, tjiritjita, ḷanaritjana/
- j V → [(')V] // wu( / )C-C<sup>1</sup>V  
 /wumalu, wujaramGa, wukalpara, wutunu/
- k V → [(')V] // CV<sup>N?</sup><sub>L</sub><sup>T</sup>-CV( / )C  
 /wal̪karatukiji, ḷunparileka/
- l V → [(,)V] // CV<sup>N</sup><sub>L</sub><sup>T</sup>-CV//  
 /mankaru, wankata, wal̪patji, tintañini, mampunu, wapmira/
- m /a/-> [(')a] // C<sup>ar</sup><sub>uw</sub>- ( / )CV(C)V  
 /wijaparijita, Jiragaarijitja, tjuwalaka, karaliwali,  
 tuwalinajaraju/
- n /i/-> [(')i] // CVj-LV  
 /tajili/
- o V → [,)V] // N<sub>1</sub> VN<sub>1</sub> G-CV//  
 /mamGiri, mimGaru/
- p V → [,V] // CVT- {<sup>(N)</sup><sub>L</sub>} V // </>  
 /kapula, kutana, tatāli, patangGi, natala/
- q V → ['v] // WVC<sup>1</sup>- {<sup>(N)</sup><sub>L</sub>} {<sup>T</sup><sub>N</sub>} V  
 /jatjunmajita/
- r V → [(<!)V] // CVC<sup>1</sup>- {<sup>(N)</sup><sub>L</sub>} {<sup>T</sup><sub>N</sub>} V / </>  
 /piralku, kutjinka, kumGal̪ta, matjal̪ku/
- s V → [(')V] // C-C<sup>1</sup>V  
 /nunda, jak, jiwa/

- t v → [v̚] / - { / } CV ( / ) C  
 / jaŋajiṭa, karijitiŋa, kuriŋiwaka /
- 3a / a / → [a̚] / // kuruŋ-lyama  
 / kuruŋalyama /
- b v → [v̚] / // C-CV ( / ) C  
 / punjGuru, papuṭu, kanuŋGu, manGalja / and most other words.
- c v → [v̚] / // C-(C), CV  
 See 2b, d, e, f, etc.
- 4 v → [v̚] / - // CVC<sup>1</sup>V //  
 / waŋunGa jakə, kurukurula janu, maraturinga jiwa /
- 5a v → [(, )v] / 'CVCV/CV( / )C-( / )CV  
 / namanaraju, njinatəkari /
- b v → [ , )v] / CVCVC-/C  
 / wataṭatarijita, jaramanaka /
- c v → [ , v] / CVC<sup>1</sup>V/C-CVCV  
 / tajiliŋaraju /
- d v → [ , v] / CVCV/C-( / )CV //  
 / jararamalu, tjipljapaji /
- 6a / i / → [i] / V/j-TV  
 / wataṭatarijita, karijiti, jaŋajiṭa /
- b v → [ , v] / / ; CVCVCV/C-( / )C  
 / pamarakaka, jararamalu /
- c v → [ < , > v] / ; CV( / )CV( / )C-( / )CV < / >  
 / mawuruka, panGipanGi, jaramana, natamaŋami, njunparilaka,  
 wataṭatarijita, tajiliŋaraju /

- 7a     $v \rightarrow [v] / ^{'}CVCV/CV(/)C-(/)CV$
- b     $v \rightarrow [v] / CVCVC-/C$
- c     $v \rightarrow [v] / CVC^1V/C...CVCV$
- d     $v \rightarrow [v] / CVCV/C-(/)CV//$

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 Waluwara 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 /nuzGa/ and /watji/, emphatic particles /jaka/ and /kunu/, 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. /tatama, kalaru, jarara/), 'CV,CVCV, (e.g. /kapula, tatali, ijatala/) or CV'CVCV, (e.g. /pakaru, kapiri, wumalu/). 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 occurring 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 permissible 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 /tajilingaranu/ can be only ['tajili,naraju], [ta'jilina,raju] or [ta'jili,paraju]; 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.

/warawula/ 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.
- /ɿaritjiɿa/ 1323 by rules 2i, 3b and 6b, or 3133 by rule 2i.
- /pilinjtjinaraŋariji/ 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.)

- /ŋanjaritjana/ 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'ŋaña'ŋanda'ŋama'ŋalu]

/kalaaka jalu ŋaña ŋanGaña maralu/

long ago- yet I go -past here-to

emphatic

I came here a long time ago.

[<sup>1</sup>nji.na,ipa<sup>1</sup>laya<sup>1</sup>ŋali:pala<sup>1</sup>kuli,rinja]

/njina jipala <sup>1</sup>ŋali jipala kulirinja/

sit you two what you two fight-complement

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

[<sup>1</sup>pul<sup>1</sup>:u,kuti<sup>1</sup>ŋan<sup>1</sup>in,deja]

/pul<sup>1</sup>lukitina <sup>1</sup>ŋunGa 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 /ŋanGana/ 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 /ŋali/ 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 voccid length, which is of significance in the realization of stress, is shown.

[*'ma:tju'jiwa'wara,wuł'a'jin,danju*] /matju jiwa warawuła jinGarju/

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'ŋandanaŋa"tanju,ɬalu"ŋurini,ɬa:lu*]

/kana jipa ḡanGana ḡataŋjuɬalu ḡuriŋiɬalu/

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---'.)

[*'ŋaŋa,li:wa"piryi*] /ŋaŋaɬi jiwa piryi/

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 /ŋat̪anjułalu/), while in other cases it is spread over most or all of the word; thus in /ŋuriŋiłalu/ 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,ni'la:lu]; similarly, we could have written \*["pir'yi] instead of ["piryi].

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 Waluwara 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 [nanali:pa], /nanali jipa/.

n ----- l

karali nataŋju jiwa

child my he He's my boy.

n ----- l n ----- vh - h n ----- l

kaṭu n̄ana inja n̄utana/ jiwa kimana 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 laritja: ji.na

/jiwa laritjaa jina/

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

h n ----- ----- l

kana n̄ana inja n̄uti: kaṭa

(/n̄utiji/)

not I him give- meat  
purposive

I'm not going to give him any meat.

m ----- h ----- n ----- h ----- l

tangumataṭakari janu n̄ankana:na

roast- they kangaroo-accusative  
habitual- past

It was kangaroos they  
roasted.

wula kuliritji maraka warawula / indanu  $\eta$ at $\eta$ wara 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 / $\eta$ anjali/, 'what?' or / $\eta$ araku/, '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  $\eta$ ana  $\eta$ andimala  
 question I go-irrealis                            Can I come ?

h---  
 n--- n---  
 $\eta$ atineji                                        / $\eta$ at $\eta$ na jiwa/                                    What happened ?

n ----- l h ---

ñanjali:pa janaita ñana / papa  
 /ñanjali jipa janajita ñana, papa/  
 what you look- me girl  
 present

What are you looking at me for, girl?

n ----- h ----- n

ñanjuka ipa inja pumataka mukamana  
 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

ñuwakama Hide it!

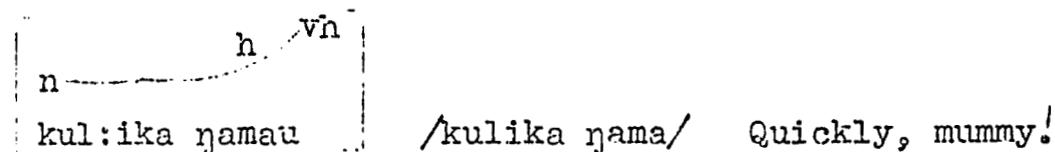
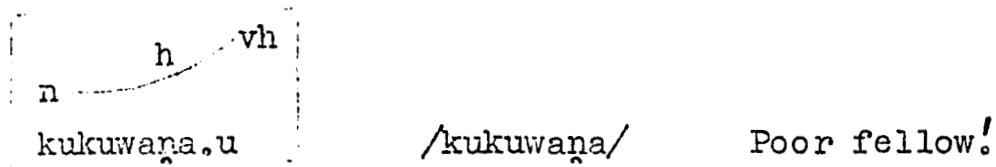
h ----- h ----- n

kana ñana katnama  
 not me push Don't push me!

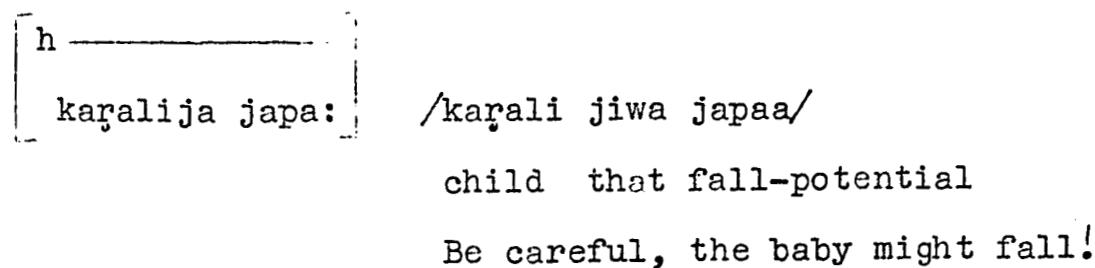
vh ----- vh h

kura ñanda Go on, go!

The exclamatory contourememe 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.



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



## 2.6 Distribution of phonemes.

### 2.6.1 Syllables.

Syllables in Waluwara are classified into four types: V, CV, VC, CVC; or, more briefly, (C)V(C). There are, however, several restrictions on the occurrence 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 /arukuṭa/, 'circumcision', which is clearly a borrowing from an Arandic language - cf. Aljawara [aruguda], 'initiand' (C. Yallop, private communication).

VC occurs in only one word, /kaanggi/, '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<sup>3)</sup> 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 (/tan/, followed by /G/) was a fourth syllable.

<sup>3.)</sup> 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 Waluwara. 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 /nanGa/, 'to go, to walk' and /jinda/, 'you'. /rγ/ occurred 17 times, mainly in the morphemes /jarγulu/, 'one' and /wuryara/, '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

	13	m <sup>t</sup>	1	m <sup>t</sup>	3	nm	12	rw	1
	3	w <sup>t</sup>	4	n <sup>p</sup>	1	nm	6		
	11	nt	4	rk	13	nm	10		
njtj	25	njtj	3	n <sup>p</sup>	4	nm	4		
rg	7	rg	1	rk	4				
rg	<u>11</u>		—		—		—		—
	<u>101</u>		<u>18</u>		<u>25</u>		<u>32</u>		<u>1</u>
lt	1	lp	5	lw	4	rtj	1	rw	1
ljtj	1	lk	6	ly	11	rk	10	ry	12
		lp	<u>3</u>	lw	6				
		lk	<u>3</u>	ly	<u>1</u>				
	2		<u>17</u>		<u>22</u>		<u>11</u>		<u>13</u>
rr	3	tp	1	ll	6	jj	2		
	—		—	<u>11</u>	<u>1</u>	rr	<u>5</u>		
	<u>3</u>		<u>1</u>		<u>7</u>		<u>7</u>		

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, nG; njG; mG; nk; nm; rY; nG, lY; pm, 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 Bulanu). 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 (/puryanGi, panGanmani, kumGalta, manjanjGi/).

The cluster /mt/ occurs only in verbs derived from Pidgin words in -im by addition of the verb formative /tuka/, e.g. /katjimituka/, 'to catch', /kukimtuka/, 'to cook', /winimtuka/, '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 were 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 839 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)	<u>49.5</u>	<u>49.4</u>
m	1.6 (B 8.5)	1.9 (B 9.0)
n	3.0 (D 5.1)	3.0 (D 5.1)
ŋ	0.8 (A 11.6)	0.8 (A 9.0)
tʃ	1.5 (P 9.2)	1.5 (P 8.5)
tʂ	0.4 (R 6.2)	0.3 (R 7.6)
k	3.5 (K 8.6)	4.4 (K 9.4)
voiceless stops	<u>10.3</u>	<u>12.0</u>
g	<u>1.4</u>	<u>1.0</u>
ɛ	3.2	3.1
ə	1.9	2.1
ɔ	4.0	2.3
nd	0.7	0.9
p	2.9	3.4
b	4.5	4.6
nasals	<u>17.3</u>	<u>16.4</u>
l	0.1	0.0
ɫ	3.6	2.8
lj	0.1	0.02
ɿ	<u>1.7</u>	<u>2.5</u>
laterals	<u>5.4</u>	<u>5.5</u>
r	<u>3.2</u>	<u>3.0</u>
w	3.6	4.9
j	6.9	6.0
f	1.1	1.3
ɣ	0.6	0.4
glides	<u>12.2</u>	<u>12.8</u>

Table 2.9

Frequencies of phonemes in word-initial position

phoneme	percentage in texts	percentage in sentences
r	5.6 (B 20.3)	4.2 (B 23.2)
t	7.4 (D 14.3)	7.3 (D 13.2)
d	3.0 (P 31.2)	2.9 (P 27.9)
k	0.6 (R 4.2)	0.8 (R 5.1)
g	11.6 (K 28.1)	11.2 (K 31.7)
stops	<u>26.2</u>	<u>26.5</u>
m	10.6	8.2
n	6.8	5.9
ŋ	1.1	2.6
p	2.7	2.4
b	18.4	19.5
nasals	<u>39.8</u>	<u>38.6</u>
l	<u>1.0</u>	<u>1.9</u>
w	6.1	10.8
j	27.0	22.4
r	0.0	0.0
glides	<u>33.1</u>	<u>33.2</u>

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 /ŋulu, malu, wali, wija, waga, ka, ku, kela/ explain the larger percentage of /l/, /w/ and /k/ in the sentences. The large number of occurrences of the morphemes /ŋanGa/, '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 /ŋ/ in the texts are in the past tense suffix /na/ or the pronoun /ŋana/, '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 /t/. The rarest phonemes are /l, lj, t, r, 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, l, 1j, r/ and /y/. /r/ is word-initial only in the word /runa/, 'catfish', but there is no evidence so far that this may be a borrowed word. Only about ten percent of the occurrences of /l/ and /n/ are in word-initial position. On the other hand /t/ and /j/ show a preference for this position; about 60% 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 /n/ 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 2.10Consonant-vowel combinations

	Ca		Ci		Cu				
	initial	medial	final	initial	medial	final	initial	medial	final
t	14 35	4 29	22 14	2 -	2 14	- 7	3 4	9 -	- -
tj	4 3	8 3	7 3	8 -	3 2	3 -	4 -	3 -	4 1
k	41	17	24	1	5	- -	19	8	6
G		23	6		11	1		5	-
m	47	36	3	6	5	9	3 6	1 -	-
n	30	9	20					1	-
n		36	15		2	-		1	32
nj		6	9	6	1	1			
p	10	9	74	1	- 2	- -	3 19	- 15	- 9
ŋ	78	23	6						
l		-	-		2	-		-	1
lj		32	19		13	33		4	15
l	-	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	-	-
r		18	15		3	-	-	4	-
γ		6	1		-	-		12	1
	<u>357</u>	<u>404</u>	<u>309</u>	<u>94</u>	<u>140</u>	<u>97</u>	<u>75</u>	<u>69</u>	<u>77</u>

- (1) The only CV combinations that never occur are /ni/, /nju/ and /lja/.
- (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, ŋa, ŋi, ŋi/ and, of course, /ni/ 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, t̪a, ŋa, ku, ŋu/ and /wa/.
- (5) The most common word-medial combinations are /ra, wa, ma, na, la, ri, ji, Ga, ŋa/ and /la/. (Note the preponderance of syllables beginning with an alveolar in this position.)
- (6) The most common word-final combination by far is /na/. 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, t̪a/ and to a lesser extent, /wa, ŋu, ku/ (making allowances for the comparative rarity of /u/).

(c) /w/, /t/ and /r/ show a very strong preference for a following /a/. No consonant is strongly biased against a following /a/.

(d) /i/ never follows /n/ and rarely follows /t, t̪, k, n, ts, t̪s, v/. /ri/ rarely occurs word-final, but is a verbal suffix which often occurs medially.

(e) /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, ṣa, lu/ and /ji/.

## 2.7 Texts.

Some aspects of Waluwara 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

#### 1. Introductory notes.

In the remaining chapters of this thesis an orthography differing from phonemic notation in that the appropriate telephone [b, ɔ, d, dj, ɖ] or [g] replaces the phoneme /G/ will be used. Thus /nangɑ/ will be written nanda, /jinGɑju/ will be jindaju, /wamGɑ/ will be wamba, /minjGi/ will be minjiji, 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 Waluwara 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			Suffixes associated with nominal stems		
mot	motive	} verb	caus	causative	} verb stem
conj	conjunctive	stem	stat	stative	} formatives
hab	habitual	} formatives	dual	dual	} noun
ger	gerund		plur	plural	} stem
nor	normalis	noun	alt	alternative	} formatives
comp	complement	stem	cust	customary	
subj	subject	} formatives	nom	nominative	
agent	agent		acc	accusative	
imp	imperative		ag	agentive	
opt	optative		loc	locative	
irr	irrealis		inst	instrumental	
pot	potential		alla	allative	
past	past tense		ela	elative	
pres	present tense		com	comitative	
dir	directional		causal	causal	
priv	privative		gen	genitive	
purp	purposive		poss	possessive	
emph	emphatic		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 Waluwara 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 occurrence 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, pata, 'big', may exist as a separate word, but the bound form -wata is an allomorph of the same morpheme which exists only in the reduplicated form patawata, '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. Waluwara can therefore be described as a suffixing language.

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

from	jirataaritjinaranju, 'brave', 'tame'
	jirata, 'fright'
	-a, 'having' (possessive suffix)
	-ri, 'to be' (stative verb formative)
	-tji, '-ing' (gerund noun formative)
	-naranju, 'lacking' (privative suffix).

There appears to be no reason why further nominal inflections should not be added to this, e.g. jirataaritjinaranjujuju, '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.

kiljikilji	armpit	
pukapuka	feather (puka, 'to stick feathers on', <sup>(1)</sup> heard only in its present tense form pukarijita.)	
talatala	axe	
kurukuru	head (kurunjalyama, 'to split someone's head')	
pundupundu	lizard sp.	
panjapanja	flat	
jirijiri	muddy (jiri, 'mud')	
pilaŋupilanju	wide (mankarupilanju, 'frill-necked lizard', literally 'wide ears')	
mundurjumundurju	winding, crooked (mundurju appears to have the same meaning.)	
kunukunu	phlegm	(probably no connection with the emphatic ad- verb kunu.)

(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 Waluwara 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.)

pukukukunu a plant, species of Bassia  
(pukunu is another plant, unidentified, similar in appearance to pukukunu.)

pumatamaña every day (pumata, 'day, sun')

tindalindala greasy (tinda, 'fat')

watalawatala stony (wata, 'stone')

kajukajukuma to try (kajuku, 'in vain'; -ma is a verb-forming suffix.)

tjinpinpi pecwee, 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:

talaatalaa	bruise	(tala, 'spittle', talaa, '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	
paṭawata	big (pata, 'big'. The function of the reduplication is not clear.)	
tawijawi	small (tawiri, 'small'. Again the function is not clear.)	
titijiti	light (in weight), rotten (as used by Fred Age, who did not accept titititi, the form used by his sister, Mrs. Toby.)	
tjitiſiti	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 kajangaja, '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

$$C_1 V C_2 V_2 > C_1 V C_2 V_2 l V_1 C_2 V_2$$

where  $C_1$  is a single consonant, but  $C_2$  may be a single consonant or a consonant cluster. It is possible that  $l$  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.

jana	to see, to look	> janjalaya	to follow
wata	to dig	> watalata	to scratch
puta	to suck	> putaluta	to lick
japa	to fall	> japalapa	to sprinkle, to fall lightly (of rain)
winma	to tacte	> winmalima	to feel, to touch.

The simplification from the expected *winmalinma* 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 l, and in others only part of the stem is reduplicated.

lari-	to hear, to listen	> larilari	to think
latji-	to dance	> latjilatji-	to shake, to be loose
numara	to chop	> numanumara	to break into pieces.
tjirilama	to rattle	> tjirilarilama	to rattle

### 3.3.3 Combination of dissimilar free morphemes.

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

ŋutumunḍuiju, 'species of hawk', from ŋutu, 'nose' and munḍuiju, 'crooked',

pilimunḍuiju, 'moon', from 'coolamon' and munḍuiju,

ŋajawalaṭi, 'grass sp.', from ŋajja, 'eye, seed' and waṭali, 'long',

njiliṇuka, 'echidna', from njili, 'needle' and ḡuka, 'many'.

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

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

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

wanjana kuryumat̄alwa, '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 ṭawunmunḍuiju, 'plain turkey', probably from ṭawullu, 'chin' and munḍuiju, 'crooked'.

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

mukat <u>tuka</u>	to make (something) good	from muka	good
kar <u>tuka</u>	to initiate	from karu	young man
walkar <u>tuka</u>	to sharpen	from walkara	sharp
man <u>tuka</u>	to listen	from mankaru	ear
wapat <u>tuka</u>	to call (someone)	from wapa mother's mother	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

winim <u>tuka</u>	to win
kuwim <u>tuka</u> , kukim <u>tuka</u>	to cook
katjim <u>tuka</u>	to catch.

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

### 3.3.4 Verbal stem formatives.

Included under this heading are the only clear-cut examples in Waluwara 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, *munja-*, 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, *l̄*; however *l* and *l̄* may be interchangeable in this position - cf. 3.3.2 - and if so it would be consistent to write *l̄*). The function of *munja* is to denote failure or inability to perform the action denoted by the verb stem to which it is added. The examples are:

muŋalanya	to be unable to see	(janya to see)
muŋalari-	to be unable to hear	(lari- to hear)
muŋalwuma	to miss (e.g. with a spear).	

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

*muŋa-* + *ŋalwa* + *-ŋama* > \**muŋalalwanama* > *muŋalwuma*  
by phonological change. (See 3.3.4.2 for *-ŋama*.)

#### 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*, *-ŋama*, *-njama*, the first being used with group I stems<sup>(3)</sup>, 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*, *mata*, *wuka*), that of group II verb stems is a nasal, lateral or glide (e.g. *janya*, *tanma*, *wala*, *jarya*, *jawa*) and that of group III stems is *r* (e.g. *kari-*, *lari-*, *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, -ñama 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 -∅ (to group I stems), -ña (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.

ŋalyama	jinja	juuwana	
split-imp	that	wood--acc	(ŋalya, 'split, crack')

kunma	karinjama	
humpy	erect-imp	Make a humpy!

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

njulu	jallama	
grass	burn-imp	Burn the grass! (jalla, 'flame')
kutjama		to do something twice (kutja, 'two')
mukama		(muka, 'goci')
japama		(japa, 'to fall')
ŋalwanama	to put in	(ŋalwa, 'to enter')
jitjala	waluwara	marana nanya tjan <small>m</small> arinjamajita
language	Waluwara	this-acc I talk- caus-pres
I am teaching him to speak Waluwara.		

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

manalaluma	to singe	(manala, 'fire')
kana jinja jikaluma		
not him cold-all-a-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:

tjanma	to tell	(jitjala, 'speech, word, language')
(The corresponding Bulanu stem is jitjama)		

nanma	to do what	(as in nanmajita jipa
(from nanjali, '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.

ŋajari-	to wake up (intrans.)	(ŋaja, 'eye')
maraturi-	to die	(maratu, 'dead')
pataři-	to grow, to become big	(pata, 'big')
jikari-	to get cold	(jika, 'cold')

kirukuru ŋanya 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 tjanmari-, 'to speak, to talk', derived from tjanma, '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.

pul <sub>1</sub> ukuti-	to become hard	(pul <sub>1</sub> ukutu, 'hard')
japuni-	to dry (intrans.)	(japunu, 'dry')
mankarukuti-	to lose, to forget	(mankaru, 'ear', kutu, 'closed', hence mankarukutu, 'deaf, forgetful')
kanatari-	to be hungry	(kanatara, '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 janya, 'to see', which forms its present tense with the combined imperfective aspect-present tense suffix -jit<sub>a</sub>, thus jayajit<sub>a</sub>, 'sees', a group I verb such as japa, 'to fall', is linked to the same suffix by the formative -ri, thus japarijit<sub>a</sub>, 'is falling'. Similarly:

paka	to jump	pakarijit <sub>a</sub>	is jumping
mata	to hit	matarijit <sub>a</sub>	is hitting
wijapa	to call	wijaparijit <sub>a</sub>	is calling
watalata	to scratch	watalatarijit <sub>a</sub>	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 janana, 'saw', japaña, 'fell', pakana, 'jumped', matana, 'hit', wijapana, 'called', watatalatana, 'scratched' and jikarina, '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:

wuryara	to run	wuryarijita	runs	wuryarana	ran
nakara	to cut	nakarijita	cuts	nakarana	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, -na, -nja and -nanda are all

used, and in all cases are linked to the verb stem by the stative suffix -ri. The -na 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 -ta or -tanda, 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. -ta and -tanda) are interchangeable in all cases.

The motive suffix is probably derived from the verb 'to go', which has two roots, nanda and nata, 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.

pakarin<sup>n</sup>andana, hopped along', from paka, 'to hop, to jump'. (pakarana is an alternative form with the same, as far as can be seen, meaning.) <sup>n</sup>andana, as a word in its own right, means 'went'. (-na is the past tense suffix.) Apart from these special cases, there are no known examples in Waluwara of compounding of dissimilar verb stems.

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

juŋu mana ŋana manala walatata  
wood, this I fire, pull-mot-pres  
tree (acc.) firewood

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

jiwa jarajanaku jalwika karjatatami  
that woman-ag shoulder-loc carry-mot-pres-dir

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

(kaja, 'to carry', hence kanata, 'to carry along'.  
-ta, present tense, -mi, 'hither'.)

wuku jiwa tjanmaritjata  
water that talk-mot-pres

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

jaraka ŋana ŋunatanami  
creek-loc I sleep-mot-past-dir

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

tatali janu warawulaka mataranya  
carney they dog- inst kill-mot-past

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

tuwanaku ŋana wuryararanya  
snake-ag me run-mot-past

The snake chased me.

jamu ḷunaya / ḷaya karitjaya ḷunda  
 they sleep-past I stand-mot- then  
 past

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

ḷaya pilinjtjiṇarajuritjaya  
 I lively - priv-stat-mot-past

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

wata ḷana jina ḷutaratiji  
 money I you (acc) give-mot-purp  
 I'll give you money before I go.

wuku mara japarinatami  
 water here fall-mot-pres-dir  
 The rain is coming.

jiwa patakaku tukaraya jinja  
 that big-ag throw-mot-past him  
 That big fellow left him behind. (tuka, 'to throw, to throw away', tukara, '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	rjamakaku	japamatana
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

njinatandi	mara
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 wałatjata and walatata as variants, and gives ɳalwatjata where ɳalwałata or ɳalwatata would be expected, and wuryarinjata where wuryarinata is most common. Fred Age, on one occasion gave an even more variant form to the present writer: wuryaritjata, 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 -na. 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:

njiminjulu      jiwa      njunatiwanāmī  
fish-from      he      lie-conj-past-dir

Informant's translation: "He was fishing and came back and lay down."

ŋana      ŋandana      matiwana      ŋana      jinja      /      tuwana  
I      go-past      kill-conj-past      I      it(acc)      /      snake

I went and killed the snake.

jiwa      ŋandana      /      njinatiwana      (Example from Hale's  
he      go-past      /      sit-conj-past      notes.)

He went and sat down.

ma<sub>lalja</sub> <sub>n</sub>jana janjatiwāna  
no I see-conj-past

No, I saw (it) again.

nandiwāya jiwa  
go-conj-past he

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

nandiwariji <sub>n</sub>jaya  
go-conj-purp I

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

njankanaji <sub>n</sub>jali nandiji matiwariji tajunat<sub>i</sub>ji  
kangaroo-purp we go-purp kill-conj-purp eat-purp

We are going to kill a kangaroo to eat

jiwa tawaku jina janjatiwaraami  
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 matiwariji is mat<sub>a</sub>, '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.

ŋana nandiji jaralu pitjin̄itjiji

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:

ŋana nandaŋami jinda jaŋatiji

I go-past-dir you(purp) see-purp

I have come to see you.

However, there are rare examples, such as

ŋulariŋa njinatiwariji

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:

ŋanya njinatakari	maraka	wukuka	(njina, 'to sit', -ta, normalis, -ri, past tense)
I sit-hab-past	this-loc	water-loc	

I used to camp at this waterhole.

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

I often go back to Urandangie.

kala	janu	ŋunatiwarakatja
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. mata, 'to hit' + -ri + -nji + -ni > matarinjini, '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. mata ('to hit') + -i > mati (see 2.4.5 for the phonological rule applying here)

-ti, 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 -ta or from group III verbs with the allomorph -tja,

e.g. janya ('to see') + -ti > janatji

mata + -ri + -a (motive) + -ti > mataratji

-tji, used with group III verb stems,

e.g. lari- ('to listen') + -tji > laritji

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

e.g. janya + -ta (motive) + -ti > janatati.

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:

ŋunati      ŋanya      wukuwara      ŋatalu      japana  
sleep-ger      I      water-poss      me-alla      fall-past

It rained on me while I was asleep.

ŋanya      jinda      waramati  
I      you(purp)      search-ger

I was looking for you.

njinatandi      mara      ŋuna      jinja      matiji  
sit-mot-ger      here      I      him      hit-purp

If he comes here I'll hit him.

ŋanya      tjiritji      ŋunparilaka  
I      sick-ger      other day-loc

I was sick yesterday.

ŋanya      njinati      njimi      ŋanya      jaŋanya      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)

wuryarakari, 'used to run' (wuryara, 'to run', -ka, habitual formative, -ri, past tense)

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

e.g. matarakari, 'used to kill' (mata, '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.

-ta, used with group II verbs,

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

-tja, used with group III verbs,

e.g. tjanmaritjalwa, 'speaker' (tjanmari-, '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 kantamata, 'windbreak'. Most nouns of this type are not simple normalis forms, but are compounds of a noun and a normalis noun.

Examples are:

kunamatjata, '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.)

mikipulimata, 'whirlwind' (miki, 'dirt', puluma, 'to mix', to whirl')

jiriwalata, 'crab' (jiri, 'mud', wala, 'to pull')

mikipunamata, 'stranger' (miki, 'dirt', puna, '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.

kala mara kunamatjataku ḥanjunataa  
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.

ŋjunataa watji ŋjana / ŋjana matjata ŋatarwa / kala kara  
ŋjana ḥanjunata  
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 kankalijarita  
wood that water- top-stat-nor  
alla  
That wood floats. (Note that the normalis suffix is -ta; -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, -ti and -tji of the former are matched by allomorphs -Ø, -nja, -ta 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,

tanmataa	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.

-na, 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 Waluwara verb by Hale, because of its function as part of the predicate of a sentence containing a "sense verb",

such as *jaja*, 'to see' and *lari-*, 'to hear', e.g.

<i>ŋana</i>	<i>jina</i>	<i>janatiji</i>	<i>tuwali</i>	<i>tukaju</i>
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 Waļuwara is somewhat wider than this, and is rather difficult to define; it may even be associated with an intransitive verb.

<i>kana</i>	<i>ŋana</i>	<i>janatiji</i>	<i>wuku</i>	<i>japanu</i>
not	I	see-purp	water	fall-comp

I hope it doesn't rain.

<i>kana</i>	<i>jipa</i>	<i>ŋana</i>	<i>larijitja</i>	/	<i>tjanmarinja</i>	<i>jindalu</i>
not	you	me	hear-pres	/	speak-comp	you-alla

You are not listening to me.

<i>jinja</i>	<i>matana</i>	/	<i>ŋunana</i>
him	kill-past	/	sleep-comp

(They) killed him while he was asleep.

<i>ŋana</i>	<i>tjirijitja</i>	<i>latjinjara</i>
I	sick-pres	dance-comp-poss

I am tired from dancing.

ŋərəna jipa larina tjaŋmarinjana  
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).

natinjaku jipa jinja tajunana kalaana  
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

ŋana jinja jaŋana kaana	I saw him crying
I him see-past cry-comp	and
ŋana jinja kaanamana	I made him cry.

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

ŋana larina tawa tjaŋmarinja	I heard the man speak
I hear-past man speak-comp	
is parallel to	
tawa ŋana tjaŋmarinjamana	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 \*japanuma) 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.

ŋana larina karali kaana I heard the baby crying appears to have the same meaning as the corresponding two-clause sentence, in this case

ŋana larina karali kaana  
I hear-past baby cry-past.

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

#### 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.

janat̄araku jipa mat̄ana  
see-subj-ag you hit-past

Did you mean to hit (him)?

matjat̄iji jiwa / njinat̄araku  
eat-purp he / sit-subj-ag

He is going to sit down and have a feed.

njunajita jiwa njinat̄araku  
sleep-pres he sit-subj-ag

He is sitting down asleep.

ŋana tjinarat̄araku karinjamana  
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 -∅ and the agentive suffix is added to the stem nata-.

In the longer form the final agentive form is *natamat̄araku*; 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')

*kuryumat̄ala* handle (*kuryuma*, 'to hold, to catch')

*pamara wandaljala* tracker (*pamara*, 'foot, track';  
*wanda*, 'to track')

Other examples of its use are:

puliti ijunatalwakaka

cattle sleep-agent-loc

The cattle are at the camp.

ŋana ijuru njinatalwa

I home sit-agent

I am always at home.

ŋatanya ŋankana matarinjalwa / jindaijuwara jaka jiwa  
ŋutupuwanya jaru tanmatala

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.

mara tawa mampunjula tukarinjala tuwaliwana  
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:

tawawija (usually [t̪a:wija]) two men

karaliwija wumawija his two children

or

karaliwija wuma

child-dual his-(dual)

ŋarawija wula Who are those two?

who-dual they two

warawulawija wula / iŋanjirawijala

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

Our two dogs are the same.

juŋuwijana wulan̄a jita Tie those two sticks!

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

### 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:

karaliwali children

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

wamba janu tutawaliku wuwajita

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 tawarila  
one-alt that man-alt (jarγulu, 'one')

It was another man.

ŋana natajita mikirilalu  
I go-pres country-alt-alla

I am going to another country.

jarajanajilaji jiwa kurajita  
woman-alt-purp he like-pres

He likes another woman.

tawijawi janu juγurila  
small they tree-alt

All the other trees are small.

ŋunda janu tjanmarina 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 -kuniñi, 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.

lalaña / kałakuniñi minjdji  
elder brother-nom meat-cust clever

My brother is a good hunter. (According to the informant,

kałakuniñi means "always looking for meat".)

wamba nŋaya njinati / jaramanakuniñi  
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:

karali    jiwa     $\eta$ junaparijita  
 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  $\eta$ junapa, used by Fred Age (see the first example), corresponds to the word  $\eta$ unpa, 'sleepy', used by Mrs. Toby; the difference may simply be a matter of idiolect. Mrs. Toby uses a verbal form  $\eta$ unparijitja, corresponding to Mr. Age's  $\eta$ unaparijita. (Cf. also  $\eta$ unparila, '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 *jirataari-*, 'to be frightened' (from *jirata*, 'fright') and *jallaari-*, 'to burn' (from *jallia*, 'flame'). Other examples of nouns formed with the possessive include:

tjitaan melon sp. (tjita 'seed')

tuwanaa doctor (tuwana 'snake')

nulaa splitjack (Capparis lasiantha)

(nula '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, tjilyaa, taryaa and paraa.

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

tjitaranuka, a variant of the more common tjitanuka, a species of fruit, from tjita, 'seed' and nuka, 'many',

tjimaranara, a plant (*Ptilotus exaltatus*) from tjimara, 'friend' and -na, the nominative/accusative suffix for proper nouns,

The privative suffix -paranu is occasionally used as a stem formative, as in pilinjtjinaranu, 'tired', from pilinjtji, 'lively'; this can take a stative verb formative to give pilinjtjinaraŋuri-, '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 kurukurupu, 'hat', i.e. 'belonging to the head', from kurukuru, '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:

waramatata            tjipiljapaji            papuju  
 look for-mot-pres duck-gen-purp            egg-purp  
 (we) are looking for duck eggs.

kana jipa            nandanya            natarulu            nuringilalu  
 not you            go-past            my-all-a            camp-all-a  
 You didn't come to my camp.

lalapalaku            ijana            tammana  
 brother-gen-ag        me            bite-past  
 (My) brother's (dog) bit me.            (example from Hale's notes.)

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

The elative suffix -yulu is used as a formative in the word panduyulu, 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'.

### 3.2.7 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 -li in tuwali, 'boomerang' (cf tuka, 'to throw') and in walali, 'long' (cf wala, 'to pull'). This could be cognate with -li in karali, 'child' (cf kara, 'to copulate'<sup>(4)</sup>), matjali, 'step cut in tree trunk' (cf matja, '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.

(<sup>4</sup>) 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 natala, 'tongue', and jitjala, 'word, language', with the common Australian *dalanj*, 'tongue' (cf Capell, 1966, p. 29). Compare also kulijika and jika, both meaning 'cold'.

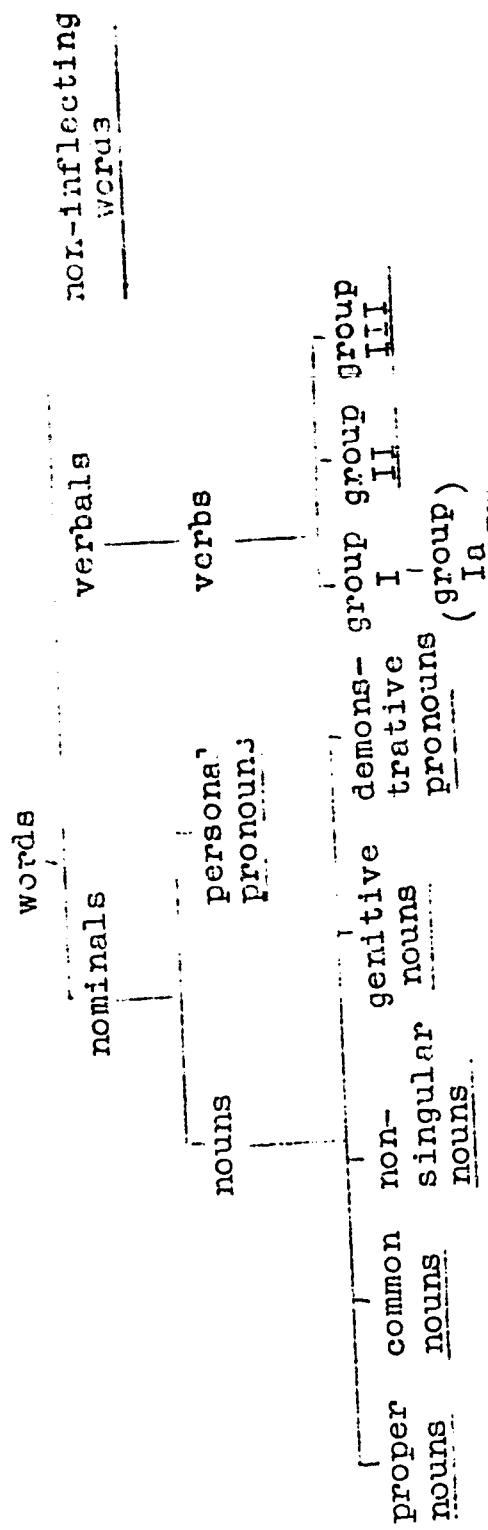
Where there is a two syllable additive the more likely interpretation in most cases is that the word formation has involved a second free morpheme; an example of such a word is pamanduru, 'milk' (cf *nama*, 'mother, breast, milk').

### 3.4 Inflection.

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

Classification of words

Table 2.1



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 inter-  
rogative 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:

papanara

girl-nom-poss            My girl

ṭulyu ḷana watana wukuwaraji walipa

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:

manala mara ṭulitjinaranjuwara / 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 - wukujuwara instead

of wukuwaraji - 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 Waluwara 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 Waluwara 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

genitive 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  $C_1 a$ , where the corresponding inflectional suffix is of the form  $C_1 V$ . 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:

juwapa	man's	(normally tawapa)
wukukaku	water	(agentive) (normally wukuku)
juwala	tree	(allative)
atakaka	stone	(locative)
juwpa	sister	(accusative)

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

Nearly, 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:

patamata    nana    juwula    walpatjila  
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 -la, 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

It has been heard instead of  
the common natawulalu and natajulaku, respectively.

### 3.4.1.1 Main inflectional suffixes.

#### 3.4.1.1.1 The zero suffix.

An uninflected nominal stem may function as a nominative, a locative or a vocative. There are, however, some restrictions:

(a) A proper noun may take the zero affix only in the vocative case; 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

jata / pandami                Hey, dad, come here!

father go-imp-ir

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

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

jemu tjirijitja They are sick.

jemu 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).

(ii) 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 ŋat̪arju maraturina My dog is dead.  
dog my die-past

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

jim warawula nataju ñanjipa jindanu  
 that dog my like your  
 My dog is like yours.

mope jatapa tajiliwara This is my father's spear.  
 this father-gen spear-poss

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

parkana tjiratala jaka ñana  
 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:

walipa ñana watarijita I'm digging a hole.  
 hole I dig-pres

warawulaku ñana markana tanmana  
 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 *-na*, used in other environments. It is obligatory if the noun is in the nominative or accusative case.

lalana              tjiritjita              My brother is sick.  
elder brother-nom sick-ger-pres

jipa    matana    lalana                      You hit my brother.  
you    hit-past e.b.-acc

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

### 3.4.3.3 The accusative suffix.

The accusative case in Maluwara, 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  $-\emptyset$  (see 3.4.3.1),  $-wana$ ,  $-aana$  and  $-na$ . Their distribution is as follows:

$-na$  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;

$-aana$  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);

$-wana$  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  $-wana$  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:

ŋaña wuruŋa larijitja I can hear you.  
 I you (plur)-acc hear-pres

kuwana ŋaña kalaŋa ŋarkuŋuwana  
 cook-past I meat-acc wallaby-acc  
 I cooked the wallaby.

juŋuwijaga wulana warŋuluma  
 stick-dual-acc they(dual) join together-imp  
 - acc  
 Tie those two sticks together.

ŋaña jipa lariŋa tjanmarinjanya  
 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:

jindanŋulaku ŋaña warawulaku ḫanmaŋa  
 your - ag me dog - ag bite-past  
 Your dog bit me.

kanjijitjo m̄paku m̄na / pul̄ukutuku  
 press down- this-ag me/ heavy - ag  
 pres

This is too heavy for me (to carry).

juru jinja jil̄m̄gana mirriku  
 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:

kal̄ilpuku janu qulpaku jinja naaranā  
 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 manuku is simply an allomorph of manu.

natamala nali manukumiji  
 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.55). This applies to most of the languages geographically close to Waluwara, and even to its closest relative (linguistically as well as geographically), Bulanu. However, Waluwara 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:

maraka      napala      gunatiji      We are camping here.  
here-loc    we           camp-purp

tjanmarijitja      jiwa      tjimerakaka      He is talking to his  
talk-pres               he           friend - loc               friend.

pinkaka      wuku      wuryarijita      The water is running  
gully-loc    water      run - pres                 in the gully.

njinajito puly'ka [He is] sitting with the old  
 sit-pres old man-loc man.

tuwana jiwa kandumula wataka The snake is under  
 snake that inside stone-loc the rock.

kutjaka wirilaka n̄na njin̄na / wuparambaka  
 two-loc year-loc I sit-past / Carandotta-loc  
 I stayed at Carandotta for two years.

warawule s̄t̄agu tjuwalaka maraturinga  
 dog my night-loc die - past

My dog died last night.

n̄r̄ku jiwa n̄ga jilwanapn̄mi wataka  
 who-ag that me hit -past-dir stone-inst  
 Who threw that stone at me?

n̄na jina tjiratiji mayaka walkoraka  
 I you (acc) spear- this-inst sharp-inst  
 purp

I'll spear you with this sharp [spear].

### 3.4.5.6. The allative.

The allomorphs of the allative morphems are -lu, -salu and -kalu, used with personal pronouns, and -kalu 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 wula      nandana      mitupuwani  
 plain-alla they      go-past      goonna-purp  
 (duel)

They went out to the plain to look for goannas.

punguwalilu      nalan      kala      Put the meat into the bag.  
 bag - alla      put-imp      meat

juγulu      nalan      jinja      tałatala      pandulu  
 tree-alla      put-imp      that (acc)      axe      butt-alla

Put the axe next to the tree.

jipa      natalu      japanami      You fell on to me.  
 you      me -alla      fall-past-dir

warawula      warandnamajita      jararalu  
 dog      bark - pres      white man-allia

The dogs bark at the white man.

tjanmara      nalu      tawalalu  
 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 -ŋulu; -kayulu is an alternative form which may be used with personal pronouns, and is the obligatory form with non-singular nouns; the other allomorphs, -gili, -ŋula and -ŋila are used with some demonstrative pronouns or the third person singular personal pronoun. Note also the use of -ŋula instead of -ŋulu in the last example of 3.3.5.5.

kum-pulu jiwa ngejoritjapami  
 kum-pulu he get cut-mot-past-dir  
 He came out from the house.

m-ro matjupulu jira wondana  
 here bed-sla you go-past  
 You went the wrong way.

nguparilanulu [The spear was made] a couple of  
 other day - eln days ago.

lininjdjinopulu [I got it] from Lily.  
 Lily Clayton - eln

#### 3.4.5.8 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 locutive suffix.

The allomorphs are -la, ~ -sala, added to the first and second person singular personal pronouns, and -kala, used in all other cases. Some examples are now given.

marakala ngen tawakala natajita  
 this-com I man-com go-pres  
 I'm going with this man.

jarkala jiwa pakape / kutulanu  
 creek-com he jump-past / other side  
 He jumped across the creek.

maya nataia partula la wiluwara  
 here me - com waist-com water-poss  
 The water is up to my waist.

tjamara nataia Talk to me !  
 talk-imp me -com  
 kilukila jawinikala jiwa natamata  
 galah sky-com that go-mot-pres  
 The galah is flying along.

### 3.4.3.2 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 -malu.

kutina jiwa jikamalu tuwana  
 go in-past that cold-causal snake

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

nepa jirutaarijitja tuwanamalu  
 I afraid -pres snake-causal  
 I'm frightened of the snake.

nandami manalamalu Come away from the fire.  
 go-imp-dir fire-causal

3.4.5.10 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 wunduru ḫawapa, 'human blood' (literally 'blood man-of') and the sentence

jungunacjita ḫaya markana yaṭanu  
clench-pres I hand my  
I'm clenching my fist.

The more normal state of affairs is illustrated by

kugukuru ḫaya matjurijitja  
head I bad-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.

ŋarapa jiwa wirawula Who does that dog belong to ?  
who-gen that dog  
patapapa wuma ḫawapanu jiwo ŋutjanra  
big-gen his man-gen she wife-poss  
She is that big man's wife.

kana ḫaya jaŋapa williwana jummapapa  
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, -malu. 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:

tjirina kalupa That meat made [me] sick.

sick-past most-gen

kunukunacrijitja napa wuwallapa

cough - pres I smoke-gen

The smoke is making me cough.

ŋana turkunu tjirijitja / tuwalipapa

I back sick-pres / boomerang-gen

[Making] the boomerang made my back sore.

-malu 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 napa kurajita jitjiraji / naja limalu

not I like-pres Urandangie - what-causal

"I don't like Urandangie." "Why?"

napa puwakaritjiji wumalu

I hide - purp him (causal)

I'm going to hide from him.

krentamtu q̥alap / jikamalu

windbreak put down-imp / cold-causal

Put up a windbreak before it gets cold.

pilimarijitiŋ q̥apa 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.

pilimarijitiŋ jikapa [I am] shaking from the  
shake-pres cold-pen cold.

jikamalu / pilimarijitiŋ q̥apa

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, <sup>e</sup>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 -parəwa was recorded by Hale, but has  
not been heard by the present writer. The allomorph  
-para is rare and occurs in free variation with the  
normal form of the privative, -parəju. The following  
examples show the use of this morpheme.

jarn wukunparaju The river has no water.

river water-priv

kalaparaju nana We have no meat.

meat-priv we (plural, exclusive)

mora njinajite kewali kuluwarijitja / jitjalangaraju

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

The child is sitting down here quietly.

tjuwalangaraju nuna njinatiji

night-priv I sit-purp

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

nana malalje wetingaraju I haven't dug [any yams]

I no dig-pur-priv yet.

karitjinparaju nunda Keep on going.

stand-ger-priv go

janatinparaju ----- When he looked away -----

look-ger-priv

### 3.4.5.12 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:

matjaawra jiwa jaraka kala  
 gum tree-poss there river-loc there (com)

There are gum trees along the river.

matjaaka jiwa / walawalara  
 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:

japa mukapa mukara / tjiratalaa  
 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 -wara, but shorter forms are more common. -wara is confined to stems with final i, u, or aa (the only example of the last in the corpus is matjaawra; since matja likely 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 -ra 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 -ra has been noted rarely with a final i or u. (The decision to say that -wara is used with stems with final a, instead of saying that -ra 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. *tuwaliwara*, *tuwalija*, *tuwala* and *tuwala* all occur in the corpus (*tuwali*, 'boomerang') and there are a number of less striking examples of the same phenomenon.

njataju jiwa karaliwara That's my child.

my that child-poss

kanataraa n̄ana I'm hungry.

hunger-poss I

kunukunaa n̄ana njirra I've got a cold in the phlegm-poss I throat throat.

n̄arapa jiwa warawulupa patara

who-gen that dog-poss big-poss

Who does that big dog belong to?

mampunu jiwa n̄imora / n̄ama mampunu /tijiwara matju good that milk-poss / milk good /tea-poss bad

I like milk better than tea.

tulyu n̄ana watana wukuwaraji walipa

sand I dig-past hole

water-poss-purp

I dug a hole for water.

kana mapa japaŋa wukuwara  
 not here fall-past water-poss  
 It hasn't rained for a long time.

tajila jiwa ŋandangami / tuwalija /majajaraa/---  
 spear-poss he go-past-dir / boomerang-/shield-poss/---  
 poss He came with his spear, his boomerang, his shield ---  
 ŋunat̪akari ŋapa jitjiraka / tawiriwara  
 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 ŋapa tura I'm going to sing a song.  
 sing-purp I song

jipa lətjitiŋi / ḡana jina jaratiŋi  
 you dance-purp / I you see-purp  
 (acc)

I'm going to watch you dance.

laŋi / ɻuŋe waratiŋi  
 grinding / seed grind-purp  
 stone

Stones for grinding seeds.

kana jipa nandapa ḡataŋulu ḡuriŋilalu / ḡana

not you go-past my-ailla camp - alla / I  
 jina kulaŋa ɻutija  
 you meat-acc give-purp  
 (acc)

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

ŋaleŋa wuku japiŋumi 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 morpheme in Wajuwara) 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 -ŋo or -ŋi been used instead of -ji. An example of this is given below; in the second last example lalŋanja has been used where lalŋaji 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.

karakiliŋi nŋapa warakajita I'm looking for my kids.

child-purp I look for-pres

nanda tŋwalatŋiji kaŋaji / nata

so ask -purp meat-purp / me (purp)

Go and ask for some meat for me.

kana kurajita nŋapa jitjirajti

not want-pres I Urandangie-purp

I don't like Urandangie.

wunja nŋapa manalaji Get some chips for the fire.

chip get fire-purp

nataŋuju nŋapa nandapa wataŋji

my - purp I go-past money-purp

I went for my money.

tjirapa jaka jinja jiwa / lalŋanja

spear-past him he / elder brother-purp

emph

He speared [that man] on account of his brother.

kana tjanmaritjini wuru jitjalaraŋji Don't talk about

not talk-ger-imp you word-poss-purp that!

(dual)

3.4.5.14 The reflexive/reciprocal suffix.

Reflexive and reciprocal actions are marked in Wadjuwara 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.

ŋatæe wætæterijita I am scratching myself.

me-refl scratch-pres

warawulaku wupaa wutjuru ñumaraŋa

dog - ag him-refl leg break-past

The dog broke its leg.

warewulawijaku wulapa tanmaya

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 (?)      nandam̥i jatalunda pataalu  
                 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.

-ti (?)      majimejiti jina mataa  
                 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.

-kuna (-ku, agentive, -<sup>g</sup>ku)  
                 jiwa tawa patakuna  
                 that man big-ag-?  
                 He who hit me is a big man.

From Hale's field notes.

-ma (?) natarwama pulukutipa nunda  
 damper-? hard-stat-past now  
 The damper is hard now.

The remarks made on -ti 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 - papowija, 'two girls', genitive noun noun -ŋ̊itayu, 'my, mine'.

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

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

Non-singular nouns are those formed with the suffixes -wija, dual, and -wali, 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 - jinjita, 'north', katra, 'south', yujinda, 'east' and yulamala - are not inflected regularly; see the vocabulary for irregular forms. An irregular elative of yara - 'who', yarijyulu, has been heard.

The demonstrative pronoun paradigms (apart from that for jina, which is also a personal pronoun) are given in Table 3.5. Also included in this table are the interrogative yere, '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 3.5

Noun Paradigms

	Proper	Common	Non-Singular	Genitive
vocative	papa			
nominative	papaga	wata	papawija nyatantu	
accusative	papaga	wata-	papwijana nyatantu	
		wateaga		nyatantuwanu
agentive	rapaku	wataku	papwijaku nyatantuaku	

	Proper	Common	Non-Singular	Genitive
locative/				
instrumental	papaka	wataka	papawijaka	ŋataŋułaka
allative	papalu	watalu	papawijakalu	ŋataŋułalu
elative	papeŋulu	watęgulu	papawijakępu	ŋataŋuŋulu
comitative	papakala	wetakala	papawijekala	ŋataŋukala
causal	papuñalu	wetamalu	papawijamaļu	ŋataŋumalu
genitive	papapa	watapa	papawijapa	
privative	papaparę	wataparę	papawijaparę	
possessive	papapę	watawę~	papawijawařa	ŋataŋuwařa~
	(and other forms?)	wataa		ŋataŋa
purposive	papaji	wetaji	papawijaja	ŋataŋuju

Table 3.4

Demonstrative Pronoun Paradigms

English	here, this	there, that	there, that	where, somewhere..
equivalent		(in sight ?)		which around
nominative	mara	ŋura		tara pala
accusative	maŋa		ŋarapa~	ʈapa
	(rarely maŋana )		ŋapa	
agentive	maŋaku		ŋaku	taku palaku
locative/				
instrumental	maŋaka	ŋuraka	ŋaka	palaka
allative	maŋalu~		ŋalu~	ʈalu~ palalu~
	maŋakuju		ŋakuju	ʈakuju palalwija
elative	maŋajili~	ŋurajulu~	ŋanjili	ʈanjili~ palanulu
	maŋajila	ŋurajula		ʈanjulu

comitative	nayakala	
singular	nayankulu	
prative	nayapra	napa
possessive	maya-ji	
duel (nom- inative)	mijuru (= miju + possessive ?)	
plural (nominative)	mali	nawali

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	third	
nominative	ŋapa	jipa	jiwa	ŋali	ŋajara	jipala	wul	
accusative	ŋana	jina	jinja			nominative plus		
purposive	ŋata	jinda	wuja		"	"		
genitive	ŋataŋju	jindanju	wuma		"	"		
allative	ŋatalu	jindalu	kaļu		"	"		
elative	ŋataŋulu	jindanju	kanili		"	"		
	ŋatala	jindala	kala		"	"		
comitative	ŋataala	jindaala			"	"		
					"	"		
causal	ŋatajumalu	jindajumalu	wumalu wubamalu		"	"		
reflexive/ reciprocal	ŋataa	jindaa	wupaa		"	"		
	ŋatawa	jindawa	wupawa		"	"		

## dual

## plural

inclusive first exclusive second third      first inclusive      first exclusive second third

ηajara      jipala      wula      ηapala      ηanu      wuru      jamu

nominative plus      -na

"      "      -ŋa

"      "      -ma

"      "      -kalu

"      "      -karulu-ŋulu

"      "      -kala

"      "      -malu

"      "      -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 of inflections 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
Fifth 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.)

telatalaji      nanda    Go and get the tomahawk!

tomahawk-purp    go-imp

najara              Wake up !

najama jinja    Wake him up !

njina              wuru        kapaliwali

sit (imp)    you (pl)    child-plur

Sit down, you kids!

kana jikara              Don't get cold.

not cold-stat-imp

wuku    nagaña              Go and get some water!

water    get-mot-imp

temini    kajami              Bring me a firestick!

firestick    bring-imp-dir

An irregular imperative in -ja is formed by the verb tajuna, 'to eat (meat)':

kaña    tajunaja              Eat [your] meat !

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

kana wuja              murinamatiñi

not him (purp)    wait-ger-imp

Don't wait for him any more.

kala jinja matarinjini

not hit hit-ger-imp

Don't keep on hitting him.

kala jinjin / ---

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

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 -la, 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 imprecisions of translation rather than wide range of functions.

kura nali njiniji pandala

come on- we fish-purp go-opt

imp (dual,

incl)

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

wukela jaramana Hunt those horses!

hunt-opt horse

pjutjanaku waku kajala

wife-ing water bring-opt

My wife will bring us water.

pendaljeni jiwa I hope he does come.

go-opt-dir he

yalu pularila We'll go home.

we go back-opt

(dual,

incl)

suji jipa putala pangaka jinja

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

Would you like to give it to me?

papa punda janala Let me see now!

I now see-opt

wutukalimala papa jiwa jararaku

tell - opt me that white man-ag

That white fellow should have told me.

### 3.4.7.5 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 -imala, and it is added to the verb stem. It is presumably cognate with the negative particle malalja, 'no'.

jinje *ŋana* jaŋimala/ *ŋana* jinja matimala

him I see-irr / I him hit-irr

If I had seen him I would have hit him.

*ŋana* jaŋimala kuru I nearly fell over.

I fall-irr emphatic

*ŋana* jinja tarŋimala kalaŋa /nunda *ŋana* tjirimala wumalu

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

(acc) causal

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

*ŋana* kamuwilili patajits//waji *ŋana* nandimala

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

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

(or, better, perhaps,

"Can't I come ?")

### 4.7.4. The potential mood.

The potential mood suffix is used to convey the idea of future uncertainty (also frequently conveyed by the potential adverb *ŋ̊iliŋ̊a*, 'maybe' together with the purposive 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), -t̊aa (group II verbs) or -t̊jaa (group III verbs) to the verb stem. It is probably a compound suffix and could be interpreted as gerund plus -aa or nominalis plus -aa. The following examples illustrate its use.

warewaliŋ̊ku jiwa pat̊aku jina tanmataa  
 dog - ing that big-ing you bite-pot  
 (acc)

That big dog might bite you.

kuluwa jipala / n̊apa jipalana mat̊aa  
 keep quiet- you I you (dual)- hit-pot  
 imp (dual) / acc

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

kimataa jiwa juju jinja / japaa n̊unda jiwa  
 let go-pot he tree that / fall-pot then he  
 (acc)

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

jeritjaŋ wəruŋa t̪waku  
hear-pot you-acc man-ing  
(plur)

The men might hear you.

kanaŋ n̪aŋa jəryŋt̪a I can't get up.

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

(But note also kanaŋ n̪aŋa jaŋajita 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 -na. In association with the habitual aspect, the past tense is marked by the suffix -ri. -na 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 1 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 -na have already been given in other contexts, e.g. in almost all parts of Sub-section 3.4.3.

wuryarana n̪aŋa I've been running.

run-past I

n̪aŋa jaŋaŋa kanaŋ jipa n̪aŋa kurŋumana

I fall-past not you me hold-past

I fell because you didn't hold me.

roast-hibiscus / stone-illa

They used to rock-kangaroos and emus on the stones.

small-pawn I man-hab-past very

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

### 3.4.7.6 The present tense.

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:

- jige, 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 native formative,
- ta, used with the gerund, and occasionally with the native 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 Bulanu informant thought that Waluwara speakers used -jita with motive forms,

... "jenatjejig instead of jenatje.

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:

wirilaritjitemi                  Summer is coming.

summer-stat-gor-pros-dir

I'm thinking.

hear-ger-pres I

numali 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.

waku jwarijite It's raining.

water fall-pres

pillukutu jiwa / kanjijitja It's heavy.

heavy it / press down-pres

wajika / papayda nipa patajita

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.

#### 3.4.3 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 I includes all verbs, the final consonant of whose stem is a stop, with the exception of matja and kaa (group II) and a few in group III (see below).

Group Ia consists of a few verb stems of three or more syllables ending in -ra. These are pitjara, nakara, waryara, jatjuwara, yawira and warara.

Group II 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 pini-, pitjini-, japuni-, tuli-, kalali- (all in group III) and with the addition of matja, kaa, tjira, wara, kura and kunukura.

Group III includes all verbs, the final consonant of whose stem is **r**, with the exception of those listed above under group Ia and group II, and also the verbs with stem-final -njV - kanji- and kunji- -and latji-, -nji-, pitjini-, tuli-, k̄l̄ili-, pirtji-, pullukuti-, nepl̄wrukuti-, relati- and japuni-. The final vowel of group III stems 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. jatjwara and warara, which are provisionally assigned to group Ia.

The verb paradigms are given as fully as possible in Table 3.7 for these groups and also for the irregular verb **ganda~ n̄ta**, 'to go', which is classified as a member of group I. Other irregularities are few: the irregular imperative **tanupana**, 'eat!', (see 3.4.7.1), the irregular present tense **ngutajita**, of **nguta**, '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 I, **jaya**, 'to fall', group Ia, **nakara**, 'to cut', group II, **jaya**, 'to see', group III, **lari**, '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 \* tjanmarinjamatatini 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 Waluwara, -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 *nanda-nata*, '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			group II			group III			(group I)	
		'to fall'			'to see'			'to hear'			'to go'	
imperative	japa	ŋakara	jenga	ṭera	nanda	nandala	nanda	nanda	nandala	nandala	nanda	nanda
optative	japala	ŋakarala	ŋajala	ṭerila	nanda	nanda	nanda	nanda	nandala	nandala	nanda	nanda
potential	japaa	ŋakaraa	ŋenjačaa	ṭaritja	nanda	nanda	nanda	nanda	nandala	nandala	nanda	nanda
irrealis	japimala	ŋakarimala	ŋanjimala	ṭarimala	nanda	nanda	nanda	nanda	nandala	nandala	nanda	nanda
past	japanya	ŋakareŋa	ŋenjanja	ṭarina	nanda	nanda	nanda	nanda	nandala	nandala	nanda	nanda
		(ŋakarina)										
present	japarijita	ŋakarijita	ŋenjanjita	ṭarijita	nanda	nanda	nanda	nanda	nandala	nandala	nanda	nanda
gerund	japi			ṭaritji	nanda	nanda	nanda	nanda	nandala	nandala	nanda	nanda
purposive	japiji (5)	ŋakariji	ŋenjanjiji	ṭaritjiji	nanda	nanda	nanda	nanda	nandala	nandala	nanda	nanda
privative	japinaraŋu	ŋakarinaraŋu	ŋenjaninaraŋu	ṭaritjinaraŋu	nanda	nanda	nanda	nanda	nandala	nandala	nanda	nanda
normalis												

(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	ŋakarakari	janat̪akari	laritjakari	ŋatakari
habitual present			janat̪akatja	laritjakatja	ŋatakatja
continuative imperative	japarinjini	ŋakarinjini	janat̪ini	laritjini	
continuative present			janat̪ita (?)	laritjita	
complement	japanju	ŋakaraŋju	janan̄a	larinja	ŋandanj
causative	japan̄a	ŋakaraŋama	janan̄ama	larinjama	
agent	japal(w)a	ŋakaral(w)a	janat̪al(w)a	laritjal(w)a	
	japanjal(w)a				
	japarinjal(w)a				
subject	japaraku		janat̪araku		ŋataku ~ ŋatamat̪araku

		group I		group II		group III		(group I)	
		'to fall'	'to cut'	'to see'	'to hear'	'to go'	'to go'	'to fall'	'to fall'
motive imperative	japerinanda			janjata ~ janjatanda		natama			
motive optative				janjatala		natamala			
motive irrealis				janjatandimala		natamapa			
motive past	japaranya japerinanda japerindaya			janjatanya janjatanda janjatanya		natamapa			
motive present	japarinata			nakararanya nakararipiita		natamata			
motive gerund				janjata		natamata			
motive purposive				janjatiji janjatiji		natamata			

	group I	group Ia	group II	group III	(group I)
	'to fall'	'to cut'	'to see'	'to hear'	'to go'
motive causative	japarinjama				
conjunctive imperative				laritjtiwara	
conjunctive potential			janatawaraa		
conjunctive past	japiwana		janatiwana	laritjiwana	nandiwana
conjunctive purposive	japiwariji		janatiwariji	laritjiwariji	
conjunctive habitual present	japawarakatja		janatawarakatja		
reduplicated	japaʃapa		janalaŋa	larilari-	
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 -ni is probably derived from marga, '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.

kunmasulu jiwa yajeritjanomi tawa  
humpy-clr that go cut-mot man  
-past-dir

The man came out from the house.

kulli nandami Come quickly!  
quick go-imp-dir  
kara yaga yutumi Give me another one!  
again me give-imp-dir

liraka karijitjami / tawa  
mouth-loc stand-pres-dir/ man

A man is standing in front of the house.

nandaji Go away!  
go-imp-dir  
pumata yalwatitaji The sun is setting.  
sun enter-ger-pres-dir

tepa jindayu kunmara /jiwa kuntiku jajajitaji  
 where your humpy-poss /that house-ag lock-pres-dir  
 Where is your camp? It's over there past that house.

### 3.6 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 those suffixes; in most cases the suffix was omitted if the informant reported 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-aaka 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 nula, 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.

potina      jiwa    wukuwaga / jepuawaka  
do what- that water-poss / fall-pot-emph

past

"What's that cloud doing? "Why doesn't it rain?"

natipa      jiva / nandaaniwaka

do what-re / go-not-dir-emph

part

"What's wrong with that fellow, he won't come?"

n̄li n̄jinat̄sawaka m̄galka / n̄ali jinja m̄gailumataa  
 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.

nandijska jiwa, 'he's set to go' as compared to nandiji 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:

jəməraku jiwa ḷaga nəlummaŋa ḷandijaaka  
white man- hit me meet-past go-purp-emph  
ag

The white man met me as I was going [along the street].

ŋaga njinajī / jikaka / ḷaga ḷandijaaka  
I sit-pres cold-purp / cold-loc I go-purp-emph

I'm stopping here until winter.

ləlaku kaŋapəni te-jiliwaga / ḷaga jaŋtijaaka  
elder carry-part-  
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 ḷaga matŋa / nəpənka nunda jinjə matijaaka  
he me hit-past / I-emph now him hit-purp-emph

He hit me; now I'm going to hit him.

jaŋuwaka ḷaga jaŋajīta I'm just looking around.  
only-emph I look-pres  
njimiji nəli ḷandiji ḷupaawaka  
fish-purp we go-purp tomorrow-emph  
(dual, incl)

We're going fishing tomorrow.

kene jiwa jiratcaarijitja yatajumalaan warawulamalaaka  
 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, -*ga* and -*ga*, are both rare. The former is most commonly used with the non-inflecting word *gatata*, 'maybe', but has also been heard with noun stems. The latter has been heard with nominalis and non-inflecting words, including the emphatic particle *wangunda*.

Examples are;

kumukurula jemu palañinjapu  
 her d-emph they bring -past

The carried the hand of the man they had killed;  
 (see the first story in Appendix I).

punjidjurn yatalala jrratiji  
 emu maybe-emph see-past

[We] might find some emus.

yanjiwijkula yajarapa jaçana  
 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

tarmataa jiwa / pakarupa That spider can bite.  
 bite-pot that / spider-emph

warundaps      napa      jina      larijitja  
emph-emph      I      you      hear-pr.s

I am listening to you. (In answer to the question  
"Why aren't you listening to me?")

wuryungun      jina,  
run -post-emph      he

He always runs away (when ----).

#### 4. SYNTAX

##### 4.1. THE UTTERANCE.

The first step that I am made have to give generally  
on the utterance; the following definitions are  
intended to fit with the present usage, and if a more  
detailed analysis, e.g. with, for example, a significant  
amount of natural intonation, were available, they  
would no doubt require revision.

The first and most basic division of speech is  
between what may be called the stream of speech. This is  
the continuous flow of speech bounded by definite

pauses. A single stretch of speech bounded by indefinite  
pauses does not give the impression of being  
an utterance (i.e. a particular piece of speech (i.e.  
a particular purpose), as for the same person speaking  
different subjects, or at different times acting a  
different role), or it is not such.

An utterance may consist of only a single word  
or phrase, such as an exclamation, e.g. kukuwaga, 'poor  
fellow!', a vocative, e.g. waga, 'girl!' or a brief answer  
to a question or response to a command, e.g. maga, 'here'  
or 'mālāja', '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 those functions.

A clause is the smallest unit which can function as a completed sentence, i.e. a sentence which is intelligible in absence of information from other sources. It is usually one, two or three phrases. If information is available from outside the sentence, e.g. from a previous sentence or from the surroundings, one or two (but not all) extra clauses may be omitted. Examples (i) and (ii) illustrate simple clauses functioning as sentences.

(i) *Warragaal* is a completed sentence from which all extraneous elements have been omitted.

The standard left-boundary criterion for identifying what is a clause and what is not, is the first virama rule:

The clauses and associated phrases form a single clause if they are covered by a single sentence prosodeme (see 3.5.4).

(ii) The clauses and associated phrases are regarded as a single sentence if one or more of a set of markers, relating one clause to the other, are present. The markers are the adverb gunda 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 than two clauses, which would, however, be very rare.

Some of the difficulties involved in defining the use of these markers are shown below (examples (xv) to (xxi)).

The first third of difficulties involving sentences from clauses to entirely intransitive (see 4.3). If a sufficient number of examples were available, a more satisfactory definition based on intonation could probably be found.

It may be noted that words which (a) form a unit of intonation, i.e. is not discontinuous; (b) contains no inflectional affixes, i.e. non-inflecting words, with the exception that certain non-inflecting words may form part of a noun phrase or verb phrase; (c) contains only nominals belonging to the same case, if a noun phrase, or verbs with the same mood, tense and prefix, if a verb phrase. Possessives, possessives and privatives are here regarded as 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

In (vii) and (xviii)). An exceptional clause contains a single noun phrase and, to be complete, must have at least two words (see (x) to (xii)). In this situation, this will become two English noun phrases, and it is most commonly by the form of the verb 'to be'; however, neither justification nor method has been found for dividing a Maltese exceptional clause into two phrases. Further study or investigation might provide both. To any of these clauses there may be added a negative adverb or a relative participle (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, Maltese 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)).

A noun phrase is most commonly a personal pronoun, a possessive pronoun, a noun or a noun and a quantifier pronoun. More complex noun phrases may have various combinations of nouns and pronouns, e.g., occasionally with one or more non-inflecting words, and with verb forms of other order. Particularly complex noun phrases are exemplified in (xii) and (xiii); see also (xiv).

A verb phrase is normally a single verb, but may consist of more than one verb (see the example (xiii)) and often contains various non-inflecting words (see examples (v) and (xvi)).

An adverb phrase usually consists of a non-inflecting word plus one or more inflected nominals.

In addition to these phrases, certain other non-inflecting words, such as *adverbs* 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.

guripi      guri<sup>g</sup> I am going.

- 1.1.1. -

clause = sentence

np      vp      clauselike

clauselike = sentence

(i) puripi      guri<sup>g</sup>      kuring<sup>g</sup>      The dog bit me.

np      np      tr      clauselike

tr      np      tr      transitive

np      ob      obj      VP

clauselike = sentence

(ii) puripi      guri<sup>g</sup>      kuring<sup>g</sup>      [They] took [them] to eat.

np      np      tr      clauselike

tr      VP      tr      VP

clauselike      clauselike

sentence

(iv) puripi      guri<sup>g</sup>      kuhwela<sup>g</sup>      That poor fellow's camp  
camp      burn-past poor fellow-gen      was burnt.

np      intr      np      in apposition

vp      to      puripi

clause

sentence

... *to* *know* *you* (*see*) *know-not* *you* *sit-ge-*  
*you* *in* *intr* *vp*  
... , *whilst* *whilst*

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— 10 —

### **III. Sentence**

For more information about the program, contact the Office of the Vice Provost for Research.

1. *luteola* - yellowish-green, *luteola*  
2. *olivacea* - olive-green, *olivacea*  
3. *viridis* - green, *viridis*

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卷之三

I am to expect this article.

(viii)	kepalii	waw	ring	japuñjita	turinja
	child	there (soc)	I	sue-pres	play-comp
	np		np	tr vp	np in appos.
	object		subject		with object

Change

### sentence

I am watching the children playing.

(xv) *gunggalvalukku*

*gunggalvalukku* -agent-loc The cattle are at the camp.

, , locative

NP = NP

*gunggalvalukku* -agent-loc *gunggalvalukku* *gunggalvalukku* -agent-loc  
woman sit-pres kill-loc

inter. V<sub>i</sub> adv p  
locative

COMBINE

sentence

My wife and I live in the hills.

(xvi) *watayewu* -NP<sub>i</sub> I have no water.

-NP<sub>i</sub>-PP<sub>iV</sub> I

NP = equational clause = sentence.

(xvii) *jintayewu* -NP<sub>i</sub> *jiwa* *putayewa* *ga* *jaru* *tammatala*  
your-verb small that gonna only bite-agent

NP = equational clause = sentence.

Your [d,q] is just a gonna killer.

(xviii) *putapapa* *wuma* *tauyewa* *jiwa* *putjanara*  
big-gen his man-gen that wife - poss

NP = equational clause = sentence

She is that big man's wife.

(xii) aina dini matjusapa mukamaya  
 pria tia- la meddy- make -past  
 (1) past  
 tr VP

past object

clitic = clitic?

(xiii) aina tia- la aina N.  
 aina tia- la aina gandami He come here often.  
 many times - he go-west-dir  
 past  
 tr (?) VP pp intr VP

In this case it is possible to interpret the first two  
 verb phrases forming a clause, with the second verb phrase  
 in apposition with the first, or to interpret the second  
 verb phrase as the clause and the first verb phrase  
 occurring in apposition with the second.

(xiv) kinataa jiwa julu jinja /japaa nunda jiwa  
 let go-pot he tree that (acc)/fall-pot then he  
 He might let go of the tree and fall.

(xvi) kulli gandami / jayatan watji jina  
 quick go-imp-dir/ see-pot before you (acc)  
 Come here quickly, before he sees you.

(xvii) japa miji metamaya /japa mataraya jinja/kalaana  
 I when go-met-past/ I kill-mot- it /meat-acc.  
 past (acc)

I killed that animal while I was walking along.

(x) koyali jinja      m̄ t̄pa 'jiwa jinja njirimati  
 still that (acc) hit-past/ he him be cheeky-ger  
 He hit the kid who was giving him cheek.

(x) m̄aku kusj      / mukaritjija jipa  
 water drink-imp/good -stat-purp you  
 Drink some water and you'll get better.

(x) t̄wam p̄pa jupimati jinja      /j̄pa wanyarimala wumalu  
 smoke I see-irr that (acc)/ I run -irr him  
 (causal)

If I had seen the smoke I would have run away.

(x) p̄tanuju p̄pa jupimati wataji      / j̄pa  
 my - purp I go-past money-purp / I  
 gagutiwape      q̄taru watapu  
 get-cond-past my money-acc  
 I went for my money and I got it.

The verb *puta*, 'to give', is unique among Valuwara  
 verbs in that it takes two direct objects, e.g.

puta      jinja      nyawé      Give it to me!  
 give-imp it (acc) me  
 jalang      p̄pa kala putapa      I gave my brother some  
 elder      I meat give-past      meat.  
 brother-sec

Thus a clause containing this verb (except in its  
 imperative form) will, if complete, contain four phrases,  
 including two separate object phrases.

Topic 10 P.

It was felt that only non-elicited items were suitable for the study of word order in Waluwara, and consequently the data available are very inadequate.

There is a great deal of freedom in the word order of simple sentences, but certain tendencies, rarely strong enough to be called rules, can be observed. These are given below. Reference will be made to a set of examples of elicited and apparently natural speech, mostly by Mrs. W., given below and numbered (i) to (xxii). See also the texts in appendix I.

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. *nayali kana jipa pandana*  
                  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 are many examples. A common exception is the purposive form of a pronoun functioning as the object of certain verbs, such as kura, 'to like', murinama, 'to wait (for)', wijapa, 'to call out (to)', tawala, '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	wijaparinjanami
he	you (purp)	call-mot-past-dir
he was calling out to you as he came.		
and	ŋana	kaajita
I	cry-pres	jinda
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 Waluwara 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. malalja, 'no', in (viii) and (ix). Other examples of incomplete sentences are jita, 'tie [it] up!', in (i), aa / jindaju, 'oh, yours', in (ix) and ɳuta 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) warawula jiwa wuryarijita / puliti tanmatiji  
 dog that run-pres / bullock bit-purp  
 jararapa / puliti tanmajita warawulaku  
 white man-gen / bullock bite-pres dog -ag  
 jararapa / jita / warawula jindaju  
 white man-gen / tie-imp / dog your  
 jita / matju jiwa warawula jindaju  
 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 tawa ɳatamatami ɳalikalu /  
 that man go-mot-pres-dir us (dual, incl)-alla /  
 ijaraŋa wuna kurajita tawaraji / matju  
 who-nom him (purp) want-pres husband-purp / bad  
 jiwa tawa/ jinda papa jiwa ɳatamatami  
 that man / you(purp) girl he go-mot-pres-dir

jinda            kana ɳata        / kana ɳaya  
 you (purp) not me (purp) / not I  
 wuja            kurajita  
 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) ɳunatiji ɳali            papa / ɳulu  
 sleep-purp we (dual, incl) girl / grass  
 ɳumara wuja        / muṭu / ɳalinja        /  
 chop-imp it (purp) / bed / us (dual, incl)-purp /  
 ɳali            ɳunatija  
 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 janina ɳumara        / manalaji        /  
 wood something chop-imp / fire-purp /  
 talaṭalaṭaka ɳumara        / ɳali  
 axe -inst chop-imp / we (dual, incl)  
 pitjariji manala  
 light-purp fire

Chop some wood with the axe and we'll light a fire.

(v) njimiji ɳali            ɳandiji  
 fish-purp we (dual, incl) go-purp  
 ɳupaawaka        / njimiji ɳali  
 tomorrow-emph / fish-purp we (dual, incl)

nandiji təjuŋatiŋi

go-purp eat-purp

We'll go fishing tomorrow, all right. We'll go  
fishing and get something to eat.

(vi) kəpali jiwa kaajita jindanu / naja jinja /  
child that cry-pres your / get-imp him /  
karali məŋa muka nataŋu / matju jiwa karali  
child this good my / bad that child  
jindanu kaajita / kaļaji jiwa kaajita /  
your cry-pres / meat-purp he cry-pres /  
ŋuta 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 ŋali nandiji  
plain-allia we (dual, incl) go-purp  
ŋutupuwanaji / jija / ŋali nandiji  
goanna-purp / yes / we (dual, incl) go-purp  
ŋutupuwanaji matiji  
goanna-purp kill-purp

We're going to the plain after goannas --- yes ---  
we're going to kill some goannas.

(viii) tuwanaku ḷana wuryarariṇa // ḷatina  
 snake-ag me chase-past // do what-past  
 nunda jipa / matana jipa jinja  
 then you / kill-past you that (acc)  
 tuwanaṇa // malalja / ḷana wuryarariṇa  
 snake-acc // no / I run-past  
 wumalu tuwanamalu  
 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) ḷanana ḷapami tajili ḷarapa // jiwa  
 get-past I-emph spear whose // that  
 ḷawa tjapmarina ḷotanu jiwa tajili //  
 man say-past mine that spear //  
 aa / jindanu / ḷajali jipa ḷana  
 oh / yours / what you that (acc)  
 ḷalanaya // kalaji nunda ḷana  
 put down- // meat-purp now I  
 past  
 tjiratiji ḷankanaji // waji jipa  
 spear-purp kangaroo-purp // question you  
 minjdjiku ḷalanaya jinja // minjdjipa  
 clever-ag put down-past it (acc) // clever-emph  
 ḷana / ḷankana tjiratala jakā ḷana //  
 I / kangaroo spear-agent emph I //  
 malalja / kana jipa tjiratata  
 no / not you spear-mot-pres

jankanaapa malalja / talu                  ḷana  
 kangaroo-acc no / where (alla) I  
 jindanu ṭanunapa jankanaapa kili //  
 your eat-past kangaroo-acc emph //  
 naluwaka jipa jaralu ṭanuna  
 there (alla)-emph you river-alla eat-imp.  
 ḷapami tjirapa // ea / manalakaka jipa  
 I-emph spear-past // oh / fire-inst you  
 jinja matapa / kana jipa jinja  
 that (acc) kill-past / not you that (acc)  
 tjirapa / ṭajilika  
 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 ḷana,  
 in the fifth line of this text, is clever-gen I, i.e. I'm  
 the good hunter it belongs to.

(x)      gandapa    janu                          / maranili  
 go-past    we (plur, excl) / here-cla  
jaralu    nara / kamuwililu    /  
 river-alla there / Camooweal-alla /  
jayatiwara    janu ---    tawawali    naka    /  
 see-conj-past    we (plur, excl) man-plur    there (loc)/  
cafeka    janu    karitji    tawawali /  
 cafe-loc    they (plur)    man-plur /  
 stand-ger  
jarajanawali    janu                          / karali    ŋulpa    janu    /  
 woman -plur    they (plur) / child    mob    they (plur)/  
gandapa    janu                                  dancehalllu    nunda  
 go-past    we (plur, excl)    dancehall-alla    then  
janu    gandapa / ŋulpa    jarajanaara /  
 we (plur, excl)    go-past / mob    woman - poss /  
ānd    jararawali    janu                          tawawalaaña /  
 and    white man-plur    they (plur)    man-plur-acc /  
me    janati    raña / tawawija    kulirinä /  
 I    see-ger    I / man-dual    fight-past /  
pulyawija    / karali    ŋulpawija / ŋikaka  
 old man-dual / child    mob-dual / jealous-loc  
wula    kulirinä / wula                          jiwa  
 they (dual)    fight-past / they (dual)    there  
jarajanaa    tawawija / nunda / wula  
 woman-poss    man-dual / then / they (dual)

kuliritji jarajanaq -- jarγulilangi  
 fight-ger woman - (purp) one-alt-purp  
 jarajana / jarγulila kunaputaŋga matana /  
 woman / one-alt stomach-acc hit-past /  
 jaŋana jiwa // kala njanatini / njan  
 fall-past he // there lie-ger-imp / I  
 (loc)  
 natajita wuŋa jarajanaraji  
 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) tuwalaŋa juŋuwa njan natakari /  
 boomerang-poss stick-poss I go-hab-past /  
 taŋatalaŋa / tuwalaŋa / tajiliŋa /  
 axe -poss / boomerang-poss / spear-poss /  
 tajili njan kaŋatakari / tjiratiji /  
 spear I take-hab-past / spear-purp /

kala / ḡankanaji / natakari ḡapa  
 meat-poss / Kangaroo-purp / go-hab-past I  
 tjitjiji ḡajunatiji / matarakari  
 budgerigar-purp eat-purp / kill-hab-past  
 njinga / kala ḡapa ḡajunatifikari njinga /  
 waxbill / meat I eat-hab-past waxbill /  
 tjitji / ḡatali  
 budgerigar / earney

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 earneys (bearded dragon -  
 a lizard).

(xii) kalangarapu ḡandiji ḡali /  
 meat-priv go - purp we (dual, incl) /  
 kalangarapu ḡunda malalja ḡandiji ḡali  
 meat-priv now no go-purp we (dual incl)  
 kalaji / kala matiji ḡali //  
 / meat kill-purp we (dual, incl) //  
 meat-purp  
 katariṇa kala ḡandaya  
 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 tjaŋmarijitja / jarajana jinja  
           he say - pres / woman that (acc)  
           wurrarangamatiji / jiwa tawa jinja matiji  
           run-caus-purp / that man him hit-purp  
           njambacka // nana laripa // narana  
           axe-inst // I hear-past // whom  
           jipa laripa tjaŋmarinjana // nana  
           you hear-past speak-comp-acc // I  
           laripa jinja tawa jiwa wurrarangamatiji  
           hear-past it (acc) man that run-caus-purp  
           jinja jarajana // jiwa jaryulilaku  
           that (acc) woman // that one-alt-ag  
           laripa munda / jiwa matiji jinja  
           hear-past then / he hit-purp him  
           tjiratiji  
           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) kənə wumə murinama / nəndd wumalū  
 not him (purp) wait-imp / go-imp him-causal  
 Don't wait for him; leave him!

(xv) ɲutəni ɲəŋə jinjə  
 give-imp-dir me it (acc)  
 Give it to me!

(xvi) ɳəŋə ɳəŋə riŋŋə məŋala ɳəŋə  
 that (acc) I chop-past firewood I  
 kəŋŋəmi / məŋala ɳəŋə kəŋŋəməni ɳəŋə  
 carry-past- / firewood I carry-past- I  
 dir  
 pitjariji / ɳəŋə ɳətərwa kuwatiŋi / kala  
 light-purp / I damper cook-purp / meat  
 ɳəŋə kuwatiŋi / kəŋaliŋi ɳətəŋjuŋi /  
 I cook-purp / child-purp my-purp /  
 jarajaraji ɳətəŋjuŋi  
 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) ḥaku tawaku manala piŋijitja / jiwa  
 that (ng) man-ag firewood chop-pres / he  
 puwakemana jinja wata  
 steal-past that (acc) stone

That man over there chopping wood is the one who  
 stole the money.

(xviii) palaka janu njinajita jitjiraka //  
 somewhere-loc they (plur) sit-pres Urandangie-  
 loc //

kana ḥapa jaŋa / ḥapa lariŋa / janu  
 not I see-past / I hear-past / they (plur)  
 njinajita / jiwa tawaku wuṭukalimana ḥana  
 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) ḥajara ḥandapami / kamuwiliŋulu /  
 we (dual, excl) go-past-dir / Camooweal-ela /  
 turinjana jaŋatiji / jaramanaaŋa /  
 play-comp-acc sec-purp / horse-acc /  
 pakirinja ḥajara jaŋa / ḥana  
 buck-comp we (dual excl) see-past / I  
 tjiritjiwanami maraka / mara ḥandanya  
 sick-conj-past-dir here-loc / this go-past  
 jarŋulu / jaŋatiji / ḥana njinapa / ḥana  
 one / sec-purp / I sit-past / I

maraka kurukuraa ḷunati / matjuriṇa  
 here-loc head-poss lie-ger / bad-stat-  
 past  
 ḷana kurukuru // kana ḷana jaŋana  
 I head // not I see-past  
 ḷana njināna maraka jalu / kana ḷana  
 I sit-past here-loc yet / not I  
 ḷandana / tawa mara ḷandana jaryulu / ḷana  
 go-past / man this go-past one / I  
 njinati maraka / warawula ḷatajuwa  
 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) ḷajaraṇa njinamama jipala njina  
 us (dual, excl) sit-caus-past sit-imp  
 you (dual)

maraka / muriṇama / ḷana ḷularitjijami /  
 here-loc / wait-imp / I return-purp-dir /  
 jiwa jalwikaku (?) ḷamaka maramalaka //  
 that old woman-ag mother-ag this-gen-ag //  
 mara ḷajara muriṇamajita / kana  
 here we (dual, excl) wait - pres / not

nandanami      yet / kana nandanami  
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)	kalaji	ŋana	ŋandiji	ŋankanajji
	meat-purp	I	yo-purp	kangaroo-purp
	tarjunat̪iji /	kamuwililu	/ njimiji	kara /
	eat-purp /	Camooweal-alla /	fish-purp	too /
	wukuwanana /	wukuwa	jiwa	pata jalu /
	water-poss-acc /	water-poss	that	big yet /
	kamuwiliŋa //	kana	ŋana	tjinajajita
	Camooweal-nom //	not	I	know-pres
	ṭawapapa /	jinja	kamuwiltukarijita	/
	man-gon /	it (acc)	Camooweal-make-pres	/
	ŋataŋu	jara	jitjirana	/ warŋana kara
	my	river	Urāndangie-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) mara tawawara wuku kutji / wukuwana  
 here man-poss water drink-ger / water-acc  
 mara kutji nunda mara tjirijitja /  
 here drink-ger now here sick-pres /  
 matju // kana mara kutjarijita malalja  
 bad // not this drink-pres no  
 nunda / 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. Wāluwara has no word for alcoholic drinks, although wuku matju, 'bad water' or kanya, 'poison' might be used. None of the four informants is a drinker.

(xxiii) mara ijana mirimala matjurijitja / ijapami  
 this I knee bad - pres / I-emph  
 ijapana jaramanaŋulu // kalaaka  
 fall-past horse-ela // long ago- emph  
 jalu / wamba ijana njinati /  
 yet / young woman I sit-ger /

jaramanakuniñi / tukaña      ñaña  
horse-cust      / throw-past me  
jaramanakaku / ñululalu / japana      ñaña  
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 Waluwara. 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 nunda 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 kalaana / warya njalata jiwa  
 smell-imp that(acc) meat-acc / rotten maybe it  
 Smell that meat; it might be rotten.

wuryarana jiwa / wutjuru jiwa malakaripa  
 run-past he / leg he sore-stat-past  
 He hurt his leg while he was running.

ŋana kala matalwa njinatiji / ŋana pataritjija  
 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 separated by / or //). The second sentence cannot easily be translated except as two sentences in English.

jiwa ḷunana ḷana jinja jaṇa  
he sleep-past I him see-past

He was asleep when I saw him.

panjali jipa ḷana t̄uparijita kutuma jindaa ḷana  
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 Wāluwara by a juxtaposed sentence or by a second clause in a sentence; an example of each is given.

naku tawaku manala piṇijitja / jiwa piwakamana jinja wata  
that(ag) man-ag fire chop-pres / he steal-past that  
(acc)  
That man chopping wood over there stole the money. money

jaṇa ḷana jipa jinja maṭana t̄awa ḷana  
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.

ŋaña larina / kanjdjapulu wuruna wata ŋutapa  
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.)

tawala jinja / jawangalu jiwa nandiji  
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 Waluwara. For example:

njinja jiwa tawiri / tutuwara wawara patawaṭa  
waxbill he small / bird-poss other-poss big

The waxbill is the smallest bird of all.

punjdjura jiwa pata / tawunmudunu jiwa tawiri jaka  
emu that big / plain turkey that small emph  
Emus are bigger than turkeys.

In the following case, however, a single sentence was used.

tara pata jindaju warawulaa ḡatāju  
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 nunda, '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 Waluwara 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 *namunu* in 4.4.1.5.

#### 4.4.1.1 The negative adverbs.

There are five methods used in Waluwara 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 nandanami 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 ḡana                            He says I'm no good.  
bad negative I

jipa wili maraturina                        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 ḡula-ḡulaja-ḡulajula, 'close', or 'after', and possibly also 'behind'.

jipa kapiri nanda / ḷaya ḷulami ḷandiji  
 you first go-imp / I after-dir(?) go-purp

You go in front and I'll come behind.

jiwa ḷulami ḷatamanami  
 he behind-dir(?) go-mot-past-dir

He came up behind me (in the sense of 'creeping up behind me').

ṣulajula punara Not far away.  
 close close

warawula jiwa wuryaranami ḷulaja / kapirija ḷakuju  
 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 ḷula should be regarded as a nominal. If the latter is so, ḷulaja (and also kapirija) in the last example above may be an allative (cf. kaarija and ḷujindijs, allatives of kaara, 'south' and ḷujinda, 'east', respectively).

ṣulaka jipa ḷandanami 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, *kapirinju*, 'before', makes it necessary to regard it as a nominal.

The word *kandila*, '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 kandila*, 'alongside the waterhole' (see 4.4.1.4 for the complete utterance)

jiwa	jarajana	karijitia	tuwanaka	kandila
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 Waluwara 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 *punara*, third example) exemplified above.

#### 4.4.1.4 Adverbs of time.

Generally, time is expressed in Waluwara by a noun, usually in the locative case, such as waraparaka, 'at sunset yesterday', njunparilaka, '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. njupaa, '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	njana	njinala	/	pilinjtjinaranu
wait	I	sit-opt	/	lively - priv

Let's sit down, I'm tired.

A group of adverbs including puti, kala and janu are rarely heard except in association with jalu, 'yet, still, enough, right'; thus puti 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', janu jalu, 'a while ago, a long time ago'.

jalu is often used alone as an adverbial phrase, e.g.,

pul̩ya jiwa waka jalu jiwa  
 old man that alive yet he

He's very old, but he's still alive.

mara jalu [I'm] right here (with apparent  
 here yet connotation of place as well as, or  
 instead of time).

ŋul̩pa jalu jiwa There is plenty there yet.  
 much yet there

ŋulajala has approximately the same meaning as put̩i jalu  
 and may be originally a compound of the same type: \*ŋula jalu.  
 However, any connection with ŋula, 'close, near', is obscure.

The adverb ŋunda, '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, to 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:

pumata ḥalwatata nunda  
 sun enter-mot-pres now The sun is setting.

kala war̄ya tarjunapa / tjirijitja nunda ḥapa  
 meat rotten eat-past / sick-pres now I

I am sick because I ate rotten meat.

karaliwali janu njinajita nunda turitjinaraŋu  
 child-plur they sit-pres now play-ger-priv  
 (plur)

The children have stopped playing.

jiwa tawa parina tajilaa tjiratiji  
 that man creep-past spear-poss spear-purp  
 punjdjuraji / tjirana nunda 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:

ŋana kutjiji / maratjuritjaa watji  
I drink-purp / die - pot before

I must have a drink or I'll die.

maraka ŋana ŋunatjiji / jara kandila / ŋaana  
here-loc I sleep-purp / river alongside / flood  
nandaami watji  
go-pot-dir before

I am camping here, but my camp was alongside the waterhole until the flood came.

ŋana tajunŋana kalaana warawulamalu watji  
I eat-past meat-acc dog - causal before

I was eating some meat, but the dog took it.

jiwa nandijami / ŋapaaka nandiji karitjatjiji  
he go-purp-dir / I-emph go-purp stand-mot-purp  
kali ja jalu / wumalu 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 januwaka, nupaaawaka and jandawula.

#### 4.4.1.5 Adverbs of manner.

The adverbs jaru, 'just, only, as well as possible', jatindalu, 'much, very', and njamunu, '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:

jaru	njanu	tjanmarijitja
just	we (plur, excl)	talk - pres

We're just talking, that's all.

jiwa	kala	jaru	matarijita	/	minjdji	jiwa
he	meat	as well	kill-pres	/	clever	he
			as possible			

He is the best hunter [ in the camp ].

jaru                                 ŋana kunu tjirala  
 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 ŋana jina tjinajajita  
 much           I           you(acc) know-pres

I know all about you.

wuryaranya ŋana / ŋana ŋalajita jatindalu  
 run-past      I      /    I    breathe-pres much  
 "I've been running; I'm blowing hard now".

jatintalu ŋana matjamana ŋatarwa  
 much           I       eat-past food

I had too much to eat.

pulya walali tawa jiwa / jarajana ŋamuŋu  
 hair long man that / woman like

That man has got long hair like a woman.

jipa ŋamuŋu jiwa  
 you like he                          He looks like you.

maŋalaka ŋamunu jiwa kuwaŋaa jina  
 fire-loc like that cook-pot you(acc)

It's too hot; it might burn you.

jitjiralu jiwa maŋajila nandana / ŋamunu  
 Urandangie-allah 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 ŋalata 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 -la is often added to ŋalata.

ŋupaa wuku ŋalata mara japiji  
 tomorrow water maybe here fall-purp

It might rain tomorrow.

punjdjura ŋalatala jaŋatiji  
 emu maybe-emph see-purp

We might see some emus.

ŋankana      ŋalata      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      patamatami      / jarajana kara tawa  
 two      they(dual) go-mot-pres-dir / woman        and      man

There are two people coming, a man and a woman.

kara      ŋana      ŋutami  
 another    me        give-imp-dir      Give me another one!

kara      ŋanya      manala  
 more       get-imp firewood      Get more wood for the fire!

karakara      ŋanya      jinja      jaŋanya  
 more           I        him        see-past      I saw him again.

nataa	jawa <sub>t</sub> iji	kara
I(refl)	rub-purp	also

I am going to paint myself too.

matjaawara	jiwa	jaraka	kala	/ kutulamukaka /
gum tree-poss	there	river-loc	there	/ other side-loc /
kawanaka	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. kawanaka 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; kawanaka, 'to here' or 'this way'; and kawanaka, 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 ŋana - 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 *ŋunda* (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,

<i>ŋana miji nandaya punjdjuraji</i> I when go-past emu-purp <i>punjdjuraa</i> emu-poss	<i>/ ŋana janat̄iwana</i> <i>/ I see-conj-past</i>
--	---

When I went out for emus, I saw an amu. (Example from Hale's field notes.)

tjakija      ḷaya / tukijaaka    ṭuwaliwana / ḷaya miji.  
 clever-poss I    / throw-purp boomerang-acc/ I since  
 jawangaka      tjakiripa  
 the bush-loc clever-stat-past

I know how to throw a boomerang; I've been learning in the bush.

tjiripa      ḷunda ḷaya / kalaana    jinja    miji    ḷaya  
 sick-past them    I / meat-acc that(acc) when I  
 jatjumaya  
 smell-past

The smell of that meat made me sick.

ḷaya miji    natamaya / ḷaya mataraṇa    jinja / kalaana  
 I    when go-mot-past / I kill-mot-past it(acc)/meat-acc

I killed that animal while I was walking along.

jindanju    warawula    ḷanjira    jaṭapa    miji  
 your    dog    like-poss    father-gen    conj(?)

Your dog is like my father's.

ṭawa    ḷanjira    jipa    miji    jiwa  
 man    like-poss    you    conj(?)    that

That man looks like you.

ḷaraku    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*, *kunu* and *wanunda*, which have a straightforward emphatic function, and *kili*, which indicates derision or disbelief. Another word, *mukana*, 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 *kunu* are usually omitted if a sentence is repeated slowly. These two and *wanunda* 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.

ŋatanya	ŋankana	matarinjalwa	/	jindarjuwara	jaka	jiwa
my-poss	kangaroo	kill-agent	/	your-poss	emph	that
ŋutupuwana	jaru	tanmatala				
goanna	only	bite-agent				

My dog is a kangaroo killer; yours only kills goannas.

wanunda kunu / nulpa jalu jiwa  
 emph emph / much yet there

That's right, there's plenty there yet.

naya japidala kunu  
 I fall-inr emph I nearly fell over.

wanundapa naya jina larijitja  
 emph-emph I you(acc) hear-pres

I am listening to you. (in answer to the question "Why don't you listen to me?")

japunumaya jakal naya manalaana  
 put out-past emph I fire-acc

I have already put the fire out.

mara kunu wata jindanu  
 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?", [hɔ?]. In the other case it was not explained, but a somewhat similar meaning appears to fit. The two examples are:

talu      njana jindauj      tanjupapa      nankanaana      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      njina      //      napa kili      /      napa tjanmarila      /  
 wait      sit-imp //      I      hoh      /      I      speak-opt      /  
 jipa      njina  
 you      sit-imp

"Sit down for a minute!" "Me? No! You sit down and let me speak!"

There are four examples of mukana 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 mukana) is just the same". The examples are given below.

nana mukana mukara      /      tjiratalaa  
 I      ?      good-poss/      spear-agent-poss

I'm a good hunter.

mikipunamata jiwa / tandala mukana nana kana jina  
stranger that / how ? I not you(acc)  
larijitja  
hear-pres

What does 'mikipunamata' mean? (larijitja here means  
'understand' rather than 'hear')

jaŋana jiwa jaryulilara / tara mukana jiwa  
father-nom that other-poss / which ? he

Which one [of those two men] is your father?

taka mukana / tjila waji  
where ? / point-imp question  
(loc)

Where [are they]? Point [to them]!

#### 4.4.3 Particles.

The two particles *jija*, 'yes' and *małalja*, 'no' are used in the same way, in general, as their English counterparts. *małalja* 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 *małalja* is shown in example (xii) and other examples of *małalja* 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 Ngarinyin; this seems appropriate for the first use described above of *ŋawija*, but not for the second.

ŋawija / jitjala ŋaya kalu wandana  
 er / word I him(alla) tell-past

Er, I told him a story.

ŋawijajanulu / jilatjanulu  
 whatsisname-ela / Tobermory-ela

from whatsisname from Tobermory

ŋawija kuya jiwa / wataka / wankata  
 whatsisname emph there / stone-loc / blue-tongue  
 lizard

There's that whatsisname, among the rocks, that blue-tongue  
 lizard!

ŋawijarijitja ŋanya / kunukurajita  
 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 Waluwara; 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, *ŋarana*, 'who?'; this is the nominative/accusative form. The base form, the vocative "*ŋara*", is unattested. The agentive, *ŋaraku*, and the genitive, *ŋarapa*, 'whose?', are common.

Two common nouns, *ŋanjali*, 'what?', and *ŋanju*, 'how many?'.

The question 'why?' is expressed by the purposive form of *ŋanjali*, viz. *ŋanjaliŋi*, or the causal, *ŋanjalimalu*. Frequently, *ŋanjaliŋi* is replaced by *ŋanjali*; this is probably due to the very common juxtaposition of *ŋanjaliŋi* and *jipa*, 'you', or *jiwa*, 'he, she, it' with subsequent dropping of one of the *ji* syllables, e.g. [*ŋanjaliŋiŋipa*] > [*ŋanjali:pa*].

A demonstrative pronoun, *tara*, 'where?', with several inflected forms; see 3.4.5.

Two verbs, *ŋanma* and *nati-*, both usually meaning 'to do what?'.

Two non-inflecting words, *ŋanjanda*, 'when?', and *tandala*, '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 *nati-*, (ix) for *ŋarapa*, *waji* and *tara* (in the allative form *ṭalu*) and (xiii) for *ŋarana*. Further examples, from elicited material, are given below.

*ŋarana jipa jiniwara*                            What's your name?  
 who-nom you name-poss

*ŋanjali jiwa*                                    What's that?  
 what that

*karali jiwa jaryajita jujuka / ŋanjili*  
 child that climb-pres tree-loc/ what-purp  
 Why is that child climbing the tree?

*ŋanju jindaju karali*  
 how many your child  
 How many children have you got?

*ŋanjuka jipa jinja pumataka mukamana*  
 how many-loc you it(acc) day-loc make-past  
 How long did it take you to make it?

*tara jindaju lalana*                            Where is your brother?  
 where your elder brother-nom

taka jipa Where are you?  
where(loc) you

patijitja runda jipa What are you doing now?  
do what-pres now you

patipa jiwa What happened?  
do what-past that

nanmana jipa jinja How did you do that?  
do what-pres you that(acc)

wajika / nanjanda napa patajita  
question / when I go-pres  
I don't know when I'm going.

tandala jipa tjammarinami What did you say?  
how you say-past-dir

waji jipa larikitja jitjalaana waluwaraana  
question you hear-pres word-acc Waluwara-acc  
Do you understand Waluwara?

wajika / naraana jiwa jiniwara wajika  
question / who-nom he name-poss question  
I don't know who he is.

patajita ḷaya waji jaralu  
 go-pres I question river-alla  
 Can I go to the river?

4.7 The stems ḷanji and jinŋandalu.

These two stems, which are, to some extent, converses, fulfil a variety of functions in Waluwara. ḷanji is variously translated as 'thing, something, like, alike, this way'; the possessive form, ḷanjira, is sometimes translated by the informants as "so-and-so" (thus ḷanjira jini, 'that's so-and-so', in answer to the question ḷarana jiwa, 'who is that?'; jini means 'name'). jinŋandalu, translated 'alone, independently, by accident', 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 ḷanji in its possessive form is to denote similarity; in this it resembles ḷamumu (see 4.4.1.5), and the two may be used together.

jiwa warawula ḷatarju ḷanjira jindanu  
 that dog my like-poss your  
 My dog is like yours.

ŋanjirawija        wula        jitjalawijawara /  
 like-poss-dual      they(dual) word--dual-poss /  
 waŋga    jutjuruwara    wula    piŋapitaara    kara  
 Wangka-jutjuru-poss      they(dual)Pitta-pitta-poss also  
 Those two languages, Wangka-jutjuru and Pitta-pitta, are the  
 same.

ŋanjira    ŋamunu    mara    ŋuwajuwana  
 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    ŋanjirana    jaŋati    /    kalaŋu    jaka    jiwa  
 not      like-poss-    see-ger    /    new      emph    that  
 acc  
 We've never seen anything like that before.

pata    jiwa    /    kana    ŋanji    tутuwara    wawara    tawijawi  
 big    that    /    not    like    bird-poss    other-poss small  
 It's the biggest bird of all.

However, *jingjandalu* may also function as a converse to *yanji*; compare the following examples:

warawujawija        wula        /        ḷanjirawijala  
dog - dual            they(dual) /        like-poss-dual-emph

Those two dogs are alike.

jinnandaluwija

alone - dual                  Those two are different.

When the similarity is between verbs rather than nominals, the unaffixed form *janji* is used, and the translation 'like this' or 'thus' is appropriate.

You made it the wrong way: make it like this.

*jawati jinja ḥanji / jalaku ḥajatiji*  
*rub-ger it(acc) thus / flame-ag get-purp*

While you were rubbing it like that, it would light up.

ŋanjilamuka (or possibly ŋanjilɿamuka) is variously translated 'behind, at the back, beside', and comparison with

ŋanji liraka, "something at the front" (lira means 'mouth' or 'front') suggests that there should be a word \*lamu, 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'.

ŋanjiwijkula	najarapa	jajana
like-dual-ag-emph	we(dual, excl)-rec	see-past

We saw one another.

ŋanjiwijkula	rjajarapa	ŋutana / ŋana
like-dual-ag-emph	we(dual, excl)-rec	give-past/ I
jinja kala ŋutana	/ jiwa ŋana ŋuwunu	ŋutana
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.

n̥ana	tawawijaku	maṭana	/ n̥anjalimalu / wula(n̥a)
me	man~dual-ag	hit-past	/ what-causal/ they{dual}- (purp)
n̥ana	ṭala	ṭukana	/ aa / n̥anjirangi
I	spittle	throw-past	/ ah / thing-poss-purp
maṭaya			
hit-past			

"Those two men hit me." "What for?" "I spat at them."

"Ah! They hit you because of that."

*jinnjandalu* is much less common than *ŋanji*, and generally occurs with no suffixation and functioning as an adverbial phrase. In the second example, *jinnjandalu* seems to have the meaning 'unhindered'; this example also illustrates two other idioms: the use of *pilala*, 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 *mankaru*, 'ear', in connection with thinking - *mankaru pamatinara* means 'not thinking' or 'forgetting'. Compare *lari-*, which means 'to think' as well as 'to hear' and 'to listen'.

jimjandalu      njajara      tjanmaritjandana  
alone            we(dual, excl) talk-mot-past

We were walking along on our own, talking.

jimjandalu jiwa kanalaji / pilala njina /  
alone he carry-opt-dir / anyhow sit-imp /  
mankaru pamañinara  
ear think-priv

Let him take it away; don't worry about it, forget it.

jimjandalu jiwa njinala / kana ñapa wuna kurajita  
alone he sit-opt / not I him(purp) like-  
pres

He can stay on his own; I don't like him.

jimjandalu jinja mañana  
by accident him hit-past

I hit him accidentally.

## 5. SOME DIACHRONIC NOTES ON WALUWARA

### 5.1 The Wakayic Language Group.

The languages most closely related to Waluwara are Bulanu, formerly spoken to the north of Waluwara country, and Wagaja, formerly spoken over a large area north-west and west of Bulanu territory, mainly in the Northern territory.

In Bulanu 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 Bulanu 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 Waluwara and Bulanu 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 Bulanu and about 25% with Waluwara, but that in morphology it is much less closely related. It is tentatively concluded, despite the figure of over 50% for Wagaja/Bulanu cognates, that Waluwara and Bulanu form a linguistic subgroup<sup>(1)</sup> (which, following the procedure used by O'Grady, Voegelin and Voegelin (1966) is named Thawa after the word for man, *tawa* in Waluwara and [*tawaji*] in Bulanu) 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, Bulanu and Wagaja examples will be given in a broad phonetic notation which, at least in the case of Bulanu, approximates to the probable phonemic system. The tentative Bulanu inventory differs from that of

(1) See O'Grady and Klokeid (1969) for the criteria used in classifying the Australian languages.

Waluwara in that it lacks the velar glide, and possibly in having a full set of voiced stops (there is a minimal pair [ma:<sup>t</sup>u / ma:<sup>d</sup>u]). Bulanu 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 Waluwara are the lenition of stops and the reduction of nasal-stop clusters. The former process is amply illustrated by a comparison of Waluwara with Bulanu - a language which was unknown to Hale - while the latter is illustrated by a comparison of some Waluwara and Wagaja equivalents. The reduction of clusters has been more extensive in Bulanu than in Waluwara.

Table 5.1 gives examples of reduction of nasal-stop clusters in Waluwara as compared with Wagaja, while Table 5.2 gives a similar comparison of Bulanu and Waluwara. The process illustrated is by no means universal; Bulanu retains many such clusters in words such as [unduru, p<sup>u</sup>ntapun<sup>u</sup>ta, wankada, tjinditjindi]. No attempt is made in this study to explain such exceptions.

Table 5.1

English	Wagaja	Wāluwara
you (sing)	imbu	jipa
tongue	ŋəndal	ŋatala
ground	mi:ŋgu	miki
to give	ŋunda	ŋuta
to fall	inpa	japa
good	mu:ŋgu	muka
<u>crow</u>	ungulu	wakula
to smell	injdjama	jadjunma
to tie	inda	jita
alive	wangulu	waka

Table 5.2

English	Wāluwara	Bulamu
butt of tree	pandu	pa:du
kidney	kamandili	kamadili
milk	ŋamanduru	ŋamaduru
deep	kanti	kaṭi
pigweed	winda	wi:da
to break	lunda	luda
up	kankalija	kakulitja
near	kandila	kadila
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 Waluwara and that the Bulanu stops agree in voicing or lack of it with the corresponding Waluwara stops.

Nasal-nasal clusters may also be reduced; compare the Waluwara words jatjunma, 'to smell', tjanmari- or tjanmari-, 'to speak', with their Bulanu equivalents, [jadjima] and [idjamari-], respectively. Other interesting pairs are nanju - [nadarju], 'how many', minjdji- [mi:ni], 'clever' and nujinda- [njudida], 'east' (Waluwara form first in each case).

Table 5.3 gives examples of an intervocalic or initial stop in Wagaja and Bulanu corresponding to a glide or zero in Waluwara. The probable processes are:

p > w
t > j
tj > j
k > γ > φ
k > γ > w      or    k > kw > w

The same processes are illustrated by the Waluwara reduplicated forms paṭawata, palawala, ḥawijawi, ḥitijiti and tjitijiti, by the word ḥuwali, 'boomerang' (cf. ḥuka, 'to throw') and by the language name Waluwara (some neighbouring tribes use the form walukara). There is no evidence of corresponding changes for the apical stops [t] and [t̪] except in the pair [miljitka] (Bulanu) -miljirka (Waluwara), 'salt'. However, this is counteracted by an apparent change in the reverse direction; ḥutu, 'nose' in Waluwara, corresponds to [ŋuru] in Bulanu and Wagaja.

Table 5.3

English	Wagaja	Bulanu	Waluwara
they (dual)	buluwi	bula	wula
to dig	bidi	bada	waṭa
to bathe	ŋubara	ŋapura	ŋawira
east	ŋudjil,	ŋudida	ŋujinda
	ŋutalu		
up	gungala (?)	kakulitja	kankalija
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, kaya
honey	(not cognate)	ŋugunu	ŋuwunu
boomerang	ḍugul	ḍugalı	ṭuwali
his	juguda	juguma	wuma

Table 5.4 compares the Waluwara and Bulamu reflexes of what are clearly earlier (i.e. Proto-Thawa) \*lp, \*lk and \*rk clusters. In Waluwara the stop members of these clusters have undergone lenition, sometimes to zero, while in Bulamu the other member of the cluster has disappeared.

Table 5.4

English	Bulamu	Waluwara
to enter	ŋapa	ŋalwa, ŋala
agent suffix	-pa	-lwa, -la
shoulder	japiji	jalwi
yam species	tjikanji	tjilyaa (2)
one	jakulu	jarvulu
to run	jukuwara	wuryara
to climb	jaka	jarya

Wagaja appears to have retained the earlier clusters unchanged, to judge from [irka], 'to climb' and [gurguma] 'to hold' (cf. Waluwara kuryuma), but the evidence here is very inadequate. There are some apparent anomalies; compare Bulamu [wupa] with Waluwara wurya, 'to clear', and Wagaja

(2) The suffix -anji in Bulamu corresponds to the suffix -aa (allomorph of the possessive suffix) in Waluwara.

[*tulpu*] and *Bulamu* [*çupuju*] with *Waluwara* *ṭulju*, 'sand'. Corresponding to *Waluwara* *jilwaja*, 'to hit by throwing', *Bulamu* has [*ljiwaja*]; this may result from borrowing by *Bulamu* followed by metathesis to eliminate the foreign consonant cluster [*lw*]. The same explanation may apply to *Bulamu* [*gajiwali*], 'far'; the corresponding *Waluwara* 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	<i>Wagaja</i>	<i>Bulamu</i>	<i>Waluwara</i>
tooth	<i>gutit</i>	<i>gutani</i>	<i>kutana</i>
bone	<i>mungud</i>	<i>mukani</i>	(not cognate)
genitive (personal pronouns)	-ba	-ma	-ma
causal	-balu	-malu	-malu

Unfortunately, no data throwing light on the voiced voiceless stop opposition in *Waluwara* or *Bulamu* have yet been obtained. Nor is there much indication of how the *Waluwara* fricatives *jj* and *ṛṛ* came about. *Waluwara* *mirri*, 'lightning',

is cognate with Bulanu [miri], and Waluwara mirimala, 'knee', with [mi:mala]. There is some internal evidence in Waluwara (viz. the fluctuation between [warr̥a] and [war̥<sup>A</sup>a] for the place name, Marion Lake) to suggest that rr̥ may derive ultimately from \*rk, but the other languages of the group have so far not provided any corroboration for this. Similarly, the realization of pirtji- as [piç̥i] by two of the Waluwara informants suggests that jj may derive from an earlier \*rtj. The Bulanu equivalent of pirtji- is pitji-, but unfortunately there are no known (to the writer) Bulanu 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 Waluwara and Bulanu 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 [injini] and [giridi] with the corresponding Bulanu [janjana] and [garidjara]

and Waluwara jaŋaŋa and kariŋitja, 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 Waluwara (and Bularu). 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	Waluwara	Bularu
tongue	njatala	njatali
tooth	kutana	gutani
word	jitjala	idjali
young woman	kutala	gudali
far	kajalla	gajiwali
snake	tuwana	duwani
adze	kumbal̚ta	gumbal̚ti

Table 5.7

English	Wajuwara	Wagaja
to climb	jarya	irka
to fall	japa	inpa
to see	janja	iŋi
to smell	jatjunma	injdjama
{ appearance face }	japinjdjiri	ininjdju }
left (hand)	wakuṇu	ugunu
crow	wakuḷa	ungulu
dog	warawuḷa	wura
English	Bulaṇu	Wagaja
wild orange	waldadji	udadju
stomach	waḍuḷu	wudad

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 ITwo Waluwara stories.1. The travelling devils; told by George Aqe.

panduŋuluku matiji tawa / ɳulpa panduŋulu ɳandanami /  
 devil-ag kill-purp man / mob devil go-past-dir/

jinja matana / tawa / jiwa ɳunaŋiji / jaraka /  
 him kill-past / man / he sleep-purp / river-loc/

jinja matana ɳunana / ɳandanana janu karandajalu /  
 him kill-past sleep-comp/ go-past they(plur)Carandotta-  
 alla /

karandajalu ɳandanana janu / tawaara / panduŋulara /  
 Carandotta--alla go-past they(plur)/ man-poss / devil-poss /

kana janu ɳularipami / puti jalu janu ɳandanana /  
 not they(plur) return-past- / long time yet they go-past /  
 dir (plur)

ka-la janu matana / ɳankana / jarŋuluka janu  
 meat they(plur) kill-past / kangaroo / one-loc they(plur)

tjuwalaka ɳandanana / tjuwalaka / maranila / puti jalu /  
 night-loc go-past / night-loc / here-ela / long time yet/

likinatjilu / kana janu ḥularipami // jarajana janu  
 Lake Nash-all / not they(plur) return- // woman they(plur)  
 past-dir

jaryula wuwatanya / wuwatanya jarajanaa / jaryulaa/  
 one-poss call-mot-past / call-mot-past woman-poss/ one-  
 poss /

warawulaa jaryulaa / warawulaa jaryulaa / ṭatali  
 dog-poss one-poss / dog-poss one-poss / carney

janu warawulaka mataranya / ṭatali / jinja  
 they(plur) dog-inst kill-mot-past / carney / it(acc)

janu ṭanunatandi / ṭatala // kurukurula janu  
 they(plur) eat-mot-ger/ carney-poss// head-emph they(plur)

palatinjamana /kurukurula / likinatjilu / kurukurula //  
 carry-past / head-emph / Lake Nash-all / head-emph //

kana jiwa likinatjina jararapa jiwa jitjala /  
 not that Lake Nash-nom white man- that word /  
 gen

jararapa / janu jiwa jilpirililama / jilpirililama//  
 white man-gen/ long ago that Ilbirilhilama / Ilbirilhilama//

njima janu ṭanunati / njimaa // nana / kana  
 fish-poss they(plur) eat-ger/ fish-poss// I / not

ŋaña tjinajajita jara jarγulu jarγulu jitjala  
 I know-pres river one one word

ŋat̄ajaa / wałuwara / likinatjina jarγulilara /  
 my-poss / Wałuwara / Lake Nash-nom one-alt-poss /

[wađulu bamadjī] / kana ŋaña tjinajajita / malalja  
 (not Wałuwara words) / not I know-pres / no

ŋaña // mara janu / ŋawija / marawaka(?)  
 I // here they(plur)/ whatsisname / this-emph

nandaŋami / tjuŋduña jilpirili--- / ŋawijanulu /  
 go-past-dir / Djunđu-nom Ilbirilhi--- / whatsisname-ela/

jilataŋulu // kana janu jitjala wałuwara  
 Ilada-ela // not they(plur) word Wałuwara

tjinajajita / ŋawijaa ŋat̄ajara jitjalara / jarγulila /  
 know-pres / whatsisname- my-poss word-poss / one-alt /  
 poss

januma jarγulila // kaŋat̄iji / ŋaña jipa  
 their(plur) one-alt // carry-purp/ me you

kaŋat̄iji / ŋawijalu / tjuwanjinirila / ŋaña  
 carry-purp/ whatsisname-alla/ Djuwanyiri-all/ I

jindala nandiji / panduŋulaa jalkujalkuwa /  
 you-com go-purp / devil-poss man eater-poss /

jalkujalku // jirataarijitja n̄aŋa / jirataarijitja /  
 man eater // be afraid-pres I / be afraid-pres /

matju jana tawaya / matju / t̄awa janu matju /  
 bad they-poss man-poss/ bad / man they(plur) bad /  
 (plur)

likinatjika // njutupuwana / t̄atalinajarju /  
 Lake Nash-loc // goanna / carney-priv /

n̄utupuwanaa / njimi / kamamara / kutarju  
 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, Waluwara. Lake Nash has another. (The next two words are in Bulamu, the original language of Lake Nash, and appear to mean 'swollen stomach'.) I don't know it. They came here. Djundu came from whatsisname - from Ilada (Tobermory). They don't know Waluwara, 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: Djundu 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, ɸ, a, ə]. [ə] is used for all low front vocoids, [a] for low central vocoids and [ɑ] for low back vocoids. Note that, for the first two and a half lines, up to and including the word ɳunana, the informant was speaking very slowly and carefully; after that the speech is more natural.

[ 'bandu,ɳuɻugu'matii'ta.wa:/'ɳuɻpa'bandu,ɳuɻu'ɳanda,nami/  
 'inja.'matana/ 'tawa:/ 'i:wa'ɳunadi:'jara ka/  
 'i.nja'matana'ɳunana/'ɳanda,ɳanu'garanda,jalu/  
 'garanda,jalu'ɳanda,ɳamu/'da.waja/'pandu,ɳula ja/  
 'gana'januju''lari,nami/'ut̪i'jal'i'janinja---'ɳandana/  
 'gala'janu'matana/'jan,kana:'jaryula'ga:ni'dju,walaga'ɳandana/  
 'djuwala,ga./'majani,la./'ut̪i'jalu/  
 'ligi,na.djilu/'gana'januju''lari,nami//  
 'jaja,jana'jaryulau'wadana/'wadana'jaja,jana.'qaryula./  
 'wara,wula.'jaryula:/'wara,wula.'jaryula:/  
 'ta,ta.li'janu'wara,wulaga'mata,jana'ta,ta.li/  
 'inja:nə'darjuna,dandi/'ta,ta.la// 'guju,guju'lajanu'bela,dinja,  
 mapu/  
 'guju,guju/a/'ligi,na.djil/'guju,guju/a//]

2. The woolly people; told by Mrs Ida Toby.

njinati watakaka / nandanya / kanatarawa nandanya /  
sit-ger stone-loc / go-past / hunger-poss go-past /

nandanya janu natarwaaraji waramati matjatijaka /  
 go-past they(plur.) food-poss- look for- eat-purp- /  
                     purp                       ger              emph

kajallalu nunda janu nandana / jaralu /  
far -alla then they(plur) go-past / river-alla/

wukuwara      natamanami      /    nukara    jiwa    kaandi/  
 water-poss    go-mot-past-dir    /    wind        that        come-ger/

jar<sup>y</sup>uluka    wa<sup>l</sup>uwaraka    janu    tjan<sup>y</sup>maritji    jitjalakaka/  
one-inst    Waluwara-inst they(plur) speak-ger    word-inst /

nunda / mirrikaku jilwanjana / ah /  
then / lightning-aq hit-past / uh /

nunda janu tjan̄marina jitjalarilaka nunda /  
then they(plur)speak-vast word-alt-inst then /

janana      janu      / matju      mara      /  
see-past    they(plur) / bad      this      /

kana	mara	ja <small>ñ</small> ana	kana	mara	ñamana
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, Waluwara. 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 story, using the same system as for the other story, is given below.

'njinadi 'wata,ga:ga/'nandana/'ganata,jawa'nan,dana/  
'nandana'januwa :'jada,ra:jai'wara,madi'madja,dija:g/  
"gaiqd,lali'nunda'janu'nandana/'jaja:lu/  
'uku,waja"mata,maqami/'nukwija'gaandi/  
'jar,yulagu"walu,waraga'janu'djamma,jidji,i"tjala,ga:g/  
'nunda/"misi,ga:gu,id"lanjana/'ah/  
'nunda'jani'djamma,jinai"tjala,jila'ganenda/  
'janu,malagai'tjalaga:/'janmi'djamma,ripa/a.h/  
'jula,ripa'janu/'jatala:'jama,la:lu/'wata,la:lu/  
'janjanaja"na:h/'matju'maja/  
'gana'maja'jatana'gana'maja'jamana

APPENDIX IIThe Pankara Dialect.

A single poor informant in Pankara, 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 Waluwara. Of these words, 21 were the same as the corresponding Waluwara words and six were the same as the corresponding Bulanu words (three were common to both). Clearly, his idiolect belonged to a dialect of Waluwara, probably a little more closely related to Bulanu than is Waluwara proper.

water	wuku
man	jarara (=white man)
woman	jarajana
fire	manala
dog	warawula
kangaroo	ŋankana
bird	tutu
emu	punjdjura
corella	ŋajanaputaju
galah	ṭinkili (this word does not occur in Waluwara, but was given by a Bulanu informant as meaning 'corella')

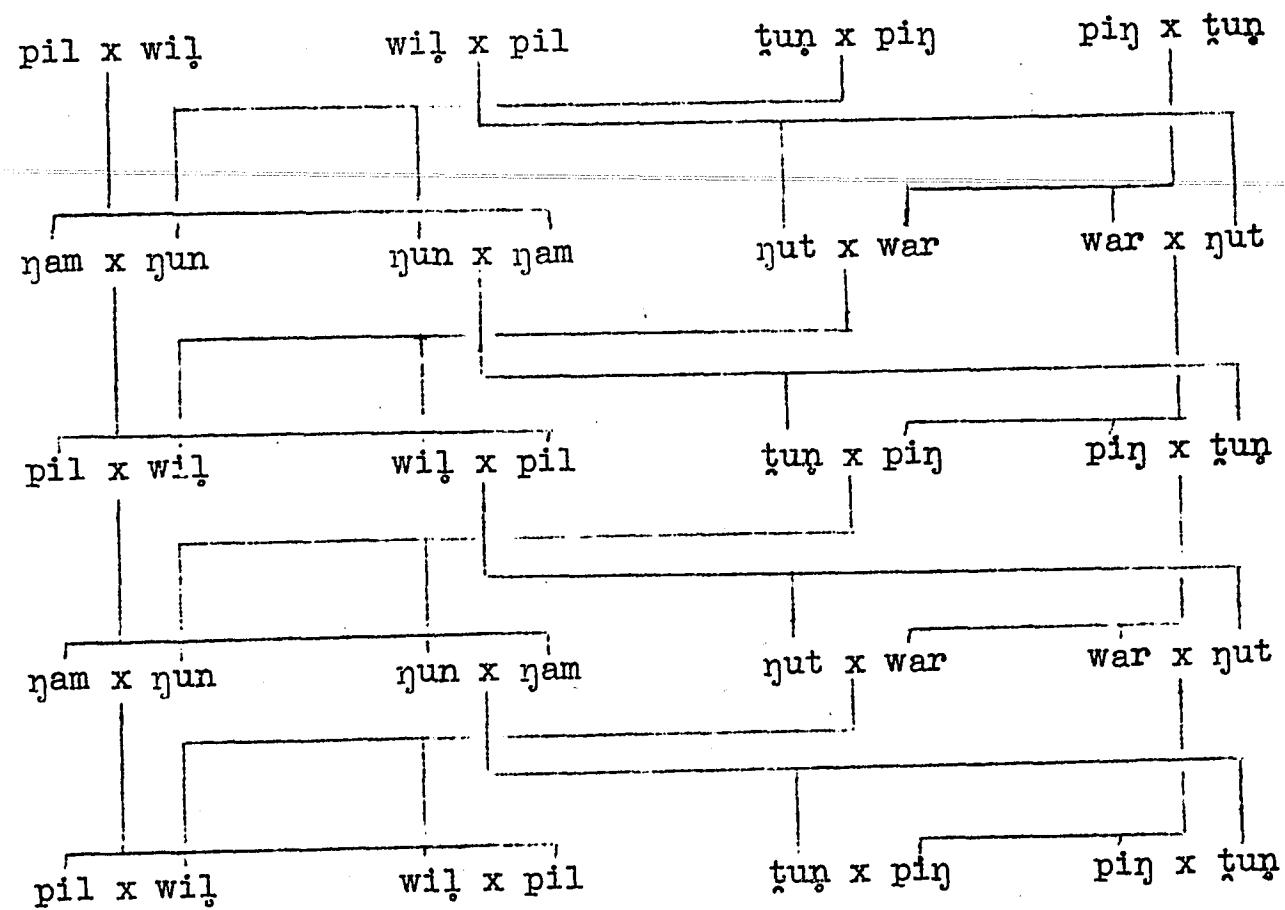
head	kuzukuru
eye	ŋanja
ear	pinali (Bulanu; the Waluwara word is maŋkaru)
nose	ŋutu
mouth	lira
teeth	kutani (Bulanu; kutana in Waluwara)
meat	kaļa
tucker	ŋataru (possibly a mishearing; Waluwara ŋatarwa)
eating	tanjunati (this is the gerund; or it may have been the purposive form tanjunačiji)
liver	kamaṇḍili
leg	wutjuru
foot	pamara
hand	markana
arm	limbi

APPENDIX IIIWaluwara 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 Waluwara 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), wilwilaa (wil),  $\eta$ amaljaku ( $\eta$ am),  $\eta$ unatalwa ( $\eta$ un),  $\dot{\tau}$ unimili ( $\dot{\tau}$ un), pinarinjdji (pin),  $\eta$ utirila ( $\eta$ ut) and warki (war).  $\kappa$ anjila seems to be an alternative for wilwilaa.

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 marriage.



APPENDIX IVPlant 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 Waluwara names were confirmed by one or more of the other informants.

Botanical name	Common name	Waluwara name
Acacia ancistrocarpa		taja

(This has an edible gum, called *nayata*.)

*Acacia aneura* mulga *ŋalaku*

(A narrow leafed form.)

*Acacia chisholmii* turpentine bush minaritji

(This is probably not a Waluwara 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 Waluwara jindirkiri, is found in the roots.)

" *coriacea* kunjdjima

(Called kunjdjima pata, "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 kalilpi

*Acacia georginae* gidgea kijalpari

(The difference between kalilpi and kijalpari is one of habit; it appears that the former grows along the creeks - although 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, pukatika  
cooba

(This name is also used in the languages immediately south of Waluwara; Roth (1897) refers to it as "sp. of wattle used in the preparation of pituri".)

*Atalaya hemiglaaca* whitewood wukalpara, milawu

(The second name is almost certainly incorrect.)

Bassia sp. pukunukunu

*Bauhinia* sp. bean tree, natalanju

(*B. caronii* or *B. cunninghamii*) bauhinia

*Calandrinia balonnensis* parrakeelya naratalwa

(?) (B)

(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 platycephalus* (?) (B) button grass, billy buttons mikipuka

(Identified by the informant only from a photograph.)

*Canthium latifolium* warandina

*Capparis lasiantha* splitjack nulaa

*Capparis* sp. mapjanjdji

*Carissa lanceolata* congaberry jilaryala

(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* wirimanimani

" *oligophylla* narawali

(The leaves were used for medicine.)

" *planitiicola* janjdjata

" *pruinosa* jambukutu

- Chenopodium auricomiforme lignum* kunjdji
- Datura stramoneum (P)* puruwana
- Echinochloa colonum* njawiranamatālwa  
(The seeds were ground and used as flour.)
- Eremophila mitchellii* fuchsia, miljara  
sandalwood
- Eremophila sp. (?) (B)* willi  
(The yam, nūrma, was obtained from this plant.)
- Erythrina vespertilio* corkwood, bean tree pili  
batswing coral  
(Coolamons - also called pili - were made from  
the bark of this tree.)
- Eucalyptus brevifolia (B)* snappy gum tjilumatāla  
(This name was obtained from Fred Age. Mrs  
Toby did not know it.)
- " *camaldulensis (B)* river gum, matjaa  
river red gum
- " *microtheca* coolibah kalatja

*Eucalyptus microtheca* (B) coolibah njiraa, kuruwa

(The name kuruwa 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 kaļatja and njiraa/kuruwa 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 pirypura,  
pirupuna

" pruinosa silverleaf box janjawali  
(See Palmer (1884) p. 321)

" terminalis (B) bloodwood kutipiri  
(Its gum is called patpanju and was used in tanning skins. See also Palmer (1884) p.315 and 319.)

*Grevillea striata* (B) beefwood walanjdji

*Gossypium australe* njamaa

(The name njamaa, 'having milk', was also given

to *Sarcostemma australe*. Both plants contain a milky fluid.)

*Hakea chordophylla* corkwood kunjdjima  
 (tawiri 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 tjimbulaku

*Melaleuca leucadendron* tea tree, cajeput kurupa  
 tree, paperbark

(Compare the words for paper, including paper money - kurupa - and the word for blanket or clothing - kurupata - and see also Palmer (1884) p. 321.)

*Mentha australis* pennyroyal, wiminipi  
 tea bush

(wiminipi pata, "big wiminipi", cf *Pterigeron odoros*.)

*Muehlenbeckia cunninghamii* lignum junguru

*Panicum decompositum*      buffalo grass      kajangaja  
 (See Palmer (1884) p.316.)

*Parsonsia eucalyptophylla* wild banana      witambara  
 (?)

(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*      wimipi

(*tawiri wimipi*, "little wimipi", cf *Mentha australis*.)

*Ptilotus schwartzii*      waninjdjara

*Sarcostemma australe*      ŋamaa

(See also *Gossypium australe*.)

*Securinega virosa*      wulawu, wilpijara

(One of these names is probably incorrect.)

*Sida fibulifera*

njalaa

*Tinospora smilacina*

maraka

*Trioidia* sp. (B) spinifex

pañandi

(The gum, called ḫuna, was used as an adhesive.)

*Tristania grandiflora* myrtle

jandawula

*Ventilago viminalis* supplejack

tanuru, wukalpara

(The second of these names is certainly incorrect.

See Palmer (1884) p.324.)

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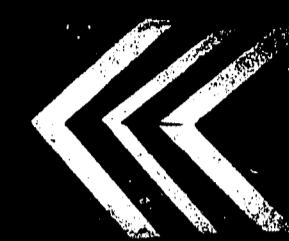
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