

**Nhanda**

Oceanic Linguistics Special Publication No. 30

# **Nhanda**

**An Aboriginal Language of Western Australia**

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University of Hawai'i Press

*Honolulu*

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Printed in the United States of America  
06 05 04 03 02 01 6 5 4 3 2 1

**Library of Congress Cataloging-in-Publication Data**

Blevins, Juliette.

Nhanda : an aboriginal language of Western Australia / Juliette Blevins.

p. cm. — (Oceanic linguistics special publication ; no. 30)

Includes bibliographical references.

ISBN 0-8248-2375-3 (pbk. : alk. paper)

I. Title. II. Series.

PL7101.N49 B54 2001

499'.15—dc21

2001027742

Camera-ready copy for this book was prepared under the  
supervision of the series editor.

University of Hawai'i Press books are printed on acid-free paper and meet the  
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Printed by Data Reproductions

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## Preface

I first set foot in Australia in July 1992 to take up a position at the University of Western Australia. Finally, after years of dreaming about describing an unknown language, I had the time and resources to devote to the task. Despite the fact that I had just moved from central Texas, where the indigenous Tonkawa language had been dead for many years, I was not prepared for what I was to learn about Australian Aboriginal languages over the next few months.

Of the 250 or so Aboriginal languages once spoken in Australia, two-thirds are extinct or moribund. Coastal languages were usually the first to go, with settlement patterns matching patterns of extinction. In Western Australia, the former home of approximately 110 Aboriginal languages, 45 were presumed extinct, and another 30 were on the verge of extinction. Wajuk, the original language of Perth, was dead. Nyungar, the language of the southwestern tip of the continent, was gone. Mirning, the language of Eucla, had disappeared with barely a trace. Witjaari, once spoken north of Wajuk, was now a ghost language. And the list went on. I had come to a land of linguistic devastation.

Several Western Australian languages had only the briefest descriptions in the published literature. One of these was Nhanda. My first inquiries regarding Nhanda met with disappointment: Mrs. Mary Morgan, the last reported fluent speaker of Nhanda, had died some time ago. I was too late.

But maybe not. The Yamaji Language Centre had heard from Mrs. Violet Drury, Mrs. Morgan's granddaughter. Mrs. Drury said that her mother, Mrs. Lucy Ryder, could speak Nhanda, and that she was starting to transcribe her words. Mrs. Ryder lived in Northampton, and was interested in meeting with me. I threw a cassette recorder, a notebook, and a change of clothes in a bag, and hopped on the next bus North. In Geraldton, I met Doug Marmion, then director of the Yamaji Language Centre, and together we drove to Northampton to meet Mrs. Ryder. She was sitting on her front porch, enjoying a light breeze. We started to talk, and used the few Nhanda words we knew: *ku'arlu* 'good', *apa* 'water'. Were we saying it right? Lucy nodded and said: 'e'e, 'e'e. Just at that moment, someone drove a car into the driveway and hit the fence: *Ciiga!* Lucy called out, as she giggled to herself. *Ciiga*, I repeated, as we all laughed. "Lucy, what does *ciiga* mean?" My work on Nhanda had begun.

Working with the last known speaker of a language can bring great joy and fulfillment, and at the same time, great pain and frustration. Lucy and I have worried equally about the correctness of all that follows, and the errors that might remain. All I can say is that we have done our best.

July 2000

Juliette Blevins

# Acknowledgments

This work has received generous support from AIATSIS in the form of Research Grants 1994/308 and 1995/309 and from the University of Western Australia Faculty of Arts in the form of Travel Grants for 1994 and 1995. Writing of this work was also supported by the 1996 University of Western Australia Stanford Women's Fellowship.

Sincere thanks to the staff and friends of the Yamaji Language Centre in Geraldton for their friendship and technical support and for fostering interest in this work from its inception to the final stages. Thanks also to Barry Alpher, Peter Austin, Barry Blake, Alan Dench, and Bob Dixon for comments on early chapter drafts, and for continuing to share their work-in-progress with me. Many thanks to Ken Hale for the copy of his fieldnotes, and for his words of encouragement after reading a first draft of the entire manuscript.

*Merci beaucoup* to Stéfany Jack for making the long journey with me to Northampton in June 1998 when I returned to Australia to check the grammar, and for taking such good care of Molly, (little) Lucy, and Becky during that time.

Special thanks to my family, all the Levins and Blevins, whose love nourishes all I do. Continuing thanks to my husband Jim, for encouraging me to pursue my dreams, and for giving me the technical support to see them realized. To my dearest mother, who was with me when this project began, and is now with me in spirit, thank you for all you have taught me.

My greatest thanks go to Mrs. Lucy Ryder, my Nhanda teacher, and to her family, especially Violet Drury and Doug Ryder, for their friendship and help. Thank you, Big Lucy, for your hard work, your patience, and your trust.

Lucyjadatha,  
inyanha ngayi walganyjanunygu.



# Abbreviations

ABS	absolutive	PAST	past tense
ACC	accusative	PATH	path locative
AGT	agentive	PIMPF	past imperfective
ALL	allative	PL	plural
AMB	ambulative	POOR	'poor' derivational suffix
AUG	augmentative	POSS	possessive
BEL	'belonging' derivational suffix	PPERF	past perfective
BY	proximate locative	PRES	present
CAUS	causative	PRIV	privative
CHER	'cherished' derivational suffix	RECIP	reciprocal
COLL	collective	REFL	reflexive
COM	comitative	REV	'revealing' derivational suffix
DAT	dative	SIM	similative
DIR	directional	SPACC	specific accusative
DU	dual	STUFF	'stuff' derivational suffix
EL	elative	1p	first person free pronoun
ERG	ergative	2p	second person free pronoun
FOC	focus	1PL	first person plural bound pro- noun
FUT	future	1SGDO	first person singular direct object bound pronoun
HAB	habitual	1SGOBL	first person singular oblique bound pronoun
IMP	imperative	1SGSUBJ	first person singular subject bound pronoun
INCH	inchoative	2SGDO	second person singular direct object bound pronoun
INSTR	instrumental	2OBL	second person oblique bound pronoun
IRR	irrealis	2SGSUBJ	second person singular sub- ject bound pronoun
LOC	locative	3PLDO	third person plural direct object bound pronoun
LOC2	old locative	3OBL	third person oblique bound pronoun
LONG	'long' derivational suffix		
NEG	negative particle		
NFUT	non-future		
NOM	nominative		
NPAST	non-past		
PART	participle		

## Abbreviations of Dialects and Languages

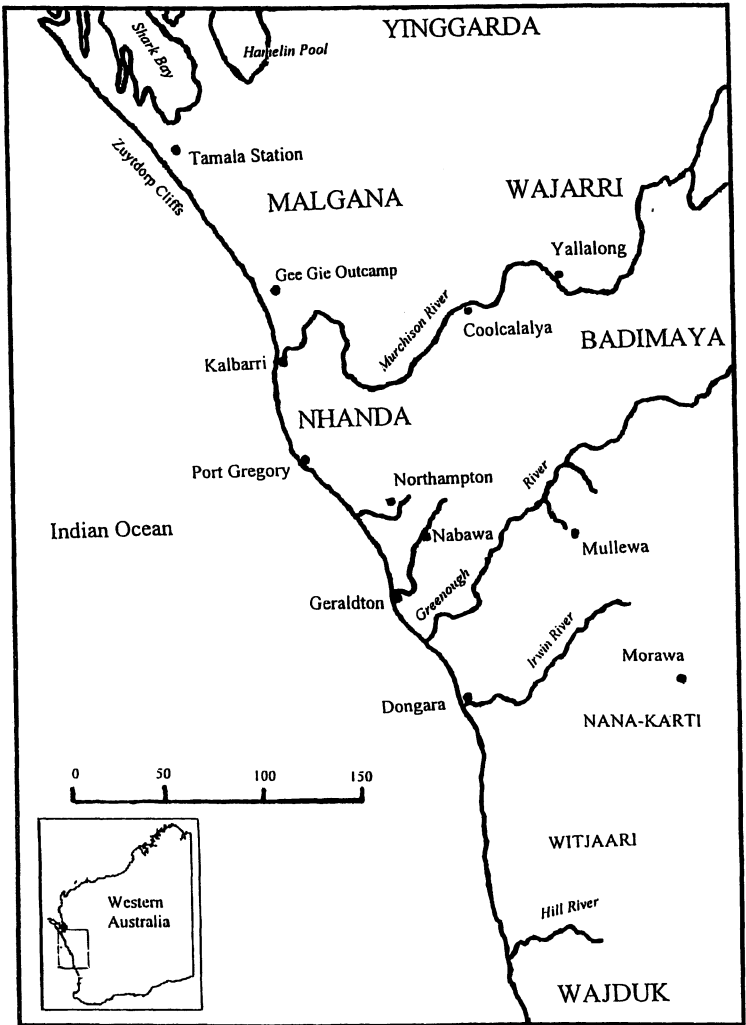
BAD	Badimaya	pNYY	proto-Nyungo-Yuulngic
C	Central Nhanda	pP	proto-Paman
GRY	Gariyarra	pPN	proto-Pama-Nyungan
GUP	Gupapuyngu	P/L	Pintupi/Luritja
KNJ	Kaantju	P/Y	Pitjantjatjara/Yankunytjatjara
MAL	Malgana		
NHA	Nhanda	S	Southern Nhanda
NY	Nyungar	UMP	Umpila
PIN	Pintupi	WAJ	Wajarri
pMAN	proto-Mantharta	WJK	Wajuk
pNhK	proto-Nhanda-Kartu	Y	Y conjugation class
pNPN	proto-Nuclear-Pama-Nyungan	YN	Northern Yinggarda
pNY	proto-Nyungic	YS	Southern Yinggarda

## Abbreviations in Lexicon

ADV	adverb	AO	Oldfield (1865)
D	D conjugation class	Waj	Wajarri loan
DB	Bates (n.d. 85)	sth	something
Eng	English loan	s.o.	someone
INT	interjection	(?)	guess at phonemic form based on earlier transcriptions
IRR	irregular verb		
I/I	interrogative/indefinite	(?)	conjugation class undetermined due to paucity of inflected forms
KH	Hale (1960)		
ko	kind of		
LOC	locational nominal		
N	nominal		
NH	NH conjugation class		
Ny	Nyungar loan		
OG	O'Grady (1966)		
PN	proper noun		
PRO	pronoun		
RTG	Goldsworthy (1886b)		
V	verb		

**PLATE: Mrs. Lucy Ryder (center), with her great-grandnieces,  
Rhianna Couzens (left) and Nicole Couzens (right)**





MAP: Nhandu and its neighbors

# 1 The Language and Its Speakers

Nhanda is a language of Western Australia, once spoken along a coastal strip 20–100 kilometers wide from present-day Geraldton north to the Murchison River. Nhanda is one of the least studied Aboriginal languages of Western Australia and is currently on the verge of extinction. Nhanda is unique among languages in this area in displaying evidence of initial consonant loss, a voicing contrast in obstruents, a distinctive glottal stop, a tripartite system of bound pronominals, a verbal conjugation contrast between unaccusative and unergatives, and an incipient case-marking system where intransitive subjects, transitive subjects and direct objects all have distinct case markers. Presently, Nhanda is spoken by a handful of people at most.

## 1.1 Linguistic Type

Typologically, Nhanda resembles many languages classified as Pama-Nyungan. At the phonological level, it has a small segment inventory, with three basic vowels /i,u,a/ and 26 consonants. The consonant system contrasts stops, nasals, and laterals at six points of articulation: labial, lamino-dental, lamino-palatal, apico-alveolar, apico-postalveolar, and velar. Glides include the pan-Australian /w,y/ along with a rhotic glide and glottal stop. Most words are vowel-final, and due to historical initial-consonant dropping, many words are vowel-initial. Due to sonorant fortition, and subsequent assimilation in obstruent clusters, there is now an obstruent voicing/length contrast.

Nhanda words consist of single or compound stems, followed by zero or more derivational and/or inflectional suffixes. There is no evidence of productive prefixation in the language. Lexical categories include nominals, verbs, adverbs, and particles. There are no clear morphological or syntactic differences between nouns and adjectives which together constitute the class of nominals. Free pronouns contrast with bound pronouns.

The Nhanda system of bound pronouns is very unusual from an areal perspective, and appears to be unique within Australia. Bound pronouns are of three types, signifying subject function, direct object function, and oblique function for verbs, and this last class also marking possessive function for nominals. The

verbal conjugation class system is also remarkable. There are two main conjugation classes, referred to here as Y and NH. The determination of conjugation class is based on argument structure and the semantics of the verb: with only a few exceptions, if a verb is unaccusative, it conjugates in the NH class, and otherwise, in the Y class.

Many Australian languages show a mixed case system, with pronominals taking nominative/accusative case and non-pronominals taking ergative/absolute case. This system appears to be in the process of extension in Nhanda. In addition to this split, non-pronominal direct objects can also occur with the accusative case marker, though this marking is not obligatory. In some instances, the accusative marker appears to be associated with specificity or definiteness of the object noun phrase. Within the noun phrase, case marking may occur on all elements or on just one.

## 1.2 Tribal and Language Names

Nhanda (other spellings are Nanda, Nhanta) is the name of the language and people once living along the coastal strip north of Geraldton and south of Shark Bay. This language is also known in nineteenth-century sources as *Amangu*, *Eaw*, *Jau*, *Watchandi*, and *Wilunya*, and the people are sometimes referred to as the Champion Bay Tribe. Two of the language name terms appear to be based on directionals in Nhanda, and were probably used by neighboring groups. *Eaw* is likely a rendering of Nhanda i'u 'south', while *Watchandi* (also spelled *Wadjandi*, *Wadyandi*, *Watchandie*, *Watjandee*, *Watjanmay*, *Watjandi*, *Watjanti*, *Wattandee*, *Wattandi*) appears to be derived from Nhanda wacu 'west'. *Wilunya* may be a derived form of the root wilu 'sea'. *Jau* could be a way of writing Nhanda ya'u 'none, nothing', given the common language-naming practice in Australia based on words for 'no'. And *Amangu* (also spelled *Amandyo*) is a southern dialect form of Nhanda ammanu 'man, person', probably taken originally from Goldsworthy's (1886b:316) Champion Bay wordlist which includes *amango* 'a Blackfellow'. (Further south in the Dongara district where final vowel loss is more prevalent, Bates (n.d. 85) shows *ammong* 'man', confirming the existence of a velar nasal in the final syllable. Compare Western Desert *amangu* 'person'.)

Tindale (1974:249) includes Buluguda (Bulugurda), Damala (Thaamala) and Daguda (Thaagurda) as local groups of Nhanda in the Hamelin Pool area. The ending -gurda is the Malgana comitative suffix, and given their location, Buluguda and Daguda are likely local groups of Malgana. Nhanda people in the Northampton area certainly refer to all of these groups as Malgana, and this classification is consistent with Playford (1996:212), where the Malgana-Nhanda boundary is situated close to Gee Gie, about halfway between the Murchison River and Tamala Station.

### 1.3 Dialects

Very little is known about Nhanda dialects, though comparison of my own data with earlier sources suggests at least three dialect groups. The northernmost group (and the language/dialect described here) is referred to as Nhanda, and was spoken in and around the mouth of the Murchison River, north to Gee Gie Outcamp, and inland along the Murchison. The central group was referred to as Watchandi, and spoken in and around present day Port Gregory and Northampton north to the lower Murchison. And the southern dialect Amangu (also known as Amandyo, Nhaaguja, Njaagurdi, and Nyaakurti) was reportedly once spoken from Geraldton (Champion Bay) south to Hill River and inland to Mullewa.

The most useful Watchandi source is Oldfield (1865). Though Oldfield's Watchandie was collected in and around Murchison House Station soon after its establishment in the 1850s, it seems representative of a dialect intermediate between Nhanda and Amangu. For example, the word for 'stone, rock' is *wur'a* in Nhanda, and *andu* in Amangu, while Oldfield's Watchandie shows both forms attested. Watchandie is also intermediate between Nhanda and Amangu in terms of final vowel loss. Amangu, like Wadjuk and Nyungar to the south, has undergone regular final vowel loss. Watchandie has more vowel loss than Nhanda, but less than Amangu.

Amangu is attested in only a few wordlists including Goldsworthy (1886b), Foley (1865), and Bates (n.d. 85).

Superficial phonological differences between the dialects appear to reflect two principal sound changes. The southern dialect shows lenition of post-tonic consonants (e.g., \*p > w, \*r > ø) which are long or fortis in north and central dialects, and also shows more final vowel loss which is sporadic in the central dialect, and absent in the northern dialect. However, initial consonant-drop, distinctive glottal stop, a complex bound pronoun system, and unique free pronouns unite the three dialects and distinguish them from surrounding languages. In Table 1-1 words from the northern dialect described in this grammar are compared with (orthographic) forms from the central Watchandi dialect described by Oldfield (1865), and a southern dialect from the Dongara district in Bates (n.d. 85). While most isoglosses group either north and central or central and southern dialects, some exclude the central dialect, like those for *wana* 'digging stick' and *abarla* 'child'. Based on Watchandie as described in Oldfield (1865), which contains several dozen sentences, there are no obvious syntactic differences between Watchandie and Nhanda. The conjunction *kala* 'and' is absent in the northern dialect, but occurs in the southern dialect.

Throughout this grammar, unmarked Nhanda forms are from the northern dialect spoken around the mouth of the Murchison River. Where other dialect forms are discussed they are annotated as central (C) or southern (S).

**Table 1-1. Nhanda dialects**

Northern	Central	Southern	Gloss
agu	<i>ago</i>	<i>aagoo</i>	'mother'
ama	<i>amo</i>	<i>amma</i>	'father'
uthu	<i>ot-tho</i>	<i>oothoo</i>	'dog'
ibi	<i>e-bee</i>	<i>ebbee</i>	'breast'
wurtka	<i>oka</i>	<i>wooka</i>	'ear'
yina	<i>e-na</i>	<i>eena</i>	'foot'
ngayi	<i>g'ni</i>	<i>ngai</i>	'I'
nyini	<i>nee-nee</i>	<i>nyinnee</i>	'you'
nyarlu	<i>ne-a-lo</i>	<i>innaloo</i>	'woman'
ku'arlu	<i>gwa-lo</i>	<i>goaloo</i>	'good'
i'ajata	<i>e-a-ca-ta</i>	<i>yajja</i>	'digging'
i'u	<i>e-u-a</i>	<i>meenung</i>	'South'
war'u	<i>wy-ro</i>	<i>waiooroo</i>	'bad'
idalu	<i>e-ra-to</i>	<i>yabbaroo</i>	'North'
idinba	<i>e-rim-ba</i>	<i>nyelle</i>	'moon'
milu	<i>mee-loo</i>	<i>erdungoo</i>	'eye'
wacu	<i>watch-u</i>	<i>weeloo</i>	'West'
wur'a	<i>wo-ra, an-do</i>	<i>andoo</i>	'stone, rock'
apa	<i>ap-pa</i>	<i>ow'wa</i>	'water'
mara	<i>ma-ra</i>	<i>maa'</i>	'hand'
maru	<i>maru</i>	<i>maow</i>	'dark'
wana	<i>wip-pa</i>	<i>wanna</i>	'digging stick'
abarla	<i>een-der-ie</i>	<i>abbala</i>	'child'
pi'i	<i>pipi</i>	<i>wal-a-ta</i>	'uncle'
indiya	<i>in-de-a</i>	<i>indawong</i>	'star'
arnmanu	<i>au-man-o</i>	<i>ammong</i>	'man, person'
warla-tha	<i>wal-a-ta</i>	<i>kaggooreetha</i>	'my head'
mutha	<i>moo-tha</i>	<i>moodha</i>	'nose'
	<i>bat-tje</i>	<i>balja wa</i>	'coolamon'
tharti		<i>dart</i>	'back'
yawarda-barta	<i>yo-er-do-bat</i>		'big kangaroo'
urda-barta		<i>oord'bat</i>	'very angry'

## 1.4 Territory and Surrounding Languages

Nhanda territory appears to stretch along the coast of central Western Australia, possibly from as far south as the Hill River, through Champion Bay, and up to the sandplains north of the Murchison River. If Watchandie and Amangu are central and southern dialects of Nhanda, as suggested above, then at least as late as the mid to late nineteenth century, Nhanda tribes inhabited coastal and inland areas, extending east as much as a hundred kilometers at points. Thieberger (1993:90) suggests that the language was mainly spoken south of the Murchison River. However, points north of the Murchison figure prominently in Nhanda stories, and two elder Nhanda were quite certain that the territory extended north towards Tamala Station, and East along the Murchison to the bend at Coolcalalya. Points all along the mouth of the Murchison, north and south, have Nhanda names and stories associated with them, and present day Kalbarri, known in Nhanda as Wudumalu, was clearly part of the Nhanda territory, with many fresh-water springs named, including those below the high tide line. One story, associated with Jibi Wujayi, a point on the North shore of the Murchison, tells of a sandlark that went into a tunnel there and came out about 20-30 miles away at Nhanganyja Spring. I follow Playford (1996:212) in situating the northern boundary of Nhanda country close to Gee Gie Outcamp, about half-way between the Murchison River and Tamala Station. North of this boundary was Malgana country.

The map (p. xv) shows approximate locations of Nhanda and surrounding languages. As already mentioned, Nhanda country borders Malgana to the North, with the boundary close to Gee Gie Outcamp, about halfway between the Murchison River and Tamala Station (Playford 1996:212). North of Malgana country is Yingkarda territory. South of Dongara, one finds Wajuk, the northern limit of the Nyungar dialects. It is unclear what languages were spoken between the southern extent of Nhanda (the Amangu dialect) and the northern extent of Wajuk. One group reported in this area are the Witjaari (Tindale, 1940). The Nhanda word *wicaa* means ‘far out, a long way off, further out’; it seems possible then that *Wicaa-ri* is the Nhanda name for the language/group beyond the southern boundary of their territory. Northeast of Nhanda is Wajarri country. It is also unclear what languages were spoken between the eastern extent of Nhanda and the western extent of Badimaya (Dunn 1982, Thieberger 1993). *Nana-karti* or *Widi* (Bates n.d. 81, n.d. 84) is reported near Carnamah and Gullewa, and Perks (1886) describes *Cheangwa*. The name ‘*Cheangwa*’ looks like a Nhanda word: *Jianga* is the name of a place near the Murchison where there is a big thicket, and to this may be added the common Nhanda comitative suffix *-waa* (see Table 1-2 below). Inter-marriage is reported between Nhanda and Malgana, and Nhanda and Wajarri, and there appear to be loanwords in Nhanda from both of these languages.

Nhanda is quite different from surrounding languages both in terms of sound patterns, morphology, and morphosyntax. Nhanda has a distinctive glottal stop,

and evidence of regular initial consonant loss, both of which are absent in neighboring languages. It has also undergone fortition and assimilation, resulting in an incipient voicing contrast, which is also absent in neighboring languages. Free pronouns differ from those of neighboring languages, as does the tripartite system of bound pronouns. Finally, the verb conjugation system differs markedly from those of Wajarri (Marmion 1996), Yingkarda (Dench 1985), and Badimaya (Dunn, 1982). Mrs. Ryder reported no mutual intelligibility (aside from scattered lexical items) between Nhanda and Malgana, Nhanda and Wajarri, and Nhanda and Yingkarda. There appears to have been more intermarriage between the Nhanda and the Malgana than other groups, and more reported bilingualism for these two languages.

Evidence from placenames supports the view that the Nhanda could have at one time had territory extending as far south as the Hill River, and several hundred kilometers inland. The Nhanda comitative suffix *-waa* ‘having, with’ is common in placenames. Oldfield, writing in the mid-nineteenth century, makes the same observation:

In the composition of the names of places, the particle *wa* (variously transformed) signifying *in possession of, containing, &c.*, is very general as a termination, being added to some word denoting a characteristic of the locality. (Oldfield 1865:291)

For example, a pair of hills on the North side of the lower Murchison are named Bilhidawaa and Junawaa, where *bilhida* ‘spear’ and *juna* ‘axe’ are Nhanda stems. These two hills were places where much fighting took place. *Maluwaa* is the name of a shady spot just down the river from present-day Murchison House; *malu* is the Nhanda word meaning ‘shade’. What allows these placenames to be used as evidence of Nhanda settlement is that, as far as I am aware, no other language in Western Australia has a comitative suffix *-waa*. What is peculiar is that analysable place names with *-waa* have been found quite far from the coastal region between Geraldton and Gee Gie Outcamp (see, for example, the location of *Mullewa* and *Morawa* on the map, p. xv). Some of these placenames are listed in Table 1-2 with proposed Nhanda morpheme structure and glosses.

One interesting feature of some of these names is that they are formed by adding the comitative suffix to a verb stem: *ngalu-waa*, *wula-waa*, *yangga-waa*. In modern Nhanda, the comitative is attached only to nominals, so that this could be an archaic feature of the language. Other placenames with *-waa* appear to be formed on borrowed stems. For instance ‘Tenindewa’ is likely an anglicization of *thanindi-waa*, where *thanindi* is ‘mallee fowl’ in Wajarri, though this stem could also be Watchandie *tan-een-due* ‘rail’ (Oldfield 1865:294). ‘Bindangwah’ appears to be based on the Nyungar verb *bindang* ‘smell’; though cognate percentages are higher between the southern dialect of Nhanda and Nyungar than central or northern dialects, *bindang* does not occur in any Amangu wordlist. A placename clearly of relatively recent origin is ‘Damperwah Hills’, likely from the English ‘damper’

**Table 1-2. Probable Nhanda placenames with -waa**

English	Nhanda	Gloss
Gullewa Mine	karla-waa	'fire-COM'
Mullewa	malu-waa	'shade-COM'
Morawa	mara-waa	'hand-COM'
Mt. Muggawah	muga-waa	'deep-COM'
Noogawa Well	muga-waa	'deep-COM'
Nabawa	nguba-waa	'blood-COM'
Billawa Well	pirlu-waa	'boomerang-COM'
Tutawa Well	thudu-waa	'meat-COM'
Wee Wah Dam	wigi-waa	'froth-COM'
Urawa Rocks	wur'a-waa	'rock-COM'
Nullewa Lake	ngalu-waa	'drinking-COM'
Eulawa Well	wula-waa	'crying-COM'
Ullerwah Soak	wula-waa	'crying-COM'
Yangewah Pool	yangga-waa	'pouring-COM'

plus the Nhanda comitative. Of course, it is always possible that Nhanda trackers, far from home, were responsible for many of these names. But the wide distribution, adoption by locals, and unique morphosyntax of the Nhanda placenames in Table 1-2 could be indicative of their ancient status.

Unfortunately, very little archeological work has been carried out in Nhanda country, though archeologists at the University of Western Australia are currently dating middens in Malgana country, excavations along the upper Murchison, and many deposits in Nyungar country.

## 1.5 Present Situation

Presently there are no more than a few speakers or semi-speakers of Nhanda remaining. The present grammatical sketch relies to a great degree on the patience, memory, dedication, and hard work of Mrs. Lucy Ryder of Northampton, Western Australia who began teaching me Nhanda in 1992. Mrs. Ryder was born on Murchison Station in 1919. She was brought up speaking Nhanda at home with her mother, Mrs. Mary Morgan, and her maternal grandmother, Jilinha (*aka* Jilba), and learned English from others on the station. Mrs. Ryder continued to use English through most of her life, until her mother became old. At this point, Mrs. Morgan, who spoke English well, reverted to Nhanda and it was this language that



Lucy spoke in looking after her elderly mother until her passing. Though Mrs. Ryder's memory of the language is not complete, a comparison of her speech with Gratte's (1967) recordings of her Uncle Watty Barker speaking Nhanda, suggests that her pronunciation of Nhanda is native, and that phonetic, phonological, morphological, and syntactic nuances of the language are very much intact. The late Mrs. Pearl Whitby also contributed Nhanda words to this study. Two descendants of Angeline Kelly, a Nhanda speaker of Mary Morgan's generation, may also have knowledge of the language: her son, Jack Brand, of Carnarvon, and her granddaughter, Phyliss McMahon of Perth (Mrs. McMahon's mother is Mr. Brand's eldest sister).

From late 1992 until late 1995, the bulk of material in this sketch was collected from Mrs. Ryder during three- to four-day trips to her home in Northampton and surrounding Nhanda country every few months. We were also able to work together during her annual visits to Perth. In June 1998, I spent an additional three weeks with Mrs. Ryder checking a draft of this sketch and vocabulary. Most of the work was by elicitation. However, in remembering episodes from her childhood, Mrs. Ryder would often come out with spontaneous sentences and short dialogues which were direct quotes. Copies of my fieldnotes and tapes are held by AIATSIS, and by the Yamaji Language Centre in Geraldton.

The risks of working with a single speaker on a moribund language are numerous. I beg the reader to take this work for what it is: a sketch grammar of a language on the verge of extinction.

## 1.6 Past Investigations

There is very little past work on Nhanda. A collection of nineteenth- and early twentieth-century wordlists, including Foley (1865), Oldfield (1886), Goldsworthy (1886a,b), and Bates (n.d. 36, 37, 85), are quite useful in establishing the geographical range of Nhanda and significant dialect differences. Foley (1865) and Goldsworthy (1886a,b) are short wordlists of variable quality, only useful once one is already familiar with the language. Oldfield (1886), a short wordlist, is sketchy, and not at all representative of his later more in-depth knowledge of the language, exhibited in his 1865 article. Bates (n.d. 36, 37, 85) are of variable quality, but useful in showing the southern extent of the Nhanda dialect chain, and identifying a further set of placenames with likely Nhanda origins. For example, *kattabee* 'girdle of opossum hair' from Bates (n.d. 85) appears to be the origin of Cataby, a town on the Brand Highway a good 150 kilometers south of Dongara, where this wordlist was collected.

Other more recent wordlists include Brandenstein (1965, 1973), Gratte (1967), and Drury (1989). Brandenstein (1965) and Gratte (1967) contain Nhanda words and customs described by Watty Barker, while Brandenstein (1973) is a

short wordlist, containing some basic Nhanda vocabulary. Drury's (1989) notes provide phonemic transcriptions of basic vocabulary, based on sessions with her mother, Mrs. Lucy Ryder.

Oldfield (1865) has a wealth of information on Nhanda language and culture. Despite its lurid tone and racist statements, this article is the only source portraying Nhanda language and customs as they might have been in pre-European contact times. Oldfield describes many cultural details, including myths of the Watchandie, their ways of gathering and preparing food, their annual Spring corroboree, and certain initiation practices. He also includes several shorts songs and a brief grammatical description, along with a fairly extensive wordlist, dozens of conjugated verbs, and a variety of short phrases. Mrs. Ryder was able to confirm common and unique aspects of Nhanda culture recounted by Oldfield including: the association of thunderstorms and particular thickets on the banks of the Murchison with *ingga* 'ghosts'; the extraction of *pulya* 'magical essence' from the body by violent rubbing and gripping of the stomach; the burial of corpses in a squatting position, with the knees bent; mother-in-law avoidance by newly married men; the absence of subincision/circumcision as part of male initiation rites (v. O'Grady 1959); and techniques for digging up *ajuga*, the native species of yam (*Dioscorea hastifolia*).

O'Grady, Voegelin, and Voegelin (1966), which is based on O'Grady (1957–58), Hale (1960), and O'Grady (1966), provides a brief description of Nhanda, including phoneme inventory, case suffixes, and full and bound pronouns. Most of this material is based on 1960 sessions with Jack Councillor. Jack Councillor's language differs in significant ways from Lucy Ryder's, and appears to represent the central dialect of Nhanda. In O'Grady's fieldnotes, it is noted that Mr. Councillor was a speaker of Malgana as well as Nhanda, so it is possible that some of the discrepancies are due to mixing of the two languages. In any case, all significant differences are noted, where relevant, in the text.

Publications based on my own fieldwork include: Blevins and Marmion (1994, 1995); Yamaji Language Centre (1998); and Blevins (1998, 1999, to appear). Blevins and Marmion (1994) reports on sound changes which have occurred in the history of the language, while Blevins and Marmion (1995) focuses on the phonemic status, distribution, and origins of Nhanda glottal stop. The Yamaji Language Centre (1998) publication, *Nhanda Wangganhaa*, is an illustrated primer, with basic vocabulary in English and Nhanda, and description of the practical orthography. Blevins (1998) argues against the hypothesis put forth by Gerritsen (1994) that there has been a Dutch influence on the Nhanda language. Blevins (1999) is a recent assessment of potential genetic relationships between Nhanda and neighboring languages, while Blevins (to appear) includes Nhanda in a survey of Australian languages having undergone initial consonant loss. Where analyses or facts differ between earlier publications and the present grammar, this work should be taken as more accurate and comprehensive.

## 2 Phonology

The sound patterns of Nhanda differ in many ways from those of surrounding languages. Nhanda differs from languages to the East and South in having a voicing or length contrast in stops. Nhanda is also the only Western Australian language outside of the Kimberley to have a distinctive glottal stop. Finally, Nhanda has a wealth of vowel-initial words, which are rare in neighboring languages.

To understand and state descriptive generalisations pertaining to the sound system of Nhanda, it is necessary to consider a number of phonological patterns in some detail.

### 2.1 Consonants

The consonant phonemes of Nhanda are shown in Table 2-1 using Nhanda orthographic symbols. Digraphs are used to write lamino-dentals, apico-post-alveolars, the velar nasal, and the lamino-palatal nasal and lateral, and an apostrophe is used to write glottal stop.

**Table 2-1. Nhanda consonant phonemes**

	bi-labial	lamino-dental	apico-alveolar	apico-post-alveolar	lamino-palatal	velar	glottal
voiceless stop	p	th	t	rt	c	k	
voiced stop/flap	b	dh	d	rd	j	g	
nasal	m	nh	n	rn	ny	ng	
lateral		lh	l	rl	ly		
glide	w	(yh)		r	y		'

Orthographic symbols which do not have standard IPA values are listed below with their IPA equivalents

Nhanda	th	dh	nh	lh	yh	ng
IPA	t̪	d̪	ɲ	l̪	j̪	ŋ
Nhanda	rt	rd	rn	rl	d	r
IPA	t̪	d̪	ɲ	l̪	r, d	r
Nhanda	c	j	ny	ly	y	'
IPA	t̪, t̪ʃ	d̪, d̪ʒ	ɲ	ɬ	j	ʔ

In the rare cases where m-g or n-g clusters need to be distinguished from forms with velar nasals, these will be written as m.g and n.g respectively. In non-Nhanda data which include an apico-alveolar tap, flap, or trill I will write this as rr, — the common orthographic symbol used for this sound in other Australian languages. Homorganic nasal stop clusters are written as combinations of nasal and stop symbols, except that the lamino-dental cluster is written ndh (not nhdh) and the apico-post-alveolar cluster is written rnd (not rnrd).

Though /w/ is listed under labials, it is, in fact, a labio-velar glide. The lamino-palatal glide /yh/ is found in only a single word in the database: kurlayhi ‘river red gum’. This sound is produced with both palatal and laminal approximation; the tongue body is in the same position it would be for /y/, but the blade of the tongue is flat and approaches the front of the hard palate and teeth. The lamino-palatal obstruents /c,j/ tend to be realized as postalveolar or pre-palatal stops or affricates. The apico-alveolar series is generally retroflex, though retroflexion can be weak or imperceptible. The apico-alveolar vs. apico-postalveolar stop contrast is a weak one in distributional and perceptual terms. While there are minimal or near-minimal pairs for all manners of articulation, as shown in (1), the contrast in stops is sometimes fully neutralized, and can vary with compensatory lengthening of a preceding stressed /a/ vowel.

(1) THE APICAL CONTRAST

artpa-	‘light, burn’	purndu	‘back’
atpi-	‘tie’	pundu	‘rain’
parduda	‘turkey’	warla	‘head’
paduda	‘dress, frock’	walajadi	‘thunderstorm’
		mara	‘hand’
		madi	‘sore, wound’

Some examples of variation in the phonetics of apico-postalveolar stops are given in (2). In (2i), where a retroflex stop is preceded by a stressed /u/ in an open syllable, there is little variation. In (2ii) where a retroflex stop is preceded by a stressed /a/ in an open syllable, retroflexion can be lost, with lengthening of the preceding vowel. In (2iii) where a retroflex stop is preceded by /i/, there is often

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neutralization to an apico-alveolar stop. Finally, in all other positions (i.e., after stressed /a,u/ in closed syllables, and after unstressed /a,u/), there is free variation between a retroflex and apico-alveolar stop.

(2) VARIATION IN APICO-POSTALVEOLAR STOPS

i.	urda	‘wild, angry’	[úɖʌ]
	yurdu	‘daughter’	[júɖʊ]
ii.	marla	‘clay, mud’	[máʎʌ],[má:ʎʌ]
	mardala	‘clouds’	[máɖʎʌʎ],[má:ɖʎʌʎ]
iii.	wirdaa	‘leg’	[wíɖʎa:], [wíɖa:]
	atpirda	‘a lie’	[átɖiɖʎa],[átɖida]
	kuwirtpa	‘funny’	[kwíɖʎpa],[kwíɖpa]
iv.	artpa-	‘light, burn’	[átɖpa],[átpa]
	wurtka	‘ear’	[wúɖʎka],[wúɖka]
	magurda	‘dream; photo’	[máɖʎɖʎa],[máɖʎɖa]
	matharda	‘sick’	[mátʎɖʎa],[mátʎɖa]

The laminal contrast is illustrated by the pairs in (3). Voiceless stops in Nhanda are longer than corresponding voiced stops (see Section 2.5). The lamino-dental dh is often produced without voicing, but still contrasts in length with th which is never voiced.

(3) THE LAMINAL CONTRAST

pathu	‘alone’	anha	‘that one’
-ba-cu	‘INCH-STUFF’	wanya	‘ko tree’
Kadhaagurdu	‘Shark Bay’	pulha	‘many’
yajalu	‘friend’	pulya	‘magic’
		kurlayhi	‘river red gum’
		balayi	‘watch out!’

Near-minimal pairs illustrating the voicing contrast are provided in Table 2-2. Voicing is contrastive intervocalically for stops at all points of articulation (i). The origins of this voicing contrast are discussed in Section 2.8. In pre-consonantal position (iii) there are only two words in the language which show a voicing contrast, and both are of non-Nhanda origin.

The placename Kajitgurdu, also known as Kajitgura, is likely of Malgana origin, showing Malgana comitative suffix -gurdu which is common in placenames (cf. Nhanda comitative -waa.)

The word badgutu ‘bread’ is from English ‘very good’, based on the description of Moore (1842:iv):

On the part of the settlers generally there existed the most friendly disposition toward the aborigines, which was evinced on every suitable opportunity, by the offer of bread, accompanied by the imitation of eating, with an assurance that it was “very good.” And thus, this term, “very good”, was almost the first English phrase used, and became the name by which bread was, for a long time generally known amongst the natives of Western Australia.

Presumably the word was borrowed as \*barrgudu (as it occurs in Malgana), and then underwent fortition (see Section 2.8) > badgutu. Outside of these two words, all obstruent clusters in Nhanda are voiceless throughout.

**Table 2-2. Obstruent voicing contrasts**

i. /V_V	ii. /##_	iii. /_C
apa ‘water’ abarla ‘child’	pulha ‘many’ buli ‘little corella’	
matha ‘wild carrot’ Kadhaagurdu ‘Shark Bay’		
citu ‘navel’ ciidi ‘a long time’		Kajitgurdu ‘placename’ badgut <u>u</u> ‘bread’
thartiya- ‘return’ mardida ‘kingfish’		
kucidu ‘hungry’ kujidu ‘vomit’	ciidi ‘long ago’ jjida ‘larrikin girl’	
nhaka ‘look-PRES’ nhaga ‘look-IMP’	kabarla ‘puppy’ Gabagaba ‘Red Bluff’	

In word-initial position (Table 2-2 ii), where apical consonants do not occur in the native vocabulary at all, voicing contrasts are found for labials, velars, and lamino-palatals. However, while the medial voicing contrast is due to regular sound change (Section 2.8), there is good reason to believe that the voiced obstruents which occur in word-initial position are the result of borrowing, and that all word-initial obstruents in Nhanda were originally voiceless allophones of intervocalic voiced obstruents. This is supported by three observations. First, frozen reduplications like thugudhugu ‘dust’, pijibiji ‘caterpillar’, and puruburu ‘fog’ have initial voiceless stops corresponding to intervocalic voiced allophones. Secondly, when words are pronounced slowly, in a syllable-by-syllable fashion, an intervocalic voiced stop will usually surface as voiceless. These two facts suggest that /b/ regularly surfaces as [p] at the beginning of a phonological word, where in slow speech, phonological words are defined by pause. Finally, there are very few words with initial voiced obstruents. Gabagaba, the Nhanda placename for Red

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Bluff (cf. Nyungar *gabbar* ‘wide’), is the only g-initial word I have found to date. Words with initial /b/ fall into three basic classes as shown in (4): (4i) clear or likely borrowings; (4ii) placenames; and (4iii) possible borrowings. Assuming that the placenames in (4ii) are not of Nhanda origin, a voicing contrast for initial bilabial stops becomes suspect as well.

### (4) /b/-INITIAL WORDS

- i. Loans

badgutu	‘bread’ (from English ‘very good’)
bangara	‘large black goanna’ (cf. WAJ bangara)
bardi	‘edible witchetty grub’ (cf. WAJ bardi)
bigurda	‘big red kangaroo’ (cf. WAJ bigurda)
bimarda	‘watersnake’ (cf. WAJ bimarra)
bugu	‘buttocks, ass’ (cf. WAJ bugu ‘anus’)
buli	‘slender-billed corella’ (cf. WAJ buli)
  
- ii. Proper nouns

Babajidangga	‘placename (other side of Coolcalalya)’
Burungin	‘placename, Gregory Rocks’
Buku	‘placename, Bookah spring’
  
- iii. Possible loans

bunyadi-	‘blow out, put out’ (cf. NY bunan ‘hole’)
bunyja-	‘suck’ (cf. NY bunan ‘hole’)

### (5) /j/-INITIAL WORDS

- i. Loans

jangara	‘featherfoot’ (cf. P/L, P/Y jangara)
juna	‘short axe’ (cf. NY juna; WJK juna ‘short club used in fighting’; WAJ jurna ‘a woman’s hitting stick’)
  
- ii. Proper nouns

Jibi Wujayi	‘placename’
Jidamarda	‘Gidamarra spring’
Jilba	‘proper name’, cf. NY jilba ‘Spring’
Jilinha	‘proper name’
Junadawaa	‘placename’

With the palatals the situation is similar, as illustrated in (5). Placenames and proper names constitute the majority of /j/-initial words (5ii). Of these Jilba is clearly non-Nhanda, since there are no native words with /lb/ clusters, all having undergone fortition to become /tp/ (v. Section 2.8). Apart from proper nouns, there

is only *jangara*, which appears to be a loan from Western Desert, and *juna*, a possible loan from *Wajuk* (5i).

To summarize, voicing is contrastive for *Nhanda* stops in intervocalic position. In the native vocabulary, voicing is noncontrastive in obstruent clusters where the entire cluster is voiceless, and it is also noncontrastive in nasal-stop clusters, where the entire cluster is voiced. In word-initial position, obstruents are typically voiceless and can be viewed as allophones of the voiced series, with only a handful of exceptions, most of which are probable loans or proper names. Nevertheless, because there is a voicing contrast in the language intervocalically, I have chosen orthographic conventions which distinguish voiced and voiceless obstruents in all positions. In other words, despite the fact that voicing is non-contrastive after nasals, I will write *mb*, *nd*, *rnd*, etc. Finally, a remark is in order regarding the phonetic correlates of the voicing contrast in *Nhanda*. Though pairs like *apa* ‘water’ and *abarla* ‘child’ show a clear voicing contrast for the bilabial stops, these consonants also differ dramatically in length. At least in intervocalic post-tonic position, the phonological opposition could well be looked at as one of length, with geminate stops redundantly voiceless, and non-geminates voiced. However, the extension of this opposition to word-initial position suggests that voicing is contrastive, and this is the analysis adopted throughout.

Notice that *Nhanda* lacks a contrast between /d/ and an apico-alveolar rhotic (*rr*), with /d/ being realized variously as an apicoalveolar stop or tap/flap. (O’Grady, Voegelin, and Voegelin 1966 have no contrast between /d/ and /rr/ either. They propose /rr/, but fail to recognize a voicing contrast for stops elsewhere.) I could just as well have chosen /rr/, a flap, as underlying with [d] as an allophone. The only reason for not doing this is the historical fortition of \*d>t, which parallels \*b>p, \*g>k in the relevant environments.) The two allophones [r] and [d] are generally in free variation intervocalically, with the stop more common in post-tonic position, and the tap/flap more common elsewhere. Three of *Nhanda*’s closest neighbors are claimed to have a contrast between /d/ and /rr/, an apico-alveolar trill or tap. *Wajarri* (Marmion 1996), *Yingkarta* (Austin 1992), and *Nyungar* (Moore, 1842) are all described as contrasting these two sounds intervocalically. Marmion (1996) presents several minimal pairs for *Wajarri*, but *Yamaji Language Centre* (1994) shows some variation between *d* and *rr*: compare *Wajarri mirra*- ‘call out’ with *midaguru*, *mirraguru* ‘rainbird’ (cf. *Nhanda mida*- ‘sing out’). The *Yingkarta* data shows no minimal or near-minimal pairs, so the contrast must remain suspect. On the other hand, all reported *Mantharta* and *Kanyara* languages of the Southern Pilbara lack a /d/ vs. /rr/ contrast.

Perhaps the most remarkable aspect of the *Nhanda* consonant system in the Western Australian context is the existence of a phonemic glottal stop. The only positions in which glottal stop is distinctive in *Nhanda* are intervocalically (6) and after the rhotic glide /r/ (8). But even in these positions, the functional load of distinctive glottal stop is very low, and there is only a single true minimal pair, *mar’u*



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‘rainbird’ vs. maru ‘night, dark’. As detailed in Section 2.8, intervocalic glottal stop has arisen historically from glides homorganic with a preceding or following vowel. It is for this reason that the pairs in (6) are meant to demonstrate a contrast between an intervocalic (invariant) glottal stop and a corresponding glide.

(6) INTERVOCALIC (INVARIANT) GLOTTAL STOP

ya'u	‘none’	i'a-	‘dig’
nhaawu	‘why, what for’	piyagu	‘galah’
ku'arlu	‘good, fine’	nha'i	‘see-PAST’
aguwana	‘our mother’	ngayi	‘1p’
pi'i	‘uncle’		
thiyinyu	‘mosquito’		

While all instances of intervocalic glottal stop in (6) are invariant, there are also morphemes where an intervocalic glide /y/ or /w/ varies with glottal stop. Some of this variation is across speakers, and possibly representative of different dialects. For example, the past tense /-i/ suffixed to a-final verbs surfaces consistently as ...ayi in Mrs. Ryder’s speech, but as ...a'i in the O’Grady corpus. Other variation occurs within the speech of a single individual: from Mrs. Ryder, I recorded iyu and i'u ‘South’; awuga and a'uga ‘stoke it up!’. Variation of this kind is shown in (7) and can be taken as further evidence of the sound change noted above.

(7) VARIATION INVOLVING GLOTTAL STOP

Variants		Gloss
awuga,	a'uga	‘stoke it up!’
iyu,	i'u	‘South’
thartiyayi,	thartiya'i	‘came back’
ajayi,	aja'i	‘bit’

Also discussed in Section 2.8 is the evolution of glottal stop from intervocalic rhotic glides. Examples in (8) contrast intervocalic /r'/ with intervocalic /r/. There are no other /rC/ clusters in Nhanda.

(8) POST-RHOTIC GLOTTAL STOP

mar'u	‘rainbird’	ur'u	‘buttocks’
maru	‘night, dark’	puru	‘haze’
war'a	‘bad’	wur'ada	‘black, black person’
mara	‘hand’	-buraada	‘thin, skinny’

The analysis of /r'/ as a consonant cluster rather than a glottalized rhotic unit phoneme is based on two observations. In slow speech, where pauses can mark syllable boundaries, a syllable break (indicated by ‘.’) is placed between the rhotic

and the following glottal stop: [waɪ.ʔa] or [waɪ'.ʔa], 'bad', [wuɪ.ʔa] or [wuɪ'.ʔa], 'stone', etc. Also, primary stressed vowels are typically lengthened in open syllables. However, stressed vowels preceding /r/ are not lengthened.

One other word with an invariant intervocalic glottal stop is the interjection 'e'e 'yes'. This is the only native Nhanda word with a distinctive /e/ vowel quality; it is also pronounced with heavy laryngealization throughout, and with slight gliding of the initial vowel from high to mid. I suspect that this word derives from \*'i'i, and that laryngealization has given rise to vowel lowering. Malgana has an identical word for 'yes', and Moore's (1842:47) dictionary of Nyungar has the following entry: *i-i* 'yes; sign of assent; pronounced gutturally...'.

## 2.2 Vowels

Nhanda has the simple three-vowel system /i u a/ with contrastive length. In stressed positions, these vowels are close to the cardinal vowels [i u a]. In unstressed positions, short vowels are centralized, and vary in quality depending in part on the quality of adjacent consonants. For example, unstressed /a/ can be realized as [ʌ] or [ə] finally, as [ə] medially, and sometimes as even higher [ɤ], for instance when between velar consonants, as in *yugangga* [jʉgʉŋgə] 'yesterday'. Vowels are partially retroflexed when followed by retroflex consonants. Long vowels are nearly twice as long as short vowels, and have a steady-state quality. Minimal and near-minimal pairs illustrating the length contrast are shown in (9).

### (9) VOWEL LENGTH CONTRAST

urda	'wild'	cidijidi	'willy wagtail'
urdaa	'directly'	ciidi	'a long time'
indaji	'ribs'	minda	'house'
indaacu	'big'	miinda-	'light'
-wa	ISGSUBJ	arndiya	'smell-PRES'
-waa	COM	arndii	'smell-PPERF'
ngutu	'large intestine'		
nguutu	'horse'		
malu	'shade'		
aluu	'that.ERG'		

Morpheme-internally, vowel length is found in initial, medial, and final syllables. The vowels in English monosyllables tend to surface as long in English loans, independent of their long/short or tense/lax status in English (e.g., *ciipu* 'sheep', *kuuki* 'cook', etc.) For more on loan word phonology, see Section 2.7. Long vowels are found in several common suffixes, including the agentive /-caa/, the comitative /-waa/, and the non-past (NH-class) /-nhaa/.

Predictable vowel length is found before the rhotic /r/ in derived environments. For example, the third-person possessive clitic -ra induces lengthening on a preceding vowel: ama ‘father’, amara [ama:ɾa] ‘her father’, agu ‘mother’, agura [agu:ɾa] ‘her mother’, etc. Length is most noticeable with a, and less so for i and u. Vowels in this context appear to be intermediate between (underlyingly) long and short vowels. Vowel length also tends to occur on stressed u in an open syllable followed by an apical-alveolar consonant, nearly neutralizing the contrast between long and short vowels in this position. Though I have written words like uudu ‘grass, straw’, puudardi ‘ko fish, bream’, etc. with long tonic vowels, it might be possible to treat these as underlying short vowels.

With the exception of the single word /e'e/ ‘yes’, the mid vowels /e,o/ are found only in English loans: coopu ‘soap’; Wagawey ‘Walkaway’. As mentioned above, /e'e/ is also phonetically aberrant in being pronounced with significant vowel laryngealization.

## 2.3 Syllable Structure and Phonotactics

Nhanda syllable types are shown in Table 2-3. Syllables may be open or closed, and vowel or consonant initial. Vowel-initial syllables are limited to word-initial position. Closed syllables include those closed by nasals and obstruents.

**Table 2-3. Nhanda syllable types**

CV	nya.rlu mi.lu ya.wa.rda	‘woman’ ‘eye’ ‘kangaroo’	CV:	nguu.ti ma.tii kan.baa.gu	‘wet’ ‘took’ ‘devil’
V	a.ba.rla i.bi u.thu	‘child’ ‘breast’ ‘dog’	V:	aa.ti.ku uu.duu	‘regardless’ ‘grass’
CVC	pun.du i.din.ba cit.ka.da war.'a	‘rain’ ‘moon’ ‘echidna’ ‘bad’	CV:C	miin.da.ga arn.ngaan.di nhaan.dha	‘light it!’ ‘Eastern people’ ‘see-FUT’
VC	arn.ma.nu im.ba at.pii	‘man’ ‘gum, sap’ ‘tie-PPERF’	V:C	uun.da.du	‘kangaroo skin pouch’

The large number of vowel-initial words in Nhanda is due to historical loss of word-initial consonants, as discussed in detail in Section 2.8. Examples in (10) show vowel-initial words in Nhanda which correspond with consonant-initial words in neighboring Wajarri and Malgana.

(10) WORD-INITIAL CONSONANT LOSS

Nhanda	Wajarri	Malgana	Gloss
aja-	baja-n-	baja-	'bite'
apa	baba	baba	'water'
ibi	bibi	bibi	'breast'
uthu	dhudhu	dhudhu	'dog'

Words like *wuthada* 'two', *wumbu* 'urine', and *wuna* 'faeces' are *w*-initial and contrast with truly *u*-initial words like *uthu* 'dog' and *uku* 'to fall down'. Vowel-initial words sometimes surface phonetically with a preceding glottal stop, and occasionally with initial breathiness or [h]. The glottal stop is most common phrase medially, between vowels, but is also heard in utterance-initial position in variation with breathiness. I treat these laryngeals as epenthetic, as they are never contrastive. Laryngeal epenthesis is stated informally in (11); the inserted glottal stop serves as an onset to the formerly onsetless syllable. Utterance-initially, [h] is an uncommon free variant of glottal stop.

(11) LARYNGEAL EPENTHESIS

$\emptyset \rightarrow ? / \text{Word}[_ \text{V}]$  (optional; domain = phonological phrase)

As a result of historical consonant loss in word-initial position, Nhanda contrasts underlying vowel-initial forms with /w,y/-initial words. In underlying vowel-initial forms, there is variation between zero and glottal stop, as a result of (11).

Underlying glide-initial forms include /w,y/ before the three vowels /i,u,a/: *wilu* 'sea', *wuna* 'faeces', *wana* 'digging stick', *yina* 'foot', *yurnda* 'thigh, hips', *yani* 'stump'. As in many other Australian languages, word-initial homorganic glide-vowel sequences /wu/ and /yi/ vary freely between [wu], [u] and [ji], [i] respectively. This appears to be due to the perceptual similarity of the homorganic segments in languages where the initial glides have very little in the way of articulatory approximation. Indeed, in Nhanda, I often heard /wu/-initial words as beginning with a long vowel uu; only after confirming that the word could not begin with a phonetic glottal stop, could I conclude that it was not underlyingly vowel initial. Though I am inclined to think of the variation in homorganic glide-vowel sequences in phonetic terms, these alternations could be stated in terms of the phonological rules in (12).

(12) INITIAL GLIDE-DELETION

a.  $w \rightarrow \emptyset / \text{Word}[_ \text{u}]$  (optional)

b.  $y \rightarrow \emptyset / \text{Word}[_ \text{i}]$  (optional)

In sum, there are two sources for surface vowel-initial words in Nhanda: those that are underlyingly vowel initial, and those which are glide initial, but have undergone glide-deletion (12). Underlying vowel-initial words like *ibi* 'breast',

have surface variants with and without glottal stop ([ʔibi], [ibi]) but never surface with homorganic glides (\*[jibi]) while underlying glide-initial words like yina ‘foot’ have surface variants with and without the initial glide ([jina], [ina]) but do not surface with initial glottal stop (\*[ʔina].) Within a constraint-based model of phonology, these patterns follow straightforwardly. Glottal stop is inserted to satisfy the syllable onset constraint. Words with underlying initial glides already satisfy the onset constraint, and therefore do not undergo glottal stop insertion.

In Nhanda, any segment can occupy the syllable onset position in intervocalic position. In the native vocabulary, syllable codas are limited to voiceless obstruents, nasals, and glides /w,r/. Occurring intervocalic consonant clusters are shown in Table 2-4, where N is a nasal stop, T is an oral stop, R is a rhotic, L is a lateral, W is a glide, N<sub>i</sub>C<sub>i</sub> indicates a homorganic nasal-stop cluster, and clusters in parentheses occur in only one or two lexical items and are suspect for independent reasons. All homorganic nasal-stop clusters occur, though as already noted, voicing is not distinctive for obstruents in post-nasal position: in this position, all obstruents are phonetically voiced. In addition, apical and lamino-palatal nasals and stops can be followed by peripheral stops /b,g/. Nasal-nasal clusters are more restricted with apical-peripheral clusters the only attested ones. Finally, clusters with initial rhotics are limited to the /r/ clusters already discussed.

**Table 2-4. Nhanda intervocalic consonant clusters**

N <sub>i</sub> T <sub>i</sub>	NT	TT	NN	RT	WL	LT
mb	nb	tp	nm	r'		(lb)
ndh	n.g	tk	nng			(lg)
nd	rn	rtp	nm			
rnd	m.g	rtk	rnng		wrl	(rlg)
nyj	nyg	ck				(lyb)
ngg	nyb	cp				

Section 2.8.3 presents evidence that inherited lateral-obstruent clusters underwent fortition in pre-Nhanda, becoming obstruent-obstruent clusters, for example, pre-Nhanda \*curlga > cutka ‘arm’. Given this sound change, the small number of lateral-stop clusters are likely non-native, hence the parentheses in Table 2-4. An exhaustive list of lateral-obstruent clusters from the Northern dialect, where regular fortition has occurred, is given in (13), with relevant forms for comparison, where available.

A w-initial cluster is found in one word: wawrla ‘alive, living’. However, given the occurrence of word-final /w/ (see below), this cluster is not problematic.

(13) LT CLUSTERS IN NHANDA

Nhanda	Gloss	Potential loan source
Jilba	'proper name'	NY jilba 'Spring'
milgi	'milk'	English <i>milk</i>
marulybidi	'jet black'	P/L maru 'black'; WAJ widi 'black'
parlba	'ankle'	WAJ parlba 'ankle'
parlgutpa-	'bark (of dog)'	P/L warlgurrba 'barking noise'
walga-	'write, draw'	WAJ, P/Y walga- 'write'
warlgabur'u	'white fluff'	WAJ warlga 'circle' + NH puru 'mist'
Wilgurdu	'placename'	MAL -gurdu 'COMITATIVE'
mandulba	'ko plant'	
munggulba	'ko plant'	
thalba	'heel'	
wilgi	'red ochre'	

There are no vowel clusters in Nhanda. Across word boundaries within the phonological phrase, and across morpheme boundaries within the word, non-identical V-V clusters are broken up by epenthetic glides. Word-internally, the only suffixes triggering glide-epenthesis are the verbal Y-class inflectional suffixes /-i/ PAST PERFECTIVE and /-a/ PRESENT. The resolution of vowel clusters with these suffixes is shown in (14).

(14) RESOLUTION OF V-V UNDER VERBAL SUFFIXATION

Stem-final V	+ /-i/ PPERF	+ /-a/ PRES
a	ayi	aa
i	ii	iya
u	ii	uwa
Examples	+ /-i/ PPERF	+ /-a/ PRES
i'a- 'dig'	i'ayi	i'aa
atpi- 'tie'	atpii	atpiya
awu- 'light a fire'	awii	awuwa

There are only two u-final verbs in the entire data-base, awu- shown above, and athu- 'cook, burn'. These verbs do not pattern together. The present tense of athu- is athura. However, this verb also has an irregular imperative athuraga, in addition to regular athuga, suggesting that the present tense athura is formed by

the addition of the third-person singular indirect object suffix *-ra*. For this reason, I take the general pattern to be that exhibited by *awu-*.

The generalizations concerning heteromorphemic word-internal vowel sequences are then as stated in a.–c. below. Across word boundaries, the generalizations are the same, but one finds the additional strategy of splitting any vowel sequence with a glottal stop, as expressed in d. below.

- a. When two vowels are identical, they merge into a tautosyllabic long vowel. (This is only true of the Northern dialect; in the Central dialect, identical vowels can be split by an epenthetic glottal stop.)
- b. When both vowels are high, the first assimilates to the second, deriving a long high vowel.
- c. When one vowel is high, and the other is non-high, an epenthetic glide homorganic with the high vowel is inserted.
- d. When strategies a.–c. above are not employed across a word boundary, insert glottal stop between adjacent vowels.

**Table 2-5. Distribution of intervocalic glides**

√ indicates attested, ∅ unattested, and ~ variation between glide and glottal stop in particular lexical items.

Context	y	w	'
á_a	√	√	∅
á_i	~	√	~
á_u	√	~	~
í_a	√	∅	√
í_i	~	√	~
í_u	∅	∅	√
ú_a	√	∅	√
ú_i	∅	√	∅
ú_u	√	∅	√

In cases where an intervocalic glide has been lost historically, the resulting forms behave as monosyllables with either long vowels or vowel-glide sequences. Examples contrasting with disyllabic VGV sequences include: *wut.paw* ‘magpie’ (< \**wutpawu*, \**wutpa'u*) cf. *kuwirtpawu* ‘for the funny one’; *mat.kaw* ‘kurarra tree’ (< \**matkawu*, \**matka'u*) cf. *nhakawu* ‘looking for’; *at.pii* ‘lie-PAST’ (< \**atpiyi*, \**atpi'i*) cf. *pi'i* ‘uncle’.

Intervocalic glides /w,y/ and glottal stop are in near complementary distribution. I attribute this to the sound change, discussed in Section 2.8.5, where

post-tonic intervocalic glides /w,y/ changed to glottal stop. Synchronic distribution of post-tonic intervocalic glides is summarized in Table 2-5. Note that wherever there is variation between a glide and glottal stop, it is always in a context where the quality of the glide (/y/ or /w/) is determined by the post-tonic vowel. I have not found (invariable) distinctive glottal stop outside of post-tonic position in Nhanda.

Within the native vocabulary there are rigid constraints on word-initial and word-final consonants. Word-initially, no apical consonants are found (with the exception of recent English loans). In addition, as already mentioned, there is not a clear voicing contrast in word-initial position, and there is no contrast between glottal-stop-initial and vowel-initial words. Finally, laterals and the rhotic /r/ are unattested word-initially. This leaves /b, m, w, dh, nh, j, ny, y, g, ng/ as the class of attested word-initial consonants within the native vocabulary, where the voiced obstruents are realized as voiceless in this position. Word-initially, both laminal series freely occur before all three vowels, and there is no strong preference for lamino-palatals before /i/ (cf. Dixon 1970), except in the nasals where word-initial *nhi...* is unattested. Word-internally, *...nhi...* occurs; *-nhii* is the past tense NH-class verbal suffix. The sequence *\*ngi...* is also absent word-initially, though it occurs freely word-medially.

Word-final consonants are extremely rare in the Northern dialect described here, and are found in only a handful of words outside of placenames: *mat.kaw* ‘kurrara tree’; *wut.paw* ‘magpie’; *kurinyguriny* ‘dizzy’; *ngu.tu.lung* ‘kangaroo sausage’. However, as noted in Section 1.3, word-final vowel loss becomes more prevalent as one moves south within the Nhanda dialect chain. It is not surprising then that O’Grady, Voegelin, and Voegelin (1966) report word-final *ny, d,* and *'*. For *ny*, however, their one example is a semblative suffix *-ngu'uny*, which I have been unable to elicit. This bears a suspicious resemblance to the Wajarri semblative suffix *-nguny* (Marmion 1996:52). They provide no examples of /d/-final words, though O’Grady’s (1966) wordlist includes one: *marngud* ‘three’, which could be a dialectal form of Nhanda *marngurdu* ‘three’ (cf. Yingkarda *mankurr* ‘three’.) Word-final glottal stop occurs sporadically after many inflectional suffixes, but also regularly after the following inflectional suffixes, with regular correspondences in (northern) Nhanda as shown below:

O’Grady (1966)	Present work	Gloss
-nhi'	-nhii	PAST
-nha'	-nhaa	NON-PAST
-ka'	-kà	IMPERATIVE

For the two NH-conjugation tense suffixes, *-nhii* and *-nhaa*, the northern dialect appears to have undergone loss of glottal stop with compensatory lengthening of



the preceding vowel. The regular imperative suffix is slightly different. The final glottal stop in the central dialect corresponds to secondary stress in the northern dialect. As detailed in Section 2.4 below, all long vowels in Nhanda attract stress. It is possible that the imperative also underwent compensatory lengthening, with *\*-ka' > \*-kàa > -kà*. Though vowel length has been lost, secondary stress remains. However, this is unlikely, as final secondary stress appears to be associated with imperative verbs whether or not they include the *-ka* suffix (see Section 3.4.2 and Section 3.4.3). As one moves south, final vowel loss becomes more prevalent, and so the inventory of final consonants increases. The southern Amangu dialect reported at Dhongara (Bates n.d. 85) shows word-final /ng rn n l w ' d r t k/. Compare Nhanda thalanyu ‘tongue’, with a greatly reduced final vowel, to Amangu *yallain*; or Nhanda augmentative suffix *-barta* (again with a greatly reduced final vowel) to Amangu *-bat*.

## 2.4 Stress

In monomorphemic forms, main stress is on the initial syllable, with secondary stress on following odd-numbered syllables, though never on the final syllable, unless the final syllable is closed or contains a long vowel. The alternating strong-weak pattern within the morpheme is broken up by long vowels, which bear secondary stress in non-initial position. Primary stressed vowels are longer than other vowels, and there is often perceptible lengthening of post-stressed consonants; unstressed vowels are shorter than stressed vowels and often centralized, particularly in word-final position. In morphologically complex forms, morphemes of two or more moras begin a new stress domain, and the monomorphemic rules apply within each stress domain. Monomoraic suffixes generally do not form stress domains on their own. When a monomoraic suffix is word final, it sometimes forms part of the preceding stress domain. If it is word medial and followed by another monomoraic suffix, then the string of monomoraic suffixes forms a stress domain; otherwise a monomoraic suffix is unstressed, and presumably unfooted.

Stress patterns for monomorphemic words are shown in (15), with stress patterns for multimorphemic words exemplified in (16). An acute accent marks primary stress, and a grave accent marks secondary stress; stress on long vowels is marked on the first half of the digraph, though it is realized through the entire vowel.

Notice that adjacent stresses may occur due to the presence of a long vowel, provided that the first stress is primary and the second is secondary: *úrdàa*, *índàacu*, etc. Though not synchronically transparent, the four-syllable words listed in (15) all likely have bimorphemic origins.

(15) NHANDA STRESS PATTERNS IN MONOMORPHEMIC WORDS

# of $\sigma$ s	Surface stress	Gloss
2	mínga	'ant'
	pí'i	'uncle'
	yítka	'coals'
	ngúutu	'horse'
	úrdàa	'directly, soon'
	úudùu	'grass'
3	ábarla	'child'
	kú'arlu	'good'
	ngúutiyu	'pregnant'
	índaji	'ribs'
	kúrlípu	'bullock'
	índàacu	'big'
	kánbàagu	'little devil'
	yúgangga	'yesterday'
ngútulùng	'kangaroo sausage'	
4	kárdagàli	'crooked, bent'
	márnwídi	'red'
	Múnimàya	'Northampton'
	thúmbirlidi	'stubborn'

In the list of multimorphemic words in (16), no two syllable words are given, since, outside of suppletive irregular verb forms, all attested disyllables are monomorphemic.

I have yet to determine criteria for the inclusion of monosyllabic suffixes in preceding stress domains: compare the ergative nouns yáwarda-lu 'kangaroo' and ármanù-lu 'man'. My preliminary hypothesis is that the ergative form of 'man' is semi-lexicalized (one could write /armanu=lu/) and, therefore that the monosyllabic suffix is included in the preceding stress domain. If this is the case, then many plural forms with -nu must be treated in the same way, as semilexicalized, since the plural suffix is regularly included in a preceding stress domain. Limited support for this hypothesis came when I attempted to elicit plural forms of nouns which are typically interpreted as plural without the plural suffix, like /kurlanu/ 'bush potato(s)'. The plural form was kúrlaninu, without secondary stress on the penult.

## (16) NHANDA STRESS PATTERNS IN MULTIMORPHEMIC WORDS

# of $\sigma$ s	Surface stress	Gloss
3	úthi-nu wángga-nhàa	'dog-PL' 'talk-PRES'
4	nyárlu-nggì-nu pánda-bà-nhii yáwarda-lu ábarla-lu ábarla-wàa árnmanù-lu árnmanì-nu yáwardì-nu úthu-thàda nyárlu-bagàa	'woman-ERG-PL' 'tired-INCH-NFUT' 'kangaroo-ERG' 'child-ERG' 'child-COM' 'man-ERG' 'man-PL' 'kangaroo-PL' 'dog-DU' 'woman-BEL'
5	árnmanu-lì-nu kúcidu-ndà-yi kúcidu-bà-nhàa píji=biji-wàa yáwarda-thàda wárla-pìtkili ábarla-bagàa púlha-bàrta-nggu	'man-ERG-PL' 'hungry-CAUS-PPERF' 'hungry-INCH-NPAST' 'mangy-COM' 'kangaroo-DU' 'head-bald' 'child-BEL' 'magic-AUG-ALL'
6	kú'arlu-ndà-yi-nha kú'arlu-nda-gùla píyarda-bì-nggùla píyarda-bà-nhii-nygu águ-jàda-wàna	'good-CAUS-PPERF-1SGDO' 'good-CAUS-AMB' 'sorry-INCH-AMB' 'sorry-INCH-NONFUT-2OBL' 'mother-CHER-IPL'
7	ándadi-jàda-wàna ngúti-jàda-ndha-wàna cúiga-ndà-yi-wàna-na	'granny-CHER-IPL' 'swim-PART-FUT-IPL' 'shame-CAUS-PPERF-IPL-COLL'

Notice that in forms like *ábarla-wàa*, *nyárlu-bagàa*, and *ábarla-bagàa*, the syllable immediately preceding the long vowel is unstressed. In *ábarla-wàa* this is because of the morpheme boundary. However, in forms with the 'BELONGING' suffix *-bagàa*, the first syllable of the suffix is never stressed (compare monomorphemic *úrdàa* 'directly, soon'.) The stress rules in (17) account for this by leaving this syllable unfooted, as opposed to assigning stress, and then eliminating it via a destressing rule. Though *-bagàa* is the only disyllabic suffix with a light syllable

followed directly by a heavy syllable, there is evidence against a regular destressing rule, whereby a light syllable with secondary stress is destressed when immediately followed by a heavy syllable with secondary stress. Consider forms like *kúcidu-bà-nhàa* ‘starting to get hungry’; though the inchoative suffix *-ba* is a light syllable, it is not destressed in this context. In fact, the inchoative *-ba* is the only monomoraic suffix which can constitute a foot on its own. I account for this with rule (17ii) below. Compare exceptional stress on inchoative *-ba* with the Panyjima causative *-ma* (Dench 1991:134–35) which also unexpectedly attracts stress when flanked by bimoraic stress domains.

The patterns exemplified in (15) and (16) can be generated by defining stress domains in terms of morpheme structure, properly defining heavy syllables which attract stress, and assigning trochees across the word from beginning to end. Hence, for Nhanda we have the following definitions:

- a. *Stress domain*: a minimally bimoraic morpheme plus any following (semi-lexicalized) monomoraic suffix which is not itself followed by a monomoraic suffix; a sequence of monomoraic suffixes.
- b. *Heavy syllable* (H): a syllable containing a long vowel; or a word-final closed syllable. All other syllables are light (L).
- c. *Quantity sensitive trochee*: a foot of the form (HL), (LL), or (H), where the foot-initial syllable is stressed.

The definition of heavy syllable is complicated by two examples of final closed syllables with secondary stress: *ngútulung* ‘kangaroo sausage’ and *Thídhandhàn*, a placename. Diachronically, the first word is likely the result of vowel loss from \**ngutulungV*. Synchronically, it seems that a syllable-final consonant bears weight, and can constitute the second weak beat of the trochee, but only in word-final position. This is the mirror image of the situation in Central Alaskan Yupik where CVV syllables are heavy everywhere, but CVC syllables are heavy in word-initial position only.

Given the definitions in a.–c. above, the metrical rules in (17) will generate the attested stress patterns.

(17) METRICAL STRESS RULES FOR NHANDA

- a. Within each stress domain, assign quantity sensitive trochees from left to right respecting any lexical stress.
- b. If inchoative */-ba/* is stray, build a unary foot on it.
- c. Assign main stress to the word-initial syllable.

The unexpected stress on inchoative */-ba/* has already been noted. The regular imperative suffix */-ga/* also has a peculiar status with respect to stress, as mentioned earlier. Though it is a light syllable, it acts as if it were heavy, attracting (secondary) stress in word-final position. In addition, in positions where one

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expects secondary stress on a preceding syllable (like the inchoative *-ba*) the syllable is stressless. Some examples of this pattern are shown in (18).

### (18) STRESS IN SOME IMPERATIVE VERB FORMS

ága-gà	'get up!'
átpi-gà	'tie (it)!'
wányja-gà	'throw (it) away!'
wúja-gà	'go through!'
áda-ma-gà	'snatch (it)!'
áya-ma-gà	'ask (him)!'
wányji-da-gà	'listen!'
wárlí-da-gà	'smack (him)!'
cíindi-ba-gà	'be quiet!'
cálya-ba-gà	'cheer up!'

Recall that the central dialect shows imperative */-ga/*, which presumably, as a closed syllable, attracts (secondary) stress in word-final position. However, in the northern dialect, there is no final glottal stop and no vowel length in this morpheme. In order to account for the stress facts, I suggest the imperative */-ga/* be lexically associated to the strong position of an iambic foot. This association will ensure that a preceding unstressed syllable (in particular, an odd-numbered monomoraic suffix or the inchoative *-ba*) is stressless, since it will be taken in as the weak terminal of the iamb. (There is only one verb with a stem-final long vowel in the corpus: *widaa-* 'spear', with imperative *wídagà*. However, vowel length was variable in this paradigm; cf. *widaayi*, *widayi* 'spear-PPERF'.)

Exceptional stress is also found in two placenames: *Kadháagurdu* 'Shark Bay' (cf. *Malgana Gadharrgurdu*), and *Bàbajidángga* 'Bubbasherdonga (Well)'. I assume that these words are marked with stress in the lexicon. Since both placenames are clear loans, lexical stress may be related to the stress pattern of the source form.

Stress does not consistently distinguish compound words from non-compound words. For instance, *ngúnda-míni* 'whiteman, whitefella' is a compound of *ngúnda* 'face' and *míni* 'light, shiny', but the stress pattern is identical to a form like *ngúnda-thàda* 'two faces', where the bound dual suffix *-thada* is affixed to the stem. See Section 3.2.5 where compounds are defined by independent phonological and syntactic features.

In  $V_1GV_2$  sequences where  $G = \{w, y\}$ , the glide is often elided, with the two vowels coalescing into a single long syllable. Where  $V_1$  is stressed, the single derived syllable is stressed as well. For example, the first-person singular pronoun *ngáyi* can be pronounced as [ŋá:j]; *tháyidi* 'snake' as [tá:jdi]; and *áwugà* 'stoke it up!' as [á:wga].

## 2.5 Length and the Minimal Word

I suggested earlier that the voicing contrast in Nhanda might be viewed as a length contrast, and that the contrast between /p th t rt c k/ and /b dh d rd j g/ is one of long (geminate) versus short obstruents respectively. Under this analysis, voicing is unspecified underlyingly and filled in by the default rules in (19):

(19) DEFAULT RULES FOR OBSTRUENT VOICING

- i. If [-sonorant] is geminate, then it is [-voiced].
- ii. If [-sonorant] is word-initial, then it is [-voiced].
- iii. Elsewhere, a [-sonorant] is [+voiced].

Under this analysis, in intervocalic position, the contrast between what I write as /p th t rt c k/ and /b dh d rd j g/ is really a length contrast: /p th t rt c k/ are linked to two timing slots each, and /b dh d rd j g/ to only one timing slot each. Rule (19i) specifies that a long obstruent, or a sequence of two short obstruents (where the feature [-sonorant] is assumed to be doubly linked), will be realized as voiceless. Rule (19ii) specifies that short obstruents in word-initial position are realized as voiceless. And rule (19iii) specifies that elsewhere, an obstruent is realized as voiced. This analysis, where the underlying ‘voiceless’ series are treated as long segments, allows for the collapse of voicelessness in /p th t rt c k/ and in obstruent clusters. It provides a straightforward account of the lack of a native voicing contrast word-initially: geminates, like all consonant clusters, are prohibited word-initially. The analysis also mirrors the historical origins of the voicing contrast, as described in Section 2.8.4. The major problem with the analysis is that the incipient voicing contrast due to loans with word-initial voiced consonants cannot be represented. If one wanted to maintain the analysis using rules (19i–iii) above, loan words with initial voiced consonants could simply be represented with underlyingly specified initial voiced obstruents.

The discussion of stress in Section 2.4 highlights the foot structure of Nhanda. In general, the word is parsed into minimally bimoraic and maximally disyllabic trochees. In many Australian languages, constraints on minimal or optimal foot size translate into constraints on word size, since every prosodic word must constitute at least one foot. This is true in Nhanda as well, where the minimal prosodic word is bimoraic and typically disyllabic. We can formalize these observations as follows:

*Minimal Word Constraint:* A prosodic word in Nhanda must constitute a foot, where feet are minimally bimoraic.

The minimal word is important in suffixal allelomorph (see Section 3.2.1), where minimal words and non-minimal words take different forms of the ergative/instrumental case suffix.

The minimal word may also play a role in a limited vowel-deletion process for which there is presently only one example. The Nhanda word *kuwirtpa* ‘funny’ is often pronounced as *kwirtpa*, with an initial *Cw* cluster. I analyze this as /*kuwirtpa*/ due to the fact that a vowel is heard when this word is pronounced in slow speech. The only other attested word with an initial *CVwi* sequence in Nhanda is *piwi* ‘mudlark’. If the vowel-deletion rule is made as general as possible, \**pw* is blocked, since it will violate the minimal word constraint. Similar rules of vowel deletion are evidenced in Wajarri and Nyangumarta, and only apply to trimoraic or longer base forms. The correct generalization appears to be that obstruent-glide clusters are tolerated word-initially, provided that the minimal word constraint is not violated.

## 2.6 Morphologically Conditioned Alternations

There are three sets of alternations in Nhanda that are morphologically conditioned: final vowel umlaut; denasalization; and nasal cluster dissimilation. None of these processes is obviously phonologically natural, and they are highly selective in terms of their morphological conditioning.

### 2.6.1 Base-final Vowel Umlaut

The morpheme /-*nu*/ serves as the regular marker of plurality on common nouns and pronouns (see 3.2.2 for further discussion). On suffixation of -*nu*, the immediately preceding vowel surfaces as [i], independent of its underlying form. Examples are given in (20). (20a) shows umlaut of stem-final vowels for nouns and pronouns, while examples of umlaut of inflectional suffixes preceding the plural are shown in (20b). The alternations in (20) must be specific to the plural morpheme /-*nu*/, since parallel phonological forms with the past imperfective suffix /-*nu*/ show no umlauting of base-final vowels: *ajanu* ‘was biting’ from *aja-* ‘bite’; *artpanu* ‘was burning’ from *artpa-* ‘burn’; *a’unu* ‘was lighting’ from *a’u-* ‘light (a fire)’; etc.

There are two plausible analyses of the alternation exemplified in (20): one could assume underlying /-*inu*/ for the plural and suggest a morphologically conditioned rule of vowel deletion to delete the preceding vowel; or one could simply stipulate the change in vowel quality preceding the plural morpheme.

I have chosen the second analysis for several reasons. First, with the exception of two verbal suffixes, all suffixes in Nhanda are consonant initial. Second, there are no other cases of vowel deletion across a morpheme boundary in Nhanda; as shown earlier, when two distinct vowels meet, a glide is inserted to break up the vowel cluster.

## (20) BASE-FINAL UMLAUT WITH /-nu/ SUFFIXATION

	Singular	Plural	Gloss
a.	abarla	abarli-nu	'child-PL'
	minda	mindinu	'house-PL'
	ala	alinu	'that one-PL'
	thayidi	thayidinu	'snake-PL'
	ngayi	ngayinu	'1p-PL'
	nyarlu	nyarli-nu	'woman-PL'
	uthu	uthinu	'dog-PL'
	kurlanu	kurlanu	'bush potato-PL'
b.	nyarlu-nggu	nyarlu-ngginu	'woman-ERG-PL'
	abarla-lu	abarla-linu	'child-ERG-PL'
	mindu-nggu	mindu-ngginu	'house-ALL-PL'
	milu-ra	milu-ri-nu	'eye-3OBL-PL'
	ngunda-ra	ngunda-ri-nu	'face-3OBL-PL'
	abarla-tha	abarla-thinu	'child-1SGOBL-PL'

Finally, two more circumscribed cases of umlaut, discussed directly, cannot be handled by a morphologically conditioned rule of vowel deletion. I therefore propose the rule in (21).

## (21) PLURAL BASE-FINAL UMLAUT

$$V \rightarrow i / \_ ] \text{nu}]_{\text{PL}}$$

In addition to (21) which operates on all morphemes preceding the plural /-nu/, umlaut is triggered by the ambulative suffix /-nggula/ on two preceding suffixes: the verbal inchoative /-ba/, and a non-productive locative /-ngga/. (For ngg/g alternations in the ambulative, see Section 2.6.3.) In both cases, the umlauting vowel can be viewed as stem final. Examples are given in (22).

## (22) STEM-FINAL UMLAUT WITH /-nggula/ SUFFIXATION

Verb stem	Ambulative	Gloss
calya-ba-	calya-bi-nggula	'happy while going along'
ciiga-ba-	ciiga-bi-nggula	'shamed while going along'
panda-ba-	panda-bi-nggula	'getting tired along'
inda-ba-	inda-bi-nggula	'getting big along'
ida-ngga-	ida-nggi-gula	'climbing along'

Other stem-final vowels do not alternate when the ambulative is suffixed: arandangula 'going along cutting' from arda- 'cut'; a'unggula 'going along stoking up the fire' from a'u- 'stoke up'; arlibanggula 'going along lending' from arliba- 'lend'.



Notice in this last example that the phonological string /ba/ precedes the ambulative, but as it is not an instance of the inchoative, umlaut is absent. I propose the rule in (23).

- (23) AMBULATIVE BASE-FINAL UMLAUT  

$$V \rightarrow i/ \_ ]\{\text{INCH,LOC2}\} (\text{ng})\text{gula}]_{\text{AMB}}$$

### 2.6.2 Denasalization

The past imperfective suffix /-nu/ surfaces as [wu] when the rhotic glide /r/ occurs in a preceding syllable. There are only two attested examples: wunarawu ‘was defecating’ from /wunara-nu/ ‘defecate-PPERF’, and wumburawu ‘was urinating’, from /wumbura-/ ‘urinate-PPERF’. This appears to be a rule of /n/-denasalization, triggered by the rhotic glide in the preceding syllable. However, it does not apply when the third-person possessive suffix /-ra/ is followed by the plural /-nu/. In this case, as exemplified in (20b), the surface string is always ...rinu, with base-final umlaut and no denasalization. Interestingly, the environment for denasalization is the one place where nasal dissimilation (detailed in 2.6.3) can occur over an intervening syllable.

### 2.6.3 Nasal Dissimilation

Nasal dissimilation has been described for many Australian languages (see below). This alternation typically involves sequential nasal-stop clusters across a vowel, where the second cluster loses its nasal component. Schematically the alternation is:

$$\dots\text{NCVNC}\dots \rightarrow \dots\text{NCVC}\dots$$

Across languages, there is variation in terms of the productivity of the rule, whether or not one or both clusters must be homorganic, and the domain across which dissimilation occurs. In Nhanda, nasal dissimilation is limited to four morphemes: the ergative/instrumental /-nggu/ suffixed to bimoraic stems (with /-lu/ allomorph for longer stems); the locative suffix /-nggu/, which shows no such allomorphy; the ambulative suffix /-nggula/; and the locative path suffix /-nggalu/ (see Section 3.2.1[d]). (Historically, it is likely that nasal dissimilation had its origins in a single morpheme \*-nggu which served as ergative, instrumental, and locative.) In (24), column I shows the target suffixes of dissimilation in non-dissimilation contexts, while the column II shows dissimilated forms. Nasal dissimilation in Nhanda is triggered only by preceding homorganic NC clusters (written as  $N_1C_1$ ). Non-homorganic NC clusters as in thumba, wunyba, etc. do not trigger dissimilation. The one exception to this generalization is pamba ‘hard ground’, which triggers dissimilation on following locative suffixes (see Section 3.2.1 [d]).

In (24) dissimilation applies across a single intervening vowel, while in (25) a VrV string separates the trigger and target of dissimilation, where /r/ is the rhotic

glide. No words with VwV or VyV between relevant clusters could be found to test whether dissimilation would apply as well in these contexts.

(24) NASAL DISSIMILATION ACROSS A SINGLE VOWEL

I	Gloss	II	Gloss
ERGATIVE/INSTR			
nyarlu-nggu	'woman-ERG'	mambu-gu	'bone-ERG'
yini-nggu	'name-ERG'	kurndi-gu	'club-ERG'
thurnba-nggu	'dove-ERG'	minyju-gu	'purse-ERG'
LOCATIVE			
yani-nggu	'stump-LOC'	mambu-gu	'bone-LOC'
parlu-nggu	'hill-LOC'	kurndi-gu	'club-LOC'
		parnba-gu	'ground-LOC'
LOCATIVE PATH			
parlu-nggalu	'hill-PATH'	urndu-galu	'back-PATH'
yuthu-nggalu	'thicket-PATH'	parnba-galu	'ground-PATH'
AMBULATIVE			
anhi-nggula	'dance-AMB'	anyja-gula	'shove-AMB'
ija-nggula	'put-AMB'	ingga-gula	'give-AMB'
wunbya-nggula	'whistle-AMB'	wumba-gula	'hide-AMB'

(25) NASAL DISSIMILATION ACROSS VrV

wanyja-ra-gula	'throw-3OBL-AMB'
wumbu-ra-gula	'urinate-3OBL-AMB'
wunangga-ra-gula	'laugh-3OBL-AMB'

Though it might appear that a rule of nasal dissimilation can be simply formulated to target any morpheme beginning with /-nggu.../ this is not the case. The allative suffix /-nggu/ is homophonous with target morphemes, but, as shown by the examples in (26) it does not undergo nasal dissimilation.

(26) NO DISSIMILATION OF /-nggu/ALLATIVE

yatka-ndha	minda-nggu
go-NPAST	house-ALL
He's going to the house.	
yatka-ndha	mangga-nggu
go-NPAST	nest-ALL
He's going to the nest.	

The rule I propose is stated in (27).

(27) NASAL CLUSTER DISSIMILATION

$$N_i \rightarrow \emptyset / N_i C_i [-\text{CONS}]^* \_ C_i \dots \{ \text{ERG/INSTR, LOC, PATH, AMB} \}$$

This rule states that in a sequence of homorganic nasal-stop clusters separated by any number of [-consonantal] segments (i.e., vowels or glides), where the second cluster is initial in the ergative/instrumental, locative, locative path, or ambulative morphemes, the nasal of the second cluster deletes. Table 2-6 summarizes the morpho-phonological differences between the homophonous -nggu suffixes in Nhanda.

**Table 2-6. Differences in homophonous -nggu suffixes**

	-nggu ERG/INSTR	-nggu LOC	-nggu ALL
suffixed to minimal-word base only	yes	no	no
undergoes nasal dissimilation	yes	yes	no

As noted by Dixon (1980:216–18) and McConvell (1988), nasal-cluster dissimilation rules are found in Aboriginal languages across Australia, and do not appear to be confined to any particular genetic grouping or geographic region. Languages with similar nasal-cluster dissimilation rules include: Arabana (Hercus 1994); Diyari (Austin 1981); Gooniyandi (McGregor 1990:98); Kalkatungu (Blake 1979); the Ngayarda languages Panyjima (Dench 1991:135), Ngarluma, and Yinyjiparnti (Wordick 1982:33); and the Ngumpin languages Gurindji, Jaru, Mudbura, and Ngarinyman (McConvell 1988). Interestingly, however, none of the languages bordering Nhanda (Malgana, Wajarri, Yingkarda, Nyungar) shows this feature, nor do the Kanyara and Mantharta languages which intervene between Nhanda and the Ngayarda languages. Nasal-cluster dissimilation in Panyjima effects allomorphs -ngga ‘locative’ and -nggu ‘agentive’ (both suffixed to minimal word bases only) which alternate with -ga and -gu respectively when preceded by a homorganic nasal-stop cluster. Unlike Nhanda, Panyjima has no other -NC-initial suffixes, so that the rule can be generalized to all lexically derived  $N_i C_i V N_i C_i$  sequences. In Yinyjiparnti (Wordick 1982:33–35) there is an even more general rule of nasal-cluster dissimilation which applies to any derived  $NCV(R)N_i C_i$  sequence, where the second NC cluster is homorganic and peripheral, and the initial NC cluster need not be homorganic. In Nhanda NC-initial pronominal clitics -nyja 2SGSUBJ, -rnda 2SGDO do not undergo dissimilation: wanyjayatpa-rnda ‘throw off-FUT-2SGDO’ which translates as ‘he’ll throw you off’. Similarly, in Panyjima the clitic -mba does not dissimilate. But in Yinyjiparnti the topic clitic -mba does undergo nasal dissimilation.

## 2.7 Loan Word Phonology

A fair number of English loans have been taken into Nhanda since European contact. All English borrowings are marked (Eng.) in the vocabulary. A discussion of these loans is revealing, as it highlights certain aspects of Nhanda sound patterns which are inviolable, and others which are not absolute.

One inviolable constraint appears to be the consonant inventory. No new consonant phones appear in the loan vocabulary. English sibilants [s,z,f] are typically realized as palatals /c,j/, while labiodental fricatives [f,v] are realized as bilabial stops /p,b/. Examples include *capa* 'supper'; *cijici* 'scissors'; *nayapu* 'knife'. English vowels are normally matched with their closest Nhanda phoneme, as in *pibardu* 'paper'; *puci* 'pussy cat'. However, extension of vowel phones also occurs: *coopu* 'soap', *Wagaweyi* 'Walkaway'.

In Section 2.5 a minimal word constraint was proposed for Nhanda, stating that words are minimally bimoraic and disyllabic. This constraint pervades not only the native vocabulary, but loan words as well. Two additional phonotactic constraints that extend from the native vocabulary to loans are that words in the Northern dialect may not end in consonants other than /ng, w/, and that consonant clusters are barred in syllable onsets.

In order to satisfy the Minimal Word Constraint (page 29), vowels of English monosyllables are realized as long in Nhanda, independent of their length/tenseness specification in English. English monosyllables with short/lax vowels which have been borrowed include: 'gun', Nhanda *kaanu*; 'whip', Nhanda *wiipu*; and 'grog', Nhanda *kiraaku*. I assume that the final vowels in these words are inserted to eliminate illicit word-final consonants (and possibly simultaneously to render monosyllabic forms disyllabic). What is remarkable is that these word-final epenthetic vowels (and apparently the initial epenthetic vowel in *kiraaku*) do not 'count' for the purposes of the Minimal Word Constraint. If they did, we would expect unattested \**kanu*, \**wipu*, \**kiraku*. Other borrowings indicating these generalizations are: *ciipu* 'sheep', *coopu* 'soap', *kuuki* 'cook', and *naata* 'note'. One other possibility to consider is that vowel length in these loans is simply the interpretation of English stress in Nhanda. That is, English stressed vowels are consistently realized as Nhanda long vowels. But this is disconfirmed by loans like *capa* 'supper' and *cijici* 'scissors', which have initial short vowels in Nhanda. I conclude then that vowel length in monosyllabic English source words is a consequence of the Minimal Word Constraint.

Fleshing out this analysis will allow for a straightforward account of further generalizations concerning English loans. Let us imagine that a word like English 'whip' is at some level phonemicized as Nhanda /wip/. Syllabification of this yields /wi.<p>/, a monomoraic syllable with a final unsyllabified consonant (angled brackets indicate extrasyllabic elements). In order to satisfy the Minimal Word Constraint, vowel lengthening occurs, yielding /wii.<p>/; finally, final

vowel epenthesis applies to allow syllabification of the stray consonant, giving the surface form *wiipu*. Now consider the loans *milgi* ‘milk’ and *wampu* ‘swamp’. Why don’t these two forms show initial vowel lengthening like other English monosyllables? In this case, let us imagine that the words are phonemicized as /milg/ and /wamp/. Initial syllabification results in /mil.<g>/ and /wam.<p>/. Recall from the discussion of stress in Section 2.4 that word-final closed syllables count as heavy in Nhanda. Therefore, no vowel lengthening occurs, as these forms are already bimoraic, and satisfy the Minimal Word Constraint. Epenthesis occurs, as in other C-final source words, to syllabify the final stray consonant.

Interestingly, although the phonotactic constraints against word-final consonants appear to hold in loans, this is not true of at least one constraint on word-initial consonants. Recall that apical consonants do not occur word-initially in the Nhanda native vocabulary. However, there are apical-initial English loans: *damba* ‘damper’; *nani* ‘nanny goat’; *naata* ‘note (of money)’; *nayapu* ‘knife’; *niilu* ‘needle’; *tiyi* ‘tea’.

Unfortunately, I have found no loans with source words ending in [ŋ, w]. Therefore, I cannot determine whether the different treatment of word-final and word-initial consonants is related to syllable- versus feature-based constraints. It could be that final-vowel epenthesis applies to any word-final consonant, instantiating a general constraint in Nhanda against word-final consonants; initial apicals, on the other hand are tolerated since consonant-initial words are generally well formed in Nhanda. Alternatively, the apical-initial loans could be taken as potential evidence that the constraint against word-initial apicals is not a synchronically active one in Nhanda.

## 2.8 Historical Phonology

Nhanda has been classified as a Kartu language by O’Grady et al. (1966) on the basis of cognate densities based on a Swadesh-type list of 100 lexical items. The Kartu subgroup is usually taken to include Badimaya, Malgana, Nhanda, Wajarri, and Yingkarta. However, Blevins (1999) demonstrates that Nhanda differs in significant structural ways from other Kartu languages, and suggests that Nhanda has had a long period of independent development.

Nhanda historical phonology is treated in Blevins and Marmion (1994) and Blevins (1999). Nhanda has undergone a number of sound changes which are not shared by any other purported Kartu language, but which do regularly reflect Proto-Pama-Nyungan (pPN) or Proto-Nhanda-Kartu (pNhK) forms, where this second grouping likely includes other Nyungic languages. Here I summarize the main sound changes in the history of Nhanda. These sound changes are responsible for some of the striking features of Nhanda within the Pama-Nyungan context. Page numbers in square brackets refer to O’Grady and Tryon (1990).

### 2.8.1 Initial Consonant Loss

As mentioned earlier, Nhanda has many vowel-initial words. These can be traced to two distinct patterns of initial consonant loss. In one, the sound change is conditioned by the phonetic properties of the consonantal target; in another, initial dropping is viewed as the result of grammaticization of an utterance-initial speech pattern typical of many Australian languages (Blevins, to appear).

The first sound change involves loss of word-initial bilabial stops. Because pre-Nhanda did not have a voicing contrast in initial position, this rule applied to the single bilabial stop word-initially, written here as *b*. The rule and illustrative data are given in (28). In reconstructed forms and comparative data, the voiced-stop symbols are used in languages where there is no obstruent voicing contrast. There is also internal evidence for this sound change. Compare the augmentative suffix *-barta* meaning ‘big, many, a lot’ with the free nominal *artarda* ‘many, a lot’.

(28) INITIAL b-LOSS: \*b > ∅ / ##\_\_ (PRE-NHANDA)

pPN \*baja-2 ‘Vtr bite, sting’ [220]; pNhK \*baja- ‘to bite’: NHA aja-; WAJ aja-; BAD baja; MAL bajani; YS baja-lanyi ‘to drink’; YN baja-lanyi ‘to eat’.

pPN \*ba1-lu ‘that + ERG’ [210]; pNhK \*bala ‘3sg deictic pronoun’: NHA ala; WAJ bala; BAD nabala ‘something’.

pPN \*ba1-nya ‘that + ACC’ [210]; pNhK \*banha ‘3sg deictic pronoun’: NHA anha; WAJ banha; BAD banha.

pNhK \*baba ‘water’: NHA apa; WAJ, MAL, YS baba.

pPN \*barndi- ‘Vtr smell, sniff’ [251]; pNhK \*barndi- ‘to smell’: NHA arndi-; YS barndi-; WAJ barndi-; BAD bandiya.

pPN \*birri ‘nail, claw’ [84]; pNhK \*birri ‘nail’: NHA idi; WAJ birri; YS birri ‘fingernail’.

pPN \*buma ‘to hit’ [127]; pNhK \*buma- ‘to hit (w/ hand)’: NHA uma-; WAJ buma-nha; BAD buwa ‘hit-FUT’; MAL bumarnu; YN bumarra-lanyi.

The rule in (28) suggests that initial bilabial obstruents weaken directly to zero, without first leniting to \*w. This is supported by the existence of *w*-initial forms in Nhanda which reflect \**w*-initial proto-forms as in (29).

(29) NHANDA RETENTION OF INITIAL \*w

pKM, pNhK \*wangga- ‘speak’: NHA, WAJ, YS, YN, BAD wangga; MAL wanggi-.

pPN \*warla ‘water, egg, head’: NHA warla ‘head, egg’; WAJ warla ‘egg’; MAL warla ‘egg’.

pKM, pNhK \*warra- ‘sing’: NHA wada-; WAJ warra-; YS warra-lanyi.

pKM, pNhK \*wigi ‘saliva, foam’: NHA wigi; WAJ wirrigi, wilhgi ‘wet’; YS wigi; YN wigi.

The only bit of counterevidence to this scenario is Goldsworthy's (1886b) Amangu *poopi* 'bark (of tree)', which may be a writing of *putpi*, corresponding to Nhanda *wurtpi*, *urtpi* 'skin'.

In addition to the regular loss of \*b, initial consonants were lost through general phrase-initial dropping. I suggest that the variable rule in (30), which characterizes modern Nhanda, existed in Pre-Nhanda as well. Rule (30) states that consonants have a tendency to be dropped after pause, i.e., at the beginning of an utterance or phonological phrase (Blevins, to appear).

(30) UTTERANCE/PHRASE-INITIAL C-LOSS (VARIABLE)

\*C > ø / // \_\_ (Pre-Nhanda)

As a result of (30), words which regularly occurred in utterance/phrase-initial position, could be reanalyzed as vowel initial. Kinship terms (used as vocatives), the word 'dog' (used to call a dog), as well as terms of endearment ('sweetheart'), and deictics are typically phrase initial in their vocative/deictic functions, where they occur as single-word utterances. This is precisely the class of words that have been reanalyzed as V-initial through the operation of rule (30). Examples are given in (31).

(31) INITIAL C-LOSS IN COMMON SINGLE-WORD UTTERANCES

- pPN \*kami 'mother's mother'; pNhK \*kami 'father's father': NHA ami  
'brother-in-law'; WAJ gami; BAD gami 'grandparents'
- pNhK \*kantharri 'grandmother, grandmother's sisters': NHA anthadi; WAJ,  
YN, YS kantharri
- pPN \*maamang 'father' [80]; pNhK \*mama 'father': NHA ama; WAJ, YN,  
YS, MAL mama
- pNhK \*martu-ngu 'sweetheart, spouse': NHA artungu; WAJ, YN, YS mar-  
tungu; MAL martiji 'married woman'
- pNhK, pMAN \*thuthu 'dog (tame)': NHA uthu; WAJ, MAL, YN tuthu;  
BAD, YS thuthu
- pNhK \*yaku 'mother': NHA aku, WAJ yagu

The majority of vowel-initial words in Nhanda are the result of the two sound changes (28) and (30). However, there are some vowel-initial words that call for additional explanations. For instance, *atpi-* 'tie' in Nhanda appears to be cognate with Proto-Kartu \**garbi-*, Proto-Mantharta \**garbi-ru*, and could illustrate a sporadic instance of initial g-loss. While examples of this sort are not numerous, they still call for additional explanations.

## 2.8.2 Word-initial Lenition

In addition to the rules of word-initial consonant loss just discussed, two diachronic word-initial lenitions are evidenced in Nhanda. First, there is weakening of \*j to y with conditions as spelled out in (32a,b). The post-vocalic conditions in

(32a,b) block lenition in earlier forms of Nhanda words like *citkada* ‘echidna’ (cf. *Wajarri jiri* ‘prickle’) and *cutka* ‘arm’ (cf. *Wajarri jurлга* ‘upper arm’).

(32) LENITION OF INITIAL PALATALS

a. \*j > y / ## \_ in (Pre-Nhanda)

pPN \*jinang ‘foot’ [91]; pNhK \*jina ‘foot’: NHA *yina*; WAJ, BAD, YS, YN, MAL *jina*.

b. \*j > y / ## \_ urC (Pre-Nhanda)

pNhK \*jurnda ‘thigh’: NHA *yurdu*; WAJ *jurdu*.

pNhK \*jurdu ‘sister’: NHA *yurdu*; WAJ *jurdu*.

A second process, shown in (33), weakens velar stops to homorganic glides before high back vowels that themselves are not followed by high consonants (palatals and velars).

(33) LENITION OF INITIAL VELARS

\*k > w / [ \_ u X (where X is not a palatal or velar consonant)

pPN \*gumbu ‘urine, bladder’; pNhK \*gumbu- ‘urine’: NHA *wumbu*; WAJ, YS, YN, BAD *gumbu*.

pPN \*guna ‘faeces’; pNhK \*gurna ‘faeces’: NHA *wuna*; WAJ *gurna*; BAD *guna*; YS *yurna* ‘rotten’; MAL *gunda*.

pPN \*gurdu ‘heart’; pNhK \*gurdu=rdu ‘heart’: NHA *wurdudu*; WAJ, BAD, YS *gurdurdu*.

pNhK, pMAN \*gurda ‘(older) brother’: NHA *wurda*; WAJ, MAL, YN, YS *gurda*; BAD *gurra*.

pNhK, pMAN \*gurlga ‘ear’: NHA *wurtka*; WAJ, BAD *gurlga*; MAL *gulga*; YN *gurlgari-nyi* ‘hear,listen to’.

pNhK, pKM \*gudharra ‘two’: NHA *wuthada*; WAJ, YS, YN, MAL *gudharra*; BAD *gudharra*, *gudha*.

The constraint on the postvocalic consonant in (33) is necessary because of forms like Nhanda *kucidu* ‘hungry’ (cf. BAD *gulyjirr*), and *kulyuru* ‘wet’ (cf. YN *gulyi-ri-nyi* ‘swim’), where an initial \*g is maintained before a u-palatal sequence. By generalizing the rule to all initial \*gu sequences not followed by high consonants, the Nhanda dative suffix *-wu* (presumably from pPN purposive \*-gu) can also be viewed as exemplifying this sound change.

For a summary of Australian languages, including Nhanda, that have undergone both initial consonant loss and initial consonant weakening, see Blevins (to appear).

### 2.8.3 Fortition

There is good comparative evidence that lateral-obstruent and rhotic-obstruent clusters in Pre-Nhanda have undergone fortition, becoming voiceless stops. As discussed in Section 2.3, Nhanda has no rhotic-obstruent clusters, and only a few



anomalous lateral-obstruent clusters, but obstruent-obstruent clusters are common. The rule of sonorant fortition is given in (34) with comparative data supporting this sound change.

## (34) SONORANT FORTITION

\*[+son,-nas] > [-sonorant]/ V \_\_ [-sonorant]

pNhK \*jurlga ‘arm’: NHA cutka ‘arm; elbow’; WAJ jurlga ‘upper arm; elbow’; MAL jungga.

pNhK \*gurlga ‘ear’: NHA wurtka; WAJ, BAD gurlga; MAL gulga; YN gurlgari-nyi ‘hear, listen to’.

pNhK \*malga ‘hard, strong’: NHA matka ‘ko tree, used for making digging sticks’; WAJ malga.

pNhK \*bilygili ‘bare, shiny’: NHA pitkili ‘bald, shiny’; WAJ bilygili ‘swamp’; BAD bilygi ‘clean’.

pNhK \*yirrga ‘coals’: NHA yitka; WAJ yirrgaru, yirrgalyi ‘charcoal’; YS yirrgalyi; YN yigaru.

pNhK \*garrbi- ‘tie’; pMAN \*garrbi-ru ‘tie’: NHA atpi-; YS garrbi-lanyi.

Though all the words in (34) involve fortition of a post-tonic liquid, fortition was not limited to this prosodic position in Nhanda. Consider the following Nhanda words, where obstruent clusters, presumably of the same origin, occur farther on in the prosodic word: ijanatpa- ‘send along’; kanggatpa- ‘cough’; kuwirtpa ‘funny’; milutpa- ‘wink’; thadatpa- ‘wipe’; wurtkatpa- ‘sleep’; wutkatpacadi ‘meanwhile’. In all of these cases, the string pa corresponds with modern Nhanda -ba, a verbalizer.

It is possible that sonorant fortition and post-tonic lengthening/devoicing of obstruents (see Section 2.8.4) were related developments in which stop closure arose, or was increased following stressed vowels.

## 2.8.4 Origins of the Voicing Contrast

The obstruent voicing contrast discussed in Section 2.1 and Section 2.5 appears to have arisen from two distinct processes. In the first case, the fortition rule in (34) was followed by total assimilation between adjacent obstruents, resulting in geminate voiceless stops, which then contrasted with non-geminate voiced stops. The total assimilation rule is stated in (35).

## (35) TOTAL ASSIMILATION IN OBSTRUENT CLUSTERS (IN PROGRESS)

\* C<sub>i</sub> C<sub>j</sub> > C<sub>j</sub>C<sub>j</sub>

[-son] [-son]

There is evidence that this sound change was still in progress with the last generation of Nhanda speakers. Variation occurs in many obstruent clusters including: witku, wiku ‘belly’; wicka, wika ‘fish’; and yitka, yika ‘coals’. Unfortunately, many of the Nhanda words with non-alternating intervocalic voiceless stops lack cog-

nates in neighboring languages. But where there are cognates, they support the analysis. For example, compare Nhanda *kucidu* ‘hungry’ with Badimaya *gulyjirr*. In this case, the historical sequence would be \**guljirru* > \**gutcidu* > *guccidu* = Nhanda *kucidu*.

A second source of intervocalic voiceless or geminate obstruents is post-tonic gemination, whereby a short consonant becomes long when it immediately follows the main stress vowel. It is difficult to specify other triggering factors, though the comparisons in (36) suggest that gemination in this environment may reflect vowel length in Proto-Pama-Nyungan forms.

(36) POST-TONIC GEMINATION

pPN \**bAyba* ‘water’ [259]; pNhK, pMAN \**baba* ‘water’: NHA *apa*; WAJ, MAL, YN, YS *baba*.

pPN \**yaaju* ‘west’ [92]: NHA *wacu*; KNJ *aajul*; UMP *ijjul*; GRY *yaju* ‘east’.

pPN \**gaajung* ‘son, child’ [100]: NHA *aaci* ‘little boy, little fella’.

As discussed in Section 2.1, word-initial contrastive voicing is limited, and likely due to borrowing.

## 2.8.5 The Origins of Glottal Stop

As already exemplified, glottal stop has phonemic status in Nhanda, though it appears to carry a low functional load. The variation shown in (7), and the complementary distribution detailed in Table 2-5 suggest that intervocalic glottal stop has arisen from the loss (or weakening) of intervocalic glides in homorganic glide/vowel or vowel/glide sequences. Rules (37i,ii) involve slight modifications of those in Blevins and Marmion (1995), based on additional data.

(37) GLIDE WEAKENING

- |                                  |                         |
|----------------------------------|-------------------------|
| i. $\acute{y} > \acute{r}$       | ii. $Vy_i > V\text{?}i$ |
| $\acute{u}w > \acute{u}\text{?}$ | $Vwu > V\text{?}u$      |

This historical change is viewed as a two-step process: first, the loss of glide features in surface  $\acute{y}/y_i$  and  $\acute{u}w/wu$  sequences; and then the spell-out of the ‘featureless’ glide as glottal stop.

The sound changes in (37i,ii) are posited primarily on the basis of internal reconstruction. Interestingly, most forms with contrastive glottal stop lack cognates in most West Australian languages. The only possible exception is Nhanda *ku'arlu* ‘good’, presumably from \**ku'arlu*, where Wajarri and Badimaya show *kuwa* ‘yes’, Wajuk and Nyungar *kwa* ‘yes’, and *kwaba* ‘good’.

A second origin of glottal stop is the reflex of \**rC* clusters (*r*, the rhotic glide), or intervocalic rhotic glides. The proposed sound change is shown in (38) with supporting potential cognate sets. This sound change is triggered by \**w{á,ú}r* sequences, i.e., tonic CVC sequences of [-consonantal, +back] segments, and results in post-glottalization of the rhotic, giving rise to rhotic-glottal

stop clusters. If the rhotic is originally followed by a consonant, that consonant is realized as a glottal stop. The only Nhanda rhotic-glottal stop cluster that cannot be accounted for by this development is that in *mar'u* ‘rainbird’, which contrasts with *maru* ‘dark’.

## (38) POST-RHOTIC GLOTTALIZATION IN PRE-NHANDA

\*w{á,ú}r(C) > w{á,ú}rʔ

Pre-Nhanda \*warbu ‘sun, sunlight’: NHA *war'u* ‘sun’; Panyjima *garbu* ‘afternoon sun’; WJK *garbala* ‘afternoon towards sunset’.

Pre-Nhanda \*wurbara ‘black, dark’: NHA *wur'ara*; Arrernte *urrberle*; P/L *wurrbarla*; Warlpiri *yurrpurlu*.

Pre-Nhanda \*wurga ‘stone’: NHA *wur'a*; Jiwarli *wurrgara* ‘big rock’.

Pre-Nhanda \*wuru ‘buttocks’: NHA *wur'u*; P/L *wurru* (nyinangu) ‘haunches’; WAJ *murru* ‘fat in emu rear’; NY *murru* ‘buttocks’.

Proto-Paman \*warra ‘bad’ [36]; Pre-Nhanda \*wara ‘bad’: NHA *war'a*; NY *warra*.

pNhK \*garrbi- ‘tie’; Proto-Mantharta \*garrbi-ru ‘tie’: NHA *atpi-*; YS *garrbi-lanyi*.

The sound changes in (38) are similar to those proposed by O’Grady (1976) for Umpila, a Paman language. In Umpila Proto-Paman \*r (glide) descends as Umpila glottal stop and Proto-Paman \*lb and \*rb descend as r'. Closer to Nhanda country, Moore (1842:viii) describes certain intervocalic rhotics in Nyungar, transcribed as *rh-r*, as follows:

In some few words *h* will be found interposed between two *r*'s, as in *Marh-ra* (the hand) *Warh-rang* (three). When this is the case, the first *r* is to be aspirated. This is an attempt to explain in letters a sound which hearing and practice alone can enable any one to understand and acquire. This obscure indistinct sound...

One can be fairly certain that Moore’s use of the term ‘aspirated’ in this context refers to aspiration, and not glottalization, since elsewhere (p. 47), in describing the interjection *i'i* ‘yes’, he describes it as being pronounced ‘gutturally’. Clearly, a distinction is being made between contrasting laryngeal states: aspiration or breathiness on the one hand, and laryngealization or creakiness on the other. Interestingly, this aspiration of rhotics in Nyungar occurs only between back vowels, and only occurs in post-tonic position. A complete list of intervocalic *rh-r* roots from Moore is given in (39). Some of these words may have Nhanda cognates. Compare, for example, Nyungar *marh-ra* ‘hand’ with Nhanda *mara* ‘hand’, or Nyungar *warh-ro* ‘knoll, hillock’ with Nhanda *wur'a* ‘rock, stone’.

(39) NYUNGAR *rh-r*

Moore 1842	Gloss
<i>barh-ran</i>	'a scar; any mark of a wound'
<i>dtarh-ra</i>	'small sort of knife; the barb of a spear'
<i>gurh-ra</i>	' <i>Macropus caeruleus</i> , the brush kangaroo'
<i>mahr-rok</i>	'yesterday'
<i>marh-ra</i>	'the hand'
<i>morh-rogado</i>	'tomorrow'
<i>murh-ro</i>	'charcoal'
<i>warh-rang</i>	'three'
<i>warh-ral</i>	'whirlwind'
<i>warh-ro</i>	'a knoll, a hillock, an acclivity'

The interest of these forms is in the parallelism of development of a possible laryngeal specification in a similar environment to that proposed for Nhanda in (38). For Nyungar, the sound change in (40) could be proposed.

## (40) NYUNGAR RHOTIC ASPIRATION

$$*{\acute{a},\acute{u}}R\{a,u\} > {\acute{a},\acute{u}}Rh\{a,u\}$$

While developments of intervocalic rhotics in Nhanda are similar to those in Umpila and Nyungar, I am unaware of any evidence suggesting that these sound changes are historically related.

### 2.8.6 The Fate of Initial Apicals

Word-initial apical consonants are not found in the native Nhanda vocabulary and no initial apicals have been reconstructed for Proto-Kanyara, Proto-Mantharda, Proto-Ngayarda, or Proto-Kardu. Initial apicals, however, have been reconstructed for a number of Proto-Pama-Nyungan roots and the development of these initial apicals has been taken as important evidence for subgrouping among Australian languages (Dixon, 1980; Evans 1988; Hendrie 1990).

In Table 2-7 I list possible Nhanda cognates of some of Hendrie's (1990) posited protoforms with initial apicals ('+' indicates a slight alteration of his protoform based on additional comparative evidence). It should be noted that Hendrie's reconstructions are speculative, and are not the result of rigorous use of the comparative method. Nevertheless, adding Nhanda data to these sets should aid future historical work. The most notable aspect of these potential correspondences is Nhanda *w* < \**t*. Other possible reflexes of initial apical consonants are zero and alveopalatal *c*.

**Table 2-7. Initial apical correspondences**

Hendrie 1990	Nhanda	Gloss
pPN *taakun	wagu=rla	'hole in ground'
pNYY *tala <sub>1</sub>	wala-ka-ba-	'scavenge'
pNYY *tala <sub>2</sub>	wala-jadi	'storm clouds'
pNYY *tantu	warndu	'throat, neck, gullet'
pPN *tarra	wardu-mba	'whirlwind'
pNY *tartu	warduwardu	'ko tree with pods'
pNYY *tawa	wadula	'long, tall'
pNPN *tiyi (PIN tiitiirr-pa)	witpa	'sweat'
pNY *turna	wurnda	'shield'
pPN *tiika-	iga-	'stand up'
pDN *tilti	icici-ba-	'hurt, be painful'
+pPN *tiling	ili-	'dry'
pNYY *titi (PIN titirr-pa)	atpi-	'tie'
pNYY *larra	arda-	'cut, split, to chop'
pPN *rirrang	idaji	'tooth'
pNYY *rurra (GUP rurrurr)	utudu	'earth, sand, ground'
pPN *lalka	catka	'burned, dried out'
pPN *ralyang	calya	'glad, happy'
+pNPN *tirrkang	citka=da	'echidna'

### 3 Morphology

In this section I describe word structure in Nhanda. It is useful in Nhanda to draw a distinction between phonological words and morphological or syntactic words. Phonological words are defined by the properties in (41).

(41) DEFINING PHONOLOGICAL WORDS

- a. A phonological word can be delimited by pause.
- b. A phonological word has exactly one main stress.
- c. A phonological word must obey the Minimal Word Constraint.
- d. A phonological word is the domain of the default rule that spells out unmarked word-initial obstruents as voiceless.
- e. A phonological word is the unit identified by the native speaker as a ‘word’.

Morphological words are lexical categories and are the minimal concatenative units in phrase formation; they may consist of bare stems, they may be the output of word-formation processes (suffixation and/or compounding), or they may be clitics. In Nhanda, as in many other Pama-Nyungan languages, a single phonological word may consist of two morphological words, and a single morphological word may be divided into two phonological words. For example, the word *nháa-wu-nyja* ‘what-DAT-2SGSUBJ’ is a single phonological word by criteria (41a,b,c,e). Yet, both *nháawu* ‘why’ and the second singular subject clitic *-nyja* define distinct morphological words (in fact the pronoun could be considered a syntactic noun phrase). On the other hand, a single morphological word in Nhanda like *wárla-pítkili* ‘bald’ (literally ‘head-bald’), a compound, appears to contain two phonological words: there are two main stresses in this case (though *wárla-pítkili* is another possible pronunciation), and the second word begins with a voiceless stop (41d). Of course, in the majority of cases, the phonological word and morphological word coincide in Nhanda, but it is important to keep in mind that this need not be the case.

Word structure in Nhanda has much in common with other Pama-Nyungan languages. Suffixation and compounding are the only two productive types of word formation. Nominal stems can appear as words, while bare verb stems generally do not appear alone and must be inflected.

Two properties of Nhanda word structure set it apart from neighboring languages. First, it has unique verbal inflectional paradigms, including distinctive

forms for irregular verbs. Second, Nhanda has three distinct sets of bound pronouns or clitics. Each set encodes a different grammatical function and has a different phonological host. A discussion of bound pronouns is included in this chapter since these elements are clearly subparts of the phonological word.

### 3.1 Parts of Speech

If parts of speech are defined by grammatical criteria alone, then the following categories are defined for Nhanda:

*Nominals*: includes open-class common nouns, (semantic) adjectives, and the closed class of demonstratives and interrogatives/indefinites.

*Pronouns*: personal free and bound pronouns, proper nouns (but see below).

*Verbs*: includes words with tense/aspect inflections.

*Adverbs*: includes non-inflecting temporal, locational, manner, and syncategorematic adverbs that modify phrases.

*Interjections*: includes non-inflecting words with special discourse functions.

Interjections are always initial in the intonational phrase, and form independent phonological phrases.

Nominals are those words that can take the basic nominal inflections described in Section 3.2.1 and Section 3.2.2, and that take ergative/absolute case marking when functioning as subject/object of transitive verbs respectively. Within the class of nominals there is a small class of bound nominal stems that only occur in derived forms. These are discussed further in Section 3.2.8. All nominals can be the sole element within a noun phrase; all can take nominal case marking; all can function as predicate nominals; all can modify other nominals within the noun phrase; and all can occur with the comitative suffix *-waa* (which might otherwise be seen as adjective forming). Demonstratives, which mark proximity from the speaker, and interrogatives/indefinites can most profitably be viewed as subclasses of nominals, as they take the same range of case inflections. The major difference between these two classes of nominals is that demonstratives and interrogatives/indefinites, as closed class items, do not take the same range of derivational suffixes as other nominals. For this reason, they are discussed in separate subsections. Though nominals and pronouns have identical external distribution in terms of heading noun phrases, these parts of speech can be distinguished by case frames.

Most pronouns can be distinguished from nominals in functioning within a nominative/accusative case-marking system. However, the pronominal dual suffix *-thada* complicates this picture, since ergative forms also occur. A special class of pronouns are bound pronouns that are described in Section 3.3.2. There are only a couple of spontaneous utterances illustrating the use of proper nouns in the syn-

tax. The few examples I have suggest that proper names function within the nominative/accusative case-marking system of pronouns, since they obligatorily take -nha in direct object position. However, in elicited data, proper names as subjects of transitive verbs were judged grammatical both with and without the ergative case suffix, undermining a definitive classification. Due to the scarcity of data, proper nouns are not discussed further.

Verbs are distinguished from other word classes by a distinctive set of derivational and inflectional suffixes. There are two major open verb classes in Nhanda, distinguished by radically different conjugations. One class is made up primarily of unaccusative verbs (verbs with single arguments that function as deep objects), while the other consists mainly of unergative verbs (transitive or intransitive verbs with deep subjects).

Adverbs are distinguished from all other categories by their failure to inflect. Adverbs typically modify verbs, verb phrases, or sentences.

Finally, the class of interjections includes words that typically stand on their own as complete utterances. They are also invariant, but differ from adverbs in lacking any modifying function. Quite often they have a very specific discourse function, and express affect.

## 3.2 Nominal Morphology

Generally, nominals can be distinguished from pronominals in Nhanda by their case frames. Nominals occur in ergative and absolutive cases in simple transitive sentences, and are the only category that can occur with the full range of derivational suffixes described in Section 3.2.4.

### 3.2.1 Case Suffixes

Case marking on common nouns is always ergative/absolutive. Proper nouns are rare in the corpus outside of placenames, making it difficult to identify case frames in simple transitive and intransitive sentences. In addition to the basic ergative and absolutive cases, nominals often take what looks like the (pronominal) accusative suffix -nha in direct object position. The distribution of this suffix suggests a strong association with specificity: where a specific object is designated, -nha can be used, but it is ungrammatical with nonspecific referents. Because this suffix is obviously related to accusative -nha and only surfaces on direct object nominals, I have included it as a case inflection.

#### 3.2.1.1 *Ergative/absolutive*

In simple intransitive and transitive clauses, case marking in Nhanda is ergative/absolutive. This means that the case of the subject of an intransitive clause is identical to the case of the object of a transitive clause; both take the absolutive



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case. The subject of a transitive clause has a unique case referred to as ‘ergative’. The phonological forms of absolutive and ergative case suffixes are as follows:

Absolutive:	unmarked
Ergative:	-(ng)gu following minimal (bimoraic) word stems -lu elsewhere

Absolutive nominals are morphologically unmarked, mirroring their syntactic status as unmarked elements within the nominal paradigm. Ergative nominals are marked by two basic allomorphs: -nggu for bimoraic stems, and -lu for longer stems. I was unable to elicit an ergative suffix on a consonant-final stem. O’Grady, Voegelin, and Voegelin (1966) report -tu/-rtu allomorphs of the ergative, but no examples are given, and none were found in Hale (1960) or O’Grady (1966). Recall that -nggu dissimilates to -gu when preceded by a homorganic NC cluster (Section 2.6.3). As a result of the bimoraic word minimum, nguutu ‘horse’ and maaca ‘boss’, which are disyllabic but trimoraic, occur in the ergative as nguutu-lu and maaca-lu. Examples illustrating ergative and absolutive case marking are given in (42). Here and elsewhere, absolutive case (.ABS) is marked in morph-by-morph glosses for clarity, despite the fact that forms are morphologically unmarked. Where absolutive case is not the subject of discussion, it is left unmarked. As shown in (42g), case marking may occur on all nominals within the noun phrase, or, as in (42h), on only one.

#### (42) ERGATIVE/ABSOLUTIVE CASE MARKING

- a. pundu yatka-yu  
rain.ABS go-DIR.NFUT  
Rain is coming.
- b. nyarlu-nggu yawarda nha-'i  
woman-ERG kangaroo.ABS see-PAST  
The woman saw the kangaroo.
- c. nyarlu-nggu munda-gu badgutu wumba-yi  
woman-ERG poor-ERG bread steal-PPERF  
The poor woman stole some bread.
- d. arnmanu-lu wur'a anyja-tii wagurla-nggu  
man-ERG rock.ABS shove-PAST hole-LOC  
The man shoved a rock into the hole.

- e. nguutu-lu wirda-tii-nha  
horse-ERG kick-PAST-1SGDO  
The horse kicked me.
- f. ala wardumba yatkayu  
that.ABS whirlwind.ABS go-DIR.NFUT  
That whirlwind is coming.
- g. arnmanu-lu kurndi-waa-lu unhi-nha  
man-ERG club-COM-ERG hit-1SGDO  
The man with the club hit me.
- h. indaacu uthu-nggu aja-ndha-wana-na  
big dog-ERG bite-FUT-IPL-COLL  
The big dog's going to bite all of us.

### 3.2.1.2 *Specific-accusative*

Like many other Australian languages, Nhanda has a split ergative system where nominals take ergative/absolutive case marking, and pronominals show nominative/accusative case marking. The accusative pronominal case marker (see Section 3.3) is *-nha*. This same case marker occurs optionally on nominal direct objects that are specific or definite. As in other languages with cognate specificity markers, the association of *-nha* with pronouns and proper names has led to its grammaticization as a specific marker. In Nhanda, however, this marking is restricted to direct objects, and could be viewed as the beginning of an incipient triadic ergative/absolutive/accusative case marking system. It is for this reason that I refer to this morpheme as the 'specific-accusative'.

Examples are given in (43). Parentheses indicate that the sentence is grammatical with and without the specified morpheme. An asterisk inside the parentheses indicates the sentence is ungrammatical with the designated morpheme; an asterisk outside the parentheses indicates the sentence is ungrammatical without the designated morpheme.

#### (43) SPECIFIC-ACCUSATIVE MARKING

- a. nyarlu-nggu yawarda-(nha) nha-'i  
woman-ERG kangaroo-SPACC see-PAST  
The woman saw the kangaroo.
- b. nyarlu-nggu aya-nu arnmanu-(nha) wur'a-wu  
woman-ERG ask-PIMPF man-SPACC money-DAT  
The woman was asking the man for money.

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c. uthu-nggu ala-kanu abarla-(nha) aja-a  
dog-ERG that-FOC child-SPACC bite-PRES  
That dog is biting the boy. [KH:63]

d. arliba-ga-nha wur'a-(\*nha)  
lend-IMP-1SGDO money-SPACC  
Lend me some money.

e. nyarlu-nggu abarla-\*(nha) cindi-nda-yi  
woman-ERG child-SPACC quiet-CAUS-PPERF  
The woman quieted down the baby.

f. inggaa-nha abarla-\*(nha)  
give.IMP-1SGDO child-SPACC  
Give me the baby!

g. inggaa-nha yawarda-(nha)  
give.IMP-1SGDO kangaroo-SPACC  
Give me the kangaroo!

Though specific-accusative marking was generally optional, there were a handful of examples like (43e,f), where Lucy Ryder judged the suffix as obligatory. The only generalization covering these sentences is that the specific marker occurs on a human nominal (abarla ‘child’; ardu ‘spouse’; nyarlu ‘woman’). Compare, for example, (43f) where the object is human, and -nha is obligatory, and (43g), where the object is non-human, and the same suffix is optional.

### 3.2.1.3 Instrumental

Instrumental case is used to mark an instrument used in performing the action denoted by the verb, including a body part (44d), or an object not normally used as an instrument (44e). The phonological forms of the instrumental case suffix are as follows:

Instrumental:     -(ng)gu following minimal (bimoraic) word stems  
                      -lu elsewhere

Examples are provided in (44).

## (44) INSTRUMENTAL CASE MARKING

- a. ngayi i'a-yi wagurla wana-nggu  
 1p dig-PPERF hole digging stick-INST  
 I dug a hole with a digging stick.
- b. ngayi i'a-yi ajuga mambu-gu  
 1p dig-PPERF ajuga bone-INST  
 I dug yams with a bone.
- c. ardama-nhaa ngayi yani yadiwa-lu  
 cut-NPAST 1p stump axe-INST  
 I'm going to cut the stump with an axe.
- d. unhi mara-nggu  
 hit hand-INST  
 [He] hit [him] with [his] hand.
- e. unhi-nha yawarda-lu  
 hit-1SGDO kangaroo-INST/ERG  
 [He] hit me with a kangaroo./ The kangaroo hit me.
- f. unhi-nha arnmanu-lu yawarda-lu  
 hit-1SGDO man-ERG kangaroo-INST  
 The man hit me with a kangaroo.
- g. arda-nu yadiwa-lu  
 chop-PPERF axe-INST  
 [He] was chopping [it] with an axe.

The instrumental suffix is identical in form to the ergative suffix, and has the same allomorphy. These two cases are distinguished by looking at the entire case frame and semantics of the sentence in question. Recall that instrumental /-nggu/, like the ergative, dissimilates to *gu* when preceded by a homorganic NC cluster (Section 2.6.3). In certain contexts, like (44e), it is ambiguous whether or not the morpheme in question is ergative or instrumental. In other sentences, like (44f), ergative and instrumental cases co-occur and are disambiguated by the semantics of the sentence. Instrumental arguments are typically found with transitive verbs. When there is no overt object represented, as in (44g), a direct object is usually understood.

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### 3.2.1.4 *Locative*

The locative case serves to mark location in space. The locative case marker /-nggu/ shows the same nasal dissimilation as the ergative/instrumental suffix (see Section 2.6.3), but there is no minimal-word conditioned allomorphy for the locative. Examples of the locative case suffix are given in (45).

#### (45) LOCATIVE CASE MARKING

- a. ngayi nyina-nhaa malu-nggu  
1p sit-NPAST shade-LOC  
I'm sitting in the shade.
- b. ngayi nyina-nhaa mambu-gu  
1p sit-NPAST bone-LOC  
I'm sitting on a bone.
- c. wadayi inyjaa marnda-gu-tha  
fly stay-PRES buttocks-LOC-ISOBL  
A fly is sitting on my bum.
- d. nyina-nhaa uthudu-nggu  
sit-NPAST ground-LOC  
[He] is sitting on the ground.
- e. arnmanu madi purndu-gu-ra atka  
man sore back-LOC-3OBL have.PRES  
The man has a sore on his back.

One locative, *parnba-gu* 'on the hard ground', is unusual in that a non-homorganic NC cluster triggers nasal dissimilation in the locative suffix. Nasal dissimilation is normally triggered only by homorganic NC clusters (see Section 2.6.3). Originally I viewed *parnba-gu* as an unanalyzable locative nominal, since the stem *parnba* never occurred without *-gu*. However, a further form, *parnba-galu* 'along the hard ground', with the locative path suffix, also shows nasal dissimilation, suggesting that both forms are compositional.

Locative *-nggu* is also used to derive locational nouns meaning 'where there are Ns; where Ns live', where N is the nominal base. Some examples of these locationals are given in (46). As with other cases of homophonous suffixes, the distinction between a pure locative and a locational noun is usually clear from the context.

## (46) LOCATIONAL FUNCTION OF -nggu

- a. nyina-nhii thayidi-barta-nggu  
sit-PAST snake-AUG-LOC  
[He] sat where there are lots of snakes.
- b. nyina-nhii cabi-nggu  
sit-PAST gecko-LOC  
[He] sat where the geckos are.

In addition to these nominal forms with regular locative case marking, there are some spatial and temporal locatives that appear to have a lexicalized locative suffix =ngga attached to a nominal stem. While all of these words have stems that can occur as free forms, the meaning of the suffixed form is compositional in some cases, and not in others. Furthermore, none of these words takes the regular locative suffix -(ng)gu. These lexicalized locatives include:

Temporal	yuga=ngga	'yesterday'	cf. yuga 'ko clouds'
	maru=ngga	'at night, in the night'	cf. maru 'night'
Spatial	ida=ngga	'up high; out loud'	cf. ida- 'up'; idalu 'north'
	mutha=ngga	'in front'	cf. mutha 'nose'
	mili=ngga	'forehead'	cf. milu 'eye'
	inya=ngga	'here'	cf. inya 'this, this one'
Both	wandaa=ga-	'when?'	cf. wandha- 'where?'

Finally, a suffix presumably related to the frozen locative =ngga is the locative path suffix -nggalu which can be roughly glossed as 'along, through, beside'. Examples are given in (47).

## (47) LOCATIVE PATH SUFFIX -nggalu

- a. inda-nhii parlu-nggalu  
climb down-PAST hill-PATH  
He climbed down through the hills.
- b. kurlayhi-nu marniwirri-nu inda-ba-nhaa gali-nggalu  
river gum-PL red-PL big-INCH-NPAST gully-PATH  
The river red gums along the gully are getting big.
- c. arnmanu wumba-nhaa yuthu-nggalu  
man hide-NPAST thicket-PATH  
The man is sneaking through the thicket.

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- d. atkada mutha=ngga, ngayi yatka-ndha-yana urndu-galu  
carry.PRES nose=LOC2 1p go-NPAST-DIR.FUT back-PATH  
Carry it along at the front, I'll come along behind.
- e. ngayi artpa-nu pamba-galu  
1p burn-PIMPF ground-PATH  
I used to burn off the hard ground.

Notice that -nggalu also undergoes nasal dissimilation, and that again, pamba, with a non-homorganic cluster, exceptionally triggers nasal dissimilation. This last fact suggests that the locative path suffix be analyzed as bimorphemic -ngga-lu. The suffix -ngga appears to be cognate with the locative -ngga allomorph (for minimal word stems only) in neighboring Malgana, Wajarri, Badimaya, and Yingkarta. The doublet purndu 'back' and urndu-galu 'along behind, at the back' suggests that -nggalu is inherited, since the regular rule of initial \*b-loss (see Section 2.8.1) predicts \*purndu 'back' > urndu.

Another locative suffix -gurtku indicates a location at, alongside, or near the nominal stem. Because the location is less exact, I refer to this as the 'non-specific locative' (BY). This suffix came up in answer to the question 'Where is it?'. As a result, I have no examples in sentential contexts. Examples include:

ina-gurtku	'by [your] foot'
murna-gurtku	'on [her] lap'
panggi-gurtku	'near the swag'
purndu-gurtku	'in back of [it]'

### 3.2.1.5 Allative

The allative case suffix /-nggu/ serves to mark motion to or toward some point, and is typically used with verbs of motion (48a–e), or verbs that involve an abstract path from one point to another (48f).

#### (48) ALLATIVE CASE MARKING

- a. ngayi yatka-ndha nguda-nggu  
1p go-NPAST camp-ALL  
I'm going to the camp.
- b. ngayi yatka-ndha Munimaya-nggu  
1p go-NPAST Northampton-ALL  
I'm going to Northampton.

- c. ngayi yatka-ndha minda-nggu  
 1p go-NPAST house-ALL  
 I'm going to the house.
- d. ngayi yatka-ndha agu-nggu-tha  
 1p go-NPAST mother-ALL-ISGOBL  
 I'm going to my mother.
- e. ida-nda-a parlu-nggu  
 up-CAUS-PRES hill-ALL  
 [He] is climbing up the hill.
- f. ngayi nhaka wuja-nggu  
 1p see.PRES hole-ALL  
 I see [him] through the hole.

Unlike the ergative/instrumental and locative suffixes, the allative case marker /-nggu/ does not undergo nasal dissimilation, as shown by examples like (48c). Examples of the allative case suffix are given in (48) with verbs *yatka-* 'go', *idanda-* 'go up, climb', and *nha-* 'look, see'. The majority of allatives in the database occur with *yatka-* 'go'.

Compass terms do not take the allative suffix, though they may function as allative nominals as shown in (49).

(49) COMPASS TERMS WITHOUT THE ALLATIVE SUFFIX

- a. ala yatka-ndha i'u, watpa yatka-ndha idalu  
 that go-NPAST south other go-PRES north  
 That one's going south, and the other one's going north.
- b. inya yatka-ndha arnngalu, ala yatka-ndha wacu  
 this go-NPAST east that go-PRES west  
 This one's going east, and that one's going west.

This might lead one to view compass terms as inherently locational. However, as shown directly below, they do occur with the ablative suffix -ngu.

3.2.1.6 Ablative

The ablative case suffix /-ngu/, exemplified in (50), marks motion away from some point (50a–f), or the source or origin of an event (50g).



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(50) ABLATIVE CASE MARKING

- a. ngayi yatka-yu Munimaya-ngu  
1p go-DIR.NFUT Northampton-ABL  
I've come from Northampton.
- b. ngayi yatka-yu idalu-ngu  
1p go-DIR.NFUT north-ABL  
I came from the north.
- c. nyini wandha-ngu yatka-yu?  
2p where-ABL go-DIR.NFUT  
Where do you come from?
- d. ngayi yatka-ndha-yana nguuda-ngu  
1p go-NPAST-DIR.FUT camp-ABL  
I'm coming from the camp.
- e. ngayi matii abarla-ngu nayapu  
1p take.PAST child-ABL knife.ABS  
I took the knife away from the child.
- f. arnmanu-lu matii-ra nyarlu-ngu wur'a-ra  
man-ERG take.PAST-3OBL woman-ABL money-3OBL  
The man took money from the woman.
- g. mutha-ngu nguba wadidi-yu  
nose-ABL blood flow-DIR.NFUT  
Blood is pouring out from [his] nose.

The verb 'go' in Nhanda is expressed by the stem *yatka-* plus inflectional suffixes, while the verb 'come' is formed by suffixing non-future and future directionals *-yu* and *-yana* to a *yatka-* stem (see Section 3.4.5.5). While the allative is never used with the verb meaning 'come' in Nhanda, the ablative is not found with 'go'. Also, note that compass terms (50b) and other directionals (e.g., *wicaa-ngu* 'from far away') can occur with the ablative, though they are unattested with allative case marking. Ablative marking occurs on the interrogative pronoun *wandha-ngu* 'from where', as well as on demonstrative pronouns *inya-ngu* 'from here', *anha-ngu* 'from there'.

Reflexes of \*-ngu are widespread in Pama-Nyungan languages. The Nhandu ablative -ngu may be cognate with Badimaya ablative -ngun (Dunn 1982:46). Compare these with Wajarri ablative -thanu, and Yingkarta -parndi/-parni.

### 3.2.1.7 Dative

The dative case suffix /-wu/ has a range of semantic functions. It may mark: the beneficiary of an event or emotion (51a–e), as a benefactive; the possessor nominal (51f) within a possessive noun phrase, functioning as genitive case; or general oblique case for non-subcategorized indirect objects (51g), with a dative function.

#### (51) DATIVE CASE MARKING

- a. nyini apa mandaa yawarda-wu  
 2p water.ABS get.PRES kangaroo-DAT  
 You get water for the kangaroo.
- b. ngayi wumba-yi wur'a nyarlu-wu  
 1p steal-PAST money woman-DAT  
 I stole money for the woman.
- c. arnmanu-lu matii wicka ngayi-thada-wu  
 man-ERG get.PAST fish 1p-DU-DAT  
 The man caught some fish for us two.
- d. ngayi piyarda-ba-nhii abarla-wu, war'a-bardu  
 1p sorry-INCH-PAST child-DAT bad-PITY  
 I'm feeling sorry for the child, poor thing.
- e. arnmanu piyarda-ba-nhii nyarlu-wu  
 man sorry-INCH-PAST woman-DAT  
 The man is feeling sorry for the woman.
- f. wandha uthu-wu thudu-ra?  
 where dog-DAT meat-3OBL  
 Where is the dog's meat?
- g. nyarlu-nggu aya-nu arnmanu-nha wur'a-wu  
 woman-ERG ask-PIMPF man-SPACC money-DAT  
 The woman was asking the man for money.

The dative suffix is not limited to nominals; it also occurs with the same form and general functions on pronouns, as described in Section 3.3. A homophonous

causal suffix is found on verbs, indicating the reason for or purpose of an event (see 3.4.5.6), though it was never found in spontaneous speech. The dative and causal can both be derived from Proto-Pama-Nyungan purposive \*-gu, given the regular sound change in (33).

### 3.2.2 Number Suffixes

Nhanda distinguishes singular, dual, and plural forms both for count nouns and pronominals. As far as I could tell, mass nouns like *apa* ‘water’, and *ngundinu* ‘mucus’ do not take number marking. Number marking appears to be optional; if nominal number is understood from the context, or if a number word is used, then number marking on the noun is often absent. The number-marking suffixes are:

Singular	unmarked
Dual (DU)	-thada
Plural (PL)	-nu

The use of dual and plural suffixes is illustrated in (52).

#### (52) NUMBER SUFFIXES

- a. *arnmanu wangga-nhaa*  
    *man talk-NPAST*  
    A man is talking.
- b. *arnmanu-thada wangga-nhaa*  
    *man-DU talk-NPAST*  
    Two men are talking.
- c. *arnmani-nu wangga-nhaa*  
    *man-PL talk-NPAST*  
    Some men are talking.
- d. *ngayi nguti-nu uthu-nha*  
    *Ip wet-PIMPF dog-SPACC*  
    I was wetting the dog.
- e. *ngayi nha-'i indaacu wuthada uthu-thada*  
    *Ip see-PAST big two dog-DU*  
    I saw two big dogs.

- f. ingga uthi-nu-(nha)  
 give.IMP dog-PL-SPACC  
 Give [it] to the dogs.
- g. wur'a-thada pamba-gu  
 stone-DU hard ground-LOC  
 There were two stones on the hard ground.
- h. wumba-yi nayapi-nu  
 steal-PPERF knife-PL  
 He stole alot of knives.

The dual suffix is a reduced form of wuthada ‘two’. Recall from Section 2.6.1 that the plural suffix triggers base-final umlaut on the preceding vowel: abarla ‘child’ but abarli-nu ‘children’; nyarlu ‘woman’, but nyarli-nu ‘women’; etc. Number marking is not restricted to animate nouns, as shown by examples (52g,h).

A few Nhanda singular nouns ending in -nu may be historical collectives or mass nouns with lexicalized instances of the plural suffix. Synchronically, the count nouns of this type take in addition the regular plural suffix, suggesting that the root is no longer analyzed as a plural. Examples include: kurlanu, kurlaninu ‘bush potato/s’; ngubanu, ngubaninu ‘dingo/s’ (cf. nguba ‘blood’); pathanu, pathaninu ‘ant nest/s’; ngundinu ‘mucus, snot (mass n.)’ (cf. ngunda ‘face’).

When both a number marker and a case marker are present, the order of suffixes can be CASE-NUMBER OR NUMBER-CASE, as shown by the examples in (53) (see also Section 3.7). However, within a noun phrase, nominals must agree in affix order, as in (53b).

(53) FREE ORDER OF CASE AND NUMBER SUFFIXES

- a. nyarlu-nggu-thada abarli-nu unhi  
 woman-ERG-DU child-PL hit.PAST  
 nyarlu-thada-lu abarli-nu unhi  
 woman-DU-ERG child-PL hit.PAST  
 The two women hit the children.
- b. alu-nggi-nu nyarlu-nggi-nu unhi-nha  
 that-ERG-PL woman-ERG-PL hit.PAST-1SGDO  
 ali-nu-lu nyarli-nu-lu unhi-nha  
 that-PL-ERG woman-PL-ERG hit.PAST-1SGDO  
 Those women hit me.

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- c. nyarlu yatka-ndha minda-nggi-nu-na  
woman go-NPAST house-ALL-PL-COLL  
nyarlu yatka-ndha mindi-nu-nggu  
woman go-NPAST house-PL-ALL

The woman is going to all the houses.

Notice in (53c) the occurrence of the collective (COLL) clitic /-na/ following the plural suffix. The collective is closely bound to plurality, and is only found immediately following the plural suffix -nu, or the bound first-person plural pronoun -wana. In all cases, -na is final in the phonological word. The collective only modifies VP-internal arguments, and could be considered a verb phrase distributive marker where the plurality of event is indicated. More examples of plural collectives with -nu are given in (54).

### (54) PLURAL COLLECTIVES

- a. ngayi nha-'i nyarli-nu-na  
1p see-PAST woman-PL-COLL  
I saw all the women.
- b. nha-ga-ndha pulha-nhi-nu-na  
see-IMP-3PLDO many-SPACC-PL-COLL  
Look at the whole mob of them!
- c. uthi-nggu aja-ndha-wana-na  
dog-ERG bite-FUT-IPL-COLL  
The dog is going to bite us all.

### 3.2.3 Derived Nominals

The agentive suffix -caa is used productively to derive a nominal from a verb stem. Suffixed to a verb stem V, the meaning of the derived nominal is ‘something that Vs, a V-er’. If the resulting noun is inanimate, it often refers to an instrument. Verb roots with corresponding derived nominals are shown in Table 3-1.

Though all the examples in Table 3-1 show -caa suffixed to a verb root, there are also attested cases of affixation to a (derived) verb stem: mara-ga- ‘put one’s hands out’ (cf. mara ‘hand’) with derived nominal máragacàa ‘a messer-upper; someone with their hands touching everything’; and wur’a-ngga- ‘shoot off, go off’ (cf. wur’a ‘stone; shoot’) with derived nominal wúr’a-ngga-càa ‘a gun’.

The suffix -caa cannot occur as an independent word. Nevertheless, there is some sense in which words formed with this suffix fall midway between suffixation and compounding. Like other monosyllabic suffixes with long vowels, -caa consistently attracts secondary stress. This, and the fact that it is bimoraic, are both

**Table 3-1. Derived nominals with agentive -caa**

Verb stem	Derived nominal
aja- 'bite'	ájacàa 'a biter (snake, spider, etc.)'
arda- 'cut'	árdacàa 'a knife'
atpi- 'tie'	átpicàa 'a policeman'
athu- 'cook'	áthucàa 'a cook'
i'a- 'dig'	í'acàa 'a digger (echidna, pig, etc.)'
ngadi- 'sleep'	ngádicàa 'a sleepyhead'
pidi- 'touch'	pídìcàa 'a picker-upper'
wangga- 'talk'	wánggacàa 'a talker (e.g., TV-announcer)'
warda- 'sing'	wárdacàa 'a singer'
wumba- 'steal'	wúmbacàa 'a thief'
wur'a- 'shoot'	wúr'acàa 'a shooter'
wutka- 'snore'	wútkacàa 'a snorer'
yanda- 'sew'	yándacàa 'a needle'

unremarkable for suffixes. However, the voicelessness of the initial consonant is unexpected. Recall from Chapter 2 that underlying long (or voiceless) consonants are found only morpheme-internally within the native vocabulary. Word-initially, voiceless obstruents are the regular realization of underlyingly short (or voiced) consonants. If -caa is viewed as word-initial, then derived nominals like those in Table 3-1 must be compounds. However, compounds may exhibit two main stresses (see Section 3.2.5), but nominals derived via derivational suffixation may not. The conclusion I reach is that the boundary that separates -caa from the preceding verbal stem is stronger than a suffix boundary, but weaker than a compound boundary.

Some support for this analysis is found in the existence of one seeming lexicalization of this word-formation process. The word *yatkajaa* 'alone; on one's own' appears to be from the verb *yatka-* 'go', plus agentive -caa. The present meaning is no longer compositional: the word does not mean literally 'someone who goes; a goer'. In addition, though the stress pattern is identical to the derived nominals in Table 3-1, the suffix-initial consonant is voiced. Compare the relatively new English words *goner* 'one who is dead or undone' (c. 1857) and *loner* 'one who avoids others' (c. 1947), which parallel *Nhanda yatkajaa* in different ways. Both are peculiar in English since they break the regular rule of agentive -*er* suffixation that selects an uninflected verb stem as base. In addition, *goner* has the same semantic verb root as *yatkajaa*, while *loner* has a similar meaning. In regular forms with -caa then, the voicelessness of the suffix-initial consonant can be taken

as an indication of its former word status, and of its current intermediate status between word and suffix.

The suffix *-caa* could derive from pre-Nhanda *\*-caGa* (G a glide), which in turn could be cognate with O’Grady’s reconstruction *\*jara* < pPN *\*jarum* ‘thing, artifact’ (1990a:90).

Though attested in only two examples, inchoative verbs with *-ba* may take a further suffix *-cu*, resulting in a derived nominal meaning ‘stuff causing one to V’, where V is the inchoative verb. The two examples are: *yarnabacu* ‘grog, liquor’ from *yarna-ba-* ‘get drunk, become mad’; and the name of a tree with long yellow seed pods *yarlinyubacu*, literally ‘causing one to elope or run off and get married’, from *yarlinyu-ba-* ‘go courting, elope, run away’. The name of the *yarlinyubacu* tree derives from the belief that if you pick one seed off of this tree, you run off and get married.

### 3.2.4 Nominal Derivational Suffixes

Together, Section 3.2.1 and Section 3.2.2 describe all attested nominal inflectional suffixes. Any lexical or derived (non-demonstrative) nominal can also take a variety of derivational suffixes that are described here. These suffixes are organized into two groups in terms of their semantic and syntactic functions. First I introduce suffixes deriving nominals with a predicative function. When these are added to nominals, the result is typically a state, and the nominal is used predicatively. Suffixes with a predicative function include: the comitative *-waa*; the privative *-nyida*; *-gayi* ‘revealing’; and the proprietive *-bagaa*. Then I discuss suffixes with a nominal modifying function. These suffixes typically modify the stem to which they attach in the same way adjectives modify nouns. Suffixes with a modifying function include: *-jada* ‘dear’; *-lada* ‘long’; the augmentative *-barta*; *-bardu* ‘poor’; and *-buraada* ‘skinny, thin’.

#### 3.2.4.1 Comitative

The Nhanda comitative suffix is *-waa*. The comitative can be glossed as ‘having’ or ‘with’, and has more or less the range of functions described by Dixon (1976) for similar suffixes in many other Australian languages. Sentences illustrating the use of comitatives are given in (55). In (55a–d), the comitative nominal functions predicatively, either as a predicate adjective (55a–c), or as an attributive predicate (55d,i). In (55e–f), the comitative nominal has a modifying function within the noun-phrase, modifying the head noun. In (55g,h) the comitative appears to have more of an adverbial function.

(55) COMITATIVE *-waa*

- a. *nyarlu abarla-waa*  
 woman child-COM

The woman is pregnant.

- b. ardu-tha apa-waa  
spouse-ISOBL water-COM  
My husband is drunk.
- c. thudu catka-waa  
meat burned-COM  
The meat is burnt.
- d. thudu mindinyu-waa  
meat maggot-COM  
The meat has maggots.
- e. irdinyja wigilidi-waa yatka-yu  
flood froth-COM go-DIR.NFUT  
The flood covered with froth was coming.
- f. aluu ngala-yi thudu puga-waa  
that.ERG eat-PPERF meat rotten-COM  
He ate some rotten meat.
- g. yatka-nu nguutu-waa  
go-PIMPF horse-COM  
He's gone on horseback.
- h. ala wardumba yatka-yu thugudhugu-waa  
that willy-willy go-DIR.NFUT dust-COM  
The willy-willy's coming throwing up the dust.

In some cases, nominals suffixed with *-waa* have taken on very specific meanings. These include: *abarlawaa* 'pregnant' (cf. *abarla* 'child'); *apawaa* 'drunk' (cf. *apa* 'water, grog'); *pijibijiwaa* 'scaly, mangy' (cf. *pijibiji* 'itch from caterpillar nest'); *nguutu* 'on horseback' (cf. *nguutu* 'horse'); *walgawaa* 'striped' (cf. *walga* 'mark, design'); *wur'awaa* 'policeman' (cf. *wur'a* 'stone; money; chains'). The specific meanings of these words do not rule out more general interpretations. For instance, depending on context, *wur'awaa* could mean 'having money', 'policeman', or 'rocky, with stones'. However, there is a sense in which the specific meanings listed above are unmarked for these comitative forms.

In addition to the functions described above, the comitative is a common suffix in placenames, as detailed in Section 1.4. For example, a shady place just down the river from Murchison House was called *Maluwaa* (cf. *malu* 'shade').



Recall that one interesting aspect of placenames with *-waa* is that the comitative can be suffixed to uninflected verb stems, for example, Yanggawaa in Yangewah Pool from *yangga-* ‘pour’). Derivations of this sort are restricted to placenames.

The linguistic origins of the Nhanda comitative suffix are not clear. I assume that the long vowel is the result of intervocalic rhotic-glide deletion, and would reconstruct pre-Nhanda *\*-wara*. This form could be cognate with the following comitative suffixes: Gugu-Badhun *-bara* (residual); Gidabal *-baa*; Warluwara *-(w)a(r)a*; Arrernte *-wara* ‘one’s own’. And all could derive from a proto-form *\*-bara* with comitative function. However, interestingly, none of Nhanda’s neighbors show any evidence of cognate suffixes.

#### 3.2.4.2 *Privative*

The privative suffix *-nyida* can be glossed as ‘not having’ or ‘without’, and is semantically a negation of the comitative. Like the comitative, it is typically used in a predicative function. Sentences illustrating privatives are given in (56).

(56) PRIVATIVE *-nyida*

- a. *ngayi ardu-nyida*  
     1p spouse-PRIV  
     I haven’t got a sweetheart.
- b. *wilu-nggu apa-nyida*  
     river-LOC water-PRIV  
     There’s no water in the river.
- c. *ngayi thudu-nyida*  
     1p meat-PRIV  
     I’ve got no meat.

In some cases, nominals suffixed with *-nyida* have taken on very specific meanings. These include: *wurtkanyida* ‘stupid, ignorant’ (cf. *wurtka* ‘ear’); *wur’anyida* ‘broke’ (cf. *wur’a* ‘money; stone; chains’). The specific meanings of these words do not rule out more general interpretations. For instance, depending on context, *wur’anyida* could mean ‘broke, having no money’, ‘having no chains’, or ‘without stones’. However, there is a sense in which the specific meanings listed above are unmarked for these privative forms.

A morphological double negative occurs in Nhanda. The nominal *ya’u* ‘none’ can be suffixed with *-nyida*, giving *ya’unyida* ‘not having any’, or literally ‘not having none’.

Privative suffixes in neighboring languages do not resemble the Nhanda suffix. Two languages of the Pilbara, Jiwarli and Tharrkari, show what appears to be a cognate privative suffix *-yirra*.

### 3.2.4.3 *Similative*

The suffix *-nganu* can be glossed as ‘similar to, resembling’, and was found in only one phrasal context:

nyini-thada ngunda-thada ngundi-nganu  
 2p-DU            face-DU            face-SIM  
 Your two faces look alike.

O’Grady, Voegelin, and Voegelin (1966:125) report a suffix *-ngu(‘)uny*, *-nguny* glossed as ‘similar to’. This suffix is limited to Jack Councillor’s speech. It was not recognized by Lucy Ryder, and I have reason to doubt that it is Nhanda. First, it occurs in sentences where there is apparent language mixing. Consider the following sentence from Ken Hale’s (1960) field notes:

inyaganu    pujikaet    uthu-ngu‘uny    yagu  
 This cat is as big as a dog. [KH:110]

The word *yagu* means ‘grown up, old’ in Nhanda, not ‘big’, though *yagu* is the word for ‘big’ in some languages of the region, e.g., Badimaya. And the phonological form for ‘pussycat’ is more or less wholly English, with only a palatal stop substituted for [s]; compare this with typical Nhanda loans from English discussed in Section 2.7 which require final vowels and do not contain non-Nhanda phonemes. Second, *-nguny* is the semblative suffix in Wajarri (Marmion 1996:52), a language which Jack Councillor was said to be familiar with.

When I attempted to elicit similatives, I consistently met with either the suffix *-nganu*, exemplified above, or phrasal constructions, like the following, involving the verb *arda-* ‘cut; halve’:

ala-thada ngunda-ri-nu arda-a-thada  
 that-DU    face-3OBL-PL    half-PRES-DU  
 Those two, their faces look alike (are two halves of the same pie).

### 3.2.4.4 *Proprietary*

The proprietary suffix *-bagaa* can be glossed as ‘belonging to’ and is used to indicate inalienable or alienable possession. It can be suffixed to nominals or to pronominals, and, when affixed to pronominals seems to be synonymous with possessive pronoun forms. Proprietary nominals are typically used as predicate nominals. Some examples are given in (57).

As discussed in Section 2.4, this suffix has a consistent stress contour *bagàa*, with no stress on the first syllable, and secondary stress on the second syllable. This stress pattern follows from the regular rules of stress assignment in (17).

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### (57) PROPRIETIVE -bagaa

- a. abarla nyarlu-bagaa  
child woman-PROP  
The child belongs to the woman.
- b. uthu abarla-bagaa  
dog child-PROP  
It's the child's dog.
- c. ngana-bagaa wur'a-ra?  
who-PROP money-3OBL  
Whose money is it?
- d. ngana-bagaa inya uthu?  
who-PROP this dog  
Whose dog is this?

### 3.2.4.5 *Revealing* -gayi

The suffix *-gayi* can be glossed as 'with N showing, revealing N', where N is a body-part nominal. The derived nominal is used either as a predicate nominal or adverbially. Examples are given in (58).

### (58) REVEALING -gayi

- a. ur'u-gayi  
buttocks-REV  
with one's buttocks showing
- b. ibi-gayi  
breast-REV  
with one's breasts showing
- c. nyini nyina-nhaa wirdaa-gayi  
2p sit-NPAST leg-REV  
You're sitting with [your] legs showing.

In contrast to the suffixes described up to this point, the nominal suffixes described in the remainder of Section 3.2.4 modify the stem much as adjectives modify nouns. Like other non-inflectional suffixes, they are not found with demonstratives.

### 3.2.4.6 Modifying suffix *-jada* ‘cherished, dear, beloved’

The suffix *-jada* means ‘cherished, dear, beloved’, and is typically followed by a possessive bound pronoun, as in the examples in (59).

#### (59) MODIFYING *-jada*

- a. *agu-jada-wana*  
mother-CHER-IPL  
our beloved mother
- b. *agu-jada-ra*  
mother-CHER-3OBL  
her dear mother
- c. *ardu-jada-tha*  
spouse-CHER-ISGOBL  
my dear husband
- d. *uthudu-jada-wana*  
country-CHER-IPL  
our cherished country
- e. *abarla-jada-thi-nu*  
child-CHER-ISGOBL-PL  
*abarli-nu-jada-tha*  
child-PL-CHER-ISGOBL  
my beloved children
- f. *uthu-jada-ra*  
child-CHER-3OBL  
*uthu-ra-jada*  
dog-3OBL-CHER  
his dear dog

A bound possessive pronoun usually follows *-jada* within the word, though the second variant in (59f) shows deviation from this order. As shown by the examples in (59e), the plural suffix *-nu* can precede or follow the *-jada*-initial morpheme sequence. (On the positional freedom of the plural suffix, see (53) and the discussion in Section 3.7.)

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### 3.2.4.7 *Modifying suffix -lada 'long'*

The suffix *-lada* 'long' has a clear adjectival function. Unlike its opposite, *purtku* 'short', *-lada* is a bound form, and always appears suffixed to a nominal base. This suffix is very common with body parts, where the derived nominal is generally predicative, hence the adjectival glosses in (60) below.

#### (60) MODIFYING *-lada*

- a. *hurndi-lada*  
tail-LONG  
long-tailed
- b. *wirdaa-lada*  
leg-LONG  
long-legged
- c. *ngunyu-lada yatkan-yu*  
hair-LONG    go-DIR.NFUT  
The long-haired one is coming.
- d. *wurtka-lada*  
ear-LONG  
long-eared
- e. *idi-lada*  
nail-LONG  
long-nailed
- f. *malu-lada*  
shadow-LONG  
long shadow
- g. *ngarn.nga-lada*  
stick-LONG  
long stick

As shown by (60f,g), the suffix is also found with inalienable nouns, serving a simple modifying function. The simple modifying function is also found with body parts, as with the subject nominal in (60c). The word *wadula* 'tall, tall one; long' can sometimes be used with similar meaning, as in *ngunyu-nygu wadula-ba-nhii* 'your hair is getting long'.

3.2.4.8 *Augmentative* -barta

A common suffix with a modifying function is the augmentative -barta, which has a range of meanings including 'big; great; a lot; big bad' illustrated in (61).

## (61) MODIFYING -barta

- a. wiku-barta  
stomach-AUG  
big-bellied person
- b. ngabu-barta  
fat-AUG  
fat person, fatso
- c. ur'u-barta  
buttocks-AUG  
big buttocks, fat-ass
- d. yuthu-barta  
thicket-AUG  
a big thicket
- e. uthu-barta  
dog-AUG  
a lot of dogs
- f. thuri-barta  
sun-AUG  
a lot of sun; heatstroke
- g. pulha-barta  
alot-AUG  
clever man, sorcerer, doctor
- h. ngayi yatka-ndha pulha-barta-nggu  
1p go-NPAST alot-AUG-ALL  
I'm going to the doctor.

Like augmentatives in many languages, this morpheme is often associated with derogatory connotations. (No 'aversive' suffix is found in Nhandu.) Unlike its opposite, *pudi* 'little', -barta is a bound form, and always appears suffixed to a

nominal base. This suffix is very common with body parts, but it is also found commonly with alienable nouns, as in (61d–g). As with other derivational suffixes, case suffixes regularly follow *-barta* as in (61h).

There are at least two instances where the augmentative has an idiosyncratic use that overlaps with the comitative: *nguutu-barta* ‘with a horse, on horseback’, which is synonymous with *nguutu-waa* ‘horse-com’; and *panggi-barta* ‘with a swag’.

When word-final, the final vowel of *-barta* is greatly reduced, surfacing as an ultra-short schwa. In central and southern dialects, the vowel has been lost altogether. Oldfield (1865:291) glosses Watchandie *bat* as ‘abounding in possession of’, and gives examples with the same range of meanings as *-barta*.

#### 3.2.4.9 *Modifying suffix -bardu* ‘poor, pitiful’

The suffix *-bardu* expresses pity, sympathy, or empathy on the part of the speaker, and is usually affixed to animate nominals. The sentences in (62) illustrate the sort of affect associated with this suffix:

(62) MODIFYING *-bardu*

- a. *ngayi piyarda-ba-nhii-ra, abarla-bardu innga-ba-nhii*  
 1p sorry-INCH-PAST-3OBL child-PITY dead-INCH-NFUT  
 I’m feeling sorry for him, the poor dear child that died.

- b. *ngayi ngutii uthu, ugarda-nda-a*  
 1p wet-PAST dog cold-CAUS-PRES  
 I wet the dog, cooled him off.

*war'a-bardu palgatpa-nhii, thuri-barta*  
 bad-PITY bark-NFUT sun-AUG  
 Poor thing was barking in the hot sun.

#### 3.2.4.10 *Modifying suffix -buraada* ‘skinny, thin’

This morpheme is only found in the word *wirdaa-buraada* ‘skinny legs, matchstick legs’. The voiced status of the initial consonant, as well as the single primary stress, suggest that this is a suffixed form, not a compound.

### 3.2.5 Compounding

Some morphologically complex nominals are compounds. Some examples are given in (63), where primary stress is found on both compound formatives, and the symbol ‘+’ is used to mark the compound boundary.

## (63) COMPOUNDS

- a. wárla+pítkili  
head-bald  
bald (one)
- b. ngúnda+kú'arlu  
face-good  
good looking, attractive (one)
- c. wírdàa+kú'arlu  
leg-good  
pretty-legged (one)
- d. mútha+pídidi  
nose-flat  
big-nosed (one)
- e. púdi+ábarla  
small-child  
baby
- f. wár'a+wángganhàa  
bad-language  
curse words

I have classified words like those in (63) as compounds if they differ from suffixed forms in at least two of three ways: i) they are formed by morphologically free word forms, and either ii) primary stress is possible on the second formative of the compound, or iii) an initial obstruent of the second formative is voiceless. The real difficulty lies not so much in distinguishing compounds from suffixed forms, but in distinguishing true compounds from simple two-word phrases. If the order of the elements is fixed and the first word fails to inflect, I treat the form as a compound. It is not clear whether this is a productive word-formation process in Nhanda.

### 3.2.6 Reduplication

A handful of nominals involve reduplication. Examples are given in (64). The symbol '=' is used to mark the reduplicative boundary, since reduplication does not appear to be productive.



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### (64) REDUPLICATED FORMS

kúriny=gùriny	‘dizzy’
máya=màya	‘trouble-maker, gossip’, cf. maya ‘house’
píji=bìji	‘caterpillar’s nest, and itch from it’
púru=bùru	‘fog, haze’, cf. puru ‘light mist’
bíndi=bìndi	‘horns (on bullock, ram, sheep)’
thúgu=dhùgu	‘dust’
wárdú=wàrdú	‘kind of tree, like a woody pear’

Note that three of the forms in (64) begin with labial stops. Since word-initial labial stops were lost in Nhanda by the sound change in (28), these reduplicated forms may be loans. Also note that these words have the stress patterns and phonological domain patterns of suffixed (or prefixed) words, not compounds. Reduplication does not appear to be productive in nominals.

Productive reduplication is found in verbs (see Section 3.4.6), and it is also found at the lexical level to indicate intensity. For instance, in describing something very far away, one might say *wicaa wicaa* ‘far, far away’; or in describing an event that happened a very long time ago, one might say *cidii cidii* ‘long, long ago’.

### 3.2.7 Demonstratives and Interrogatives/Indefinites

Demonstrative and interrogatives/indefinites in Nhanda form a special subclass of nominals. They follow ergative/absolutive inflection like other nominals, and can take all other nominal case and number markers. On the other hand, like pronouns, they constitute a closed lexical class, and in some cases have suppletive morphology. Demonstratives and interrogatives are also the only nominals that occur with the focus suffix *-ganu* (see Section 4.9).

As in many other Australian languages, true third-person pronouns are absent in Nhanda (see Section 3.3), and demonstratives often function as discourse pronouns for both animate and inanimate referents.

Nhanda demonstrative roots encode a three-way distinction in terms of proximity to the speaker:

<i>inya</i>	‘this’	closest to speaker
<i>ala</i>	‘that’	medium distance from speaker
<i>anha</i>	‘that <sub>DIST</sub> ’	farthest distance from speaker

Table 3.2 lists singular, dual, and plural forms of the demonstratives in the core cases, including the specific accusative, which is the most common form of direct object demonstratives. Apart from the suppletive ergative singular and plural forms of *ala* and *inya*, and the possessor/genitive singular *-ngura* (cf. possessive third-person bound pronoun *-ra*) and plural *-u* (cf. dative *-wu* elsewhere), the

demonstrative paradigm is completely regular, and identical to nominal paradigms. In fact, within the database, -ngura is the only morpheme with a restrictive nominal possessive function.

**Table 3-2. Nhanda inflected demonstratives**

	ABSOLUTIVE	ERGATIVE	SPECIFIC ACCUSATIVE	DATIVE/POSSESSIVE
sg	ala	aluu	ala-nha	ala-ngura
du	ala-thada	ala-thada-lu	ala-thada-nha	ala-thada-wu
pl	ali-nu	aluundu	ala-nhi-nu	ali-nu-u
sg	inya	ilu, inya-nggu	inya-nha	inya-ngura
du	inya-thada	inya-thada-lu	inya-thada-nha	inya-thada-wu
pl	inyi-nu	ilurndu, inya-nggi-nu	inya-nhi-nu, inyi-nu-nha	inya-wi-nu
sg	anha	anha-nggu	anha-nha	anha-ngura
du	anha-thada	anha-thada-lu	anha-thada-nha	anha-thada-wu
pl	anhi-nu	anha-nggi-nu	anha-nhi-nu	anha-wi-nu

The deictic *anha* is used temporally in two expressions: *anha yugangga* ‘the day before yesterday’ and *anha induga* ‘the day after tomorrow’.

Nhanda deictic roots *alu* and *anha* appear to reflect pPN \*ba-lu and \*ba-nha (O’Grady 1990b:210) after initial b-loss (28).

As in many other Australian languages, Nhanda interrogatives double as indefinites. For example, the question word *nhaa* ‘what’ is identical in form to the indefinite pronoun *nhaa* ‘something’. This dual function persists in derived forms. When *wandha* ‘where/somewhere’ is made into a verb by addition of the inchoative suffix -ba, the derived verb stem *wandha-ba-* retains the two meanings of the base and can be translated as ‘go where?’ or ‘disappear (i.e., to go somewhere unknown)’. Intonation usually distinguishes between interrogative and indefinite meanings: question intonation often involves a pitch accent on the question word, with steady or rising pitch across the phrase, while declarative intonation is falling. Basic case forms for the interrogatives/indefinites *nhaa* ‘what/something’ and *ngana* ‘who/someone’ are listed in (65).

(65) BASIC CASE FORMS FOR INTERROGATIVES/INDEFINITES

	ABSOLUTIVE/ NOMINATIVE	ERGATIVE	POSSESSIVE
what/something	<i>nhaa</i>	<i>nhaa-nggu</i>	
who/someone	<i>ngana</i>	<i>ngandu</i>	<i>ngana-bagaa</i>

Both roots in (65) can occur with all other nominal case markers, with two exceptions. There is no possessive (genitive) form of the inanimate *nhaa*. This is unremarkable, since the role of possessor is in many languages limited to animate nouns. Second, there is no specific accusative form for either interrogative/indefinite. This is expected, given the non-specific semantics of these morphemes, and further supports the analysis of nominal *-nha* as a specificity or definiteness marker.

Notice above that the uninflected forms are labeled absolutive or nominative. For many examples with transitive verbs, unmarked and ergative interrogative/indefinite subjects were both acceptable. For instance, *Ngandu nhaka-wana-na?* and *Ngana nhaka-wana-na?* were both acceptable sentences meaning ‘Who is looking at us?’. I assume, in cases like this, that the unmarked subject is nominative, and that interrogatives and indefinites are midway between (open class) nominals and pronominals in terms of their case frames. Additional interrogatives/indefinites are listed in (66).

(66) MORE INTERROGATIVES/INDEFINITES

<i>wandha</i>	‘where/somewhere’
<i>wandha-ra</i>	‘to where/somewhere’ (ALLATIVE)
<i>wandha-ngu</i>	‘from where/somewhere’ (ELATIVE)
<i>wandha-ga-cadi</i>	‘when/sometime’ (LOCATIVE2)
<i>nhaa-barndi</i>	‘what for, why’
<i>nhaa-wu</i>	‘what for, why’ (OBLIQUE)

### 3.2.8 Bound Nominals

As noted in Section 3.1, there is a small subclass of bound nominals that only occur in derived forms. These bound nominal stems could be considered a distinctive class of adjective stem. However, there are three arguments against their adjectival status. First, apart from their boundedness, they behave in all other respect as other nominals. Second, they cannot modify nouns directly. Finally, though certain bound nominals like *panda-* ‘tired’ and *piyarda-* ‘sorry’ designate semantic qualities or states typically predicated of nouns, other bound nominals like *thurla-* ‘goodbye’ and *walaka-* ‘scavenger’ do not (these root glosses were provided by Mrs. Ryder, though she insisted that they could not be used without the appropriate derivational suffixes.) For these reasons I have not classified bound nominals as adjectives. In fact, apart from the derivational suffixes they select, there is no basis on which to assign categorial status to these bound forms.

An exhaustive list of these bound nominals, in alphabetical order, along with attested derivatives, is provided in (67). The most common derivational suffix in (67) is the inchoative *-ba*. For discussion of this and other verbal derivational suffixes, see Section 3.4.5.

## (67) BOUND NOMINALS AND THEIR DERIVED FORMS

Bound	ca'u-	'cunning, joking'
	ca'ubilhi	'cunning, con' (N)
	ca'u-nda-	'make a fool of s.o.' (V)
Bound	icici-	'pain, hurt'
	iciciba-	'be painful, hurt' (V)
Bound	mika-	'play, fun'
	mikaba-	'have fun, play' (V)
	mikanda-	'play with s.o./sth' (V)
Bound	panda-	'tired'
	pandaba-	'be tired' (V)
Bound	piyarda-	'sorry'
	piyardaba-	'feel sorry (for s.o.)' (V)
Bound	pudhabudha-	'tired, drowsy'
	pudhabudhaba-	'get tired, get sleepy' (V)
Bound	thada-	'larrikin, flirt'
	thadaba-	'to become larrikins' (V)
Bound	thurla-	'goodbye, parting'
	thurlawaa	'gone away for good' (N)
Bound	ugurda-	'cold'
	ugurdadi	'cold' (N)
	ugurdanda-	'cool s.o./sth off' (V)
Bound	walaka-	'scavenger'
	walakaba-	'scavenge' (V)
Bound	walga-	'stripe, mark'
	walgawaa	'striped' (N)
	walganyja-	'write, draw, paint' (V)
Bound	wudilu-	'winded'
	wudiluba-	'be winded' (V)
Bound	yarliny-	'courting'
	yarlinyuba-	'go courting' (V)

All bound nominals are followed by a dash in the alphabetical vocabulary, indicating their bound status.

### 3.3 Pronouns

The class of pronouns in Nhanda includes all personal pronouns. Unlike nominals, personal pronouns follow a nominative/accusative case-marking pattern. Pronouns in Nhanda include both free and bound forms. Where both a free and bound form is possible, use of the free form can impart emphasis or focus.

#### 3.3.1 Free Pronouns

The nominative (unmarked) case forms for Nhanda free pronouns are shown in Table 3-3.

**Table 3-3. Nhanda nominative pronouns**

	SINGULAR	DUAL	PLURAL
1p	ngayi	ngayi-thada	ngayi-nu
2p	nyini	nyini-thada	nyini-nu

Recall that there are no true third-person pronouns. When necessary, demonstratives function as third-person pronouns within the discourse. Unlike surrounding languages, Nhanda does not have an inclusive/exclusive distinction for first-person plural pronouns.

Other basic case forms for personal pronouns in Nhanda are shown in Table 3-4.

**Table 3-4. Nhanda pronominal case forms**

	ACCUSATIVE	POSSESSIVE	ERGATIVE
SG	ngayi-nha	ngayunga	
1 DU	ngayi-thada-nha	ngayi-thada-wu	ngayi-thada-lu
PL	ngayi-nu-nha	ngayi-nu-u	
SG	nyini-nha	nyinunga	
2 DU	nyini-thada-nha	nyini-thada-wu	nyini-thada-lu
PL	nyini-nu-nha	nyini-nu-nygu	

With the exception of the possessive singular and plural forms, case marking is entirely regular. This is true for all other case inflections as well, which are formed by adding the appropriate case suffix to the unmarked pronominal stems in Table 3-3.

A note is in order concerning dual pronouns, which, as shown in Table 3-4, have ergative case forms in addition to the nominative forms in Table 3-3. While these ergative pronominal forms constitute single phonological words, at the mor-

pho-syntactic level, they can be analyzed as single words, e.g., [[ngayi]thada]<sub>N</sub>], or as compounds, e.g., [[ngayi]<sub>N</sub>[thada]<sub>N</sub>]. Under the first analysis, ngayi heads the morphological word, and determines nominative/accusative case marking. Under the second analysis, thada heads the word, and determines ergative/absolutive case marking (as the nominal wuthada ‘two’, from which it originates, would do, in the same position.)

When a noun is possessed, the possessive case form of the pronoun optionally occurs with a possessed form of the noun, which includes a bound pronominal suffix (see Section 3.3.2) marking person and number properties of the possessor. The paradigm for possessive noun phrases is shown in Table 3-5.

**Table 3-5. Nhanda possessive noun phrases**

1	SG	ngayunga	warla-tha	‘my head’
		ngayunga	wur'a-tha	‘my money’
DU		ngayi-thada-wu	warla-wana	‘our (du) heads’
		ngayi-thada-wu	wur'a-wana	‘our (du) money’
PL		ngayi-nu-u	warla-wana	‘our (pl) heads’
		ngayi-nu-u	wur'a-wana	‘our (pl) money’
2	SG	nyinunga	warla-nygu	‘your (sg) head’
		nyinunga	wur'a-nygu	‘your(sg) money’
DU		nyini-thada-wu	warla-nygu	‘your (du) heads’
		nyini-thada-wu	wur'a-nygu	‘your (du) money’
PL		nyini-nu-nygu	warla-nygu	‘your (pl) heads’
		nyini-nu-nygu	wur'a-nygu	‘your (pl) money’

There are no morpho-syntactic differences between alienable and inalienable possession. As with all free pronouns, the use of these possessive forms together with the bound pronoun usually indicates focus or emphasis. Compare the examples in (68).

(68) POSSESSIVE NOUN PHRASES IN CONTEXT

- a. agu-tha-lu            bardi            athu-nu  
 mother-ISOBL-ERG grub            cook-PIMPF

My mother was cooking grubs.

- b. ngana-bagaa minyju-ra? ngayunga minyju-tha  
 who-BEL            purse-3OBL 1sg.POSS            purse-ISOBL

Whose purse is it? It's MY purse.

In (68a), there is no emphasis on the identity of the possessor, while in (68b), the possessor is being questioned, and could be considered the focus of the response.

Nhanda first- and second-person pronouns *ngayi* and *nyini* appear to be conservative reflexes of Proto-Pama-Nyungan forms *\*ngay* ‘1sg.nominative’ (Koch 1997) and *\*nyin* ‘2sg.nominative’. The only sound change that has occurred is the ‘bulking’ of these words from one to two syllables, presumably to satisfy the bimoraic minimal word constraint (see Section 2.5). The bulking process inserted a final empty vowel slot, which was filled by features of the preceding glide (*\*ngay* > *\*ngayV* > *ngayi*) or vowel (*\*nyin* > *\*nyinV* > *nyini*).

The uninflected forms of pronominal roots are nominative singular. Duals are derived by suffixation of the regular dual suffix *-thada*, while plurals are formed by the suffixation of the regular plural suffix *-nu*. To the nominative base, *-nha* is added to form accusatives, and *-wu* to form a general (non-possessive) dative form. Again, both of these suffixes are found regularly on non-pronominals. In sum, the Nhanda pronominal system appears to retain the earliest forms of the singular pronoun stems. However, overlaid on these stems is the innovation of entirely regular number marking. Where Capell (1956:100) reconstructs Common Australian *\*nhurra* 2pl, Nhanda has an innovative form *nyini-nu*, from the pPN base *\*nyin*.

Though Nhanda was first classified by O’Grady, Voegelin, and Voegelin (1966) as a Kartu language, where the Kartu subgroup included Badimaya, Malgana, Nhanda, Wajarri, and Yingkarta, the free pronouns of Nhanda suggest otherwise. Badimaya, Malgana, Wajarri, and Yingkarta all show reflexes of Proto-Pama-Nyungan ergative forms. Blevins (1999) proposes the Proto-Kartu reconstructions in (69), with earlier reconstructions (most of which are attributable to Proto-Pama-Nyungan) listed for comparison.

(69) PROTO-KARTU NOMINATIVE/SUBJECT PRONOUNS

	Proto-Kartu	Earlier forms
1sg	<i>*ngatha</i>	<i>*ngathu</i> 1sg.ERG (Capell 1956)
1du	<i>*ngali</i>	<i>*ngali</i> 1DU (INCL) (Dixon 1980, Koch 1997)
1pl	<i>*ngaNHu</i>	
2sg	<i>*nyinta</i>	<i>*nyuntu</i> 2sg.ERG (Capell 1956) <i>*nyin-Tu</i> (Dixon 1980)
2du	<i>*nhupalV</i>	<i>*nhumpVIV</i> 2DU (Capell 1956)
2pl	<i>*nhurra</i>	<i>*nhurra</i> 2PL (Capell 1956)
3sg	<i>*palu</i>	<i>*pa-lu</i> 3SG [210]
3pl	<i>*thana</i>	<i>*THaNa</i> 3PL (Dixon 1980)

While Nhanda is relatively conservative in maintaining the original Proto-Pama-Nyungan nominative forms for singular pronouns, Proto-Kartu is conservative in reflecting the pPN ergative singular forms, as well as pPN irregular

duals and plurals. If the possibility of borrowing can be ruled out, and if a Kartu subgroup exists, based on pronominal comparison, Nhanda does not look at all like a Kartu language. See Blevins (1999) for further comparative evidence supporting a long period of independent development for Nhanda in Pama-Nyungan.

### 3.3.2 Bound Pronouns

Nhanda is unusual in having three distinct sets of bound pronouns, with distinct grammatical functions and distributions. One set of bound pronouns marks direct object and is suffixed to verbs. A second set marks nominal possession on nouns and oblique objects on verbs. A third set of bound pronouns is made up of first-position subject clitics.

#### 3.3.2.1 *Object bound pronouns*

Bound pronouns that function as direct objects of verbs occur immediately after the inflected verb. I will refer to these as object bound pronouns. The full set of object bound pronouns is shown in (70).

#### (70) OBJECT BOUND PRONOUNS (FOLLOW VERBAL TENSE/ASPECT SUFFIXES)

Person/number	Bound pronoun	Abbreviations used
1SG	-nha	1SGDO
1DU, PL	-wana	1PL
2SG	-rnda	2SGDO
3SG	unmarked	
3DU, PL	-ndha	3PLDO

For all persons, a singular/non-singular distinction is made. In the first person, both numbers have distinct bound pronominal forms. In the second person, only the singular does; dual and plural direct objects must be expressed by full pronouns: *nyini-thada-nha* and *nyini-nu-nha* respectively. Third-person singular direct objects are unmarked. If a transitive verb occurs without an overt object noun phrase, then the bound pronoun is obligatory. Examples of this sort are given in (71). A non-pronominal subject is marked ergative when object bound pronouns occur, showing that the argument structure of the verb is unaffected.

#### (71) BOUND OBJECT PRONOUNS (WITHOUT OBJECT NOUN PHRASES)

- a. *wiyabarndi-lu nha-'i-nha*  
 young boy-ERG see-PAST-1SGDO  
 The young man looked at me.
- b. *wunbi-ga-wana*  
 leave-IMP-1PL  
 Leave us two alone!



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- c. aluu    nha-'i-wana  
that.ERG see-PAST-1PL  
That one saw all of us.
- d. arnmanu-lu nhaka-rnda wuja-nggu  
man-ERG see-2SGDO hole-LOC  
The man sees you through the hole.
- e. nyarlu-nggu nha-'i  
woman-ERG see-PAST  
The woman saw [it].
- f. wuthada-nha, malya-wa    nha-'i -ndha  
two-SPACC NEG-1SGSUBJ see-PAST-3PLDO  
Those two, I didn't see them.
- g. abarli-nu mika-nda-a uthu; urdamundi aja-ndha-ndha  
child-PL play-CAUS-PRES dog directly bite-FUT-3PLDO  
The children are playing with the dog; directly he will bite them.

When a direct object noun phrase occurs, the bound direct object pronoun is optional. Compare examples with bound pronouns in (72a–c), where co-referential elements are in bold, to those without in (72d–f). In general, as suggested above, the use of a full pronoun where a bound form is possible appears to signify emphasis.

(72) OPTIONALITY OF BOUND PRONOUNS WITH OBJECT NOUN PHRASES

- a. inggaa-**nha**    pirlu            ngayi-nha  
give.IMP-1SGDO boomerang 1p-ACC  
Give **ME** the boomerang.
- b. **nyini-nha**-wa    nhaka-rnda  
2p-ACC-1SGSUBJ see-2SGDO  
I'm looking at **YOU**.
- c. nha-ga-**ndha**    pulhi-nhi-nu  
see-IMP-3PLDO many-SPACC-PL  
Look at the mob of them.

d. nyini nha-'i ngayi-nha  
 2p see-PAST 1p-ACC  
 You saw me.

e. ngayi nha-'i nyini-nha  
 1p see-PAST 2p-ACC  
 I saw you.

f. ngayi nha-'i ali-nu-na  
 1p see-PAST that-PL-COLL  
 I saw them all.

### 3.3.2.2 *Oblique bound pronouns*

A second set of bound pronouns, shown in (73), is used to mark possession on nouns, and indirect objects on verbs. I will refer to these as oblique bound pronouns. In the oblique bound pronouns, a singular/non-singular contrast is found in the first person only. Number is nondistinctive in second and third persons.

#### (73) OBLIQUE BOUND PRONOUNS

Person/number	Bound pronoun	Abbreviations used
1SG	-tha	1SGOBL
1DU, PL	-wana	1PL
2SG, DU, PL	-nygu	2OBL
3SG, DU, PL	-ra	3OBL

when suffixed to verb, encodes indirect object

when suffixed to noun, encodes possessor

An alternative would be to recognize a set of verbal oblique bound pronouns, and an independent syncretic set of possessive nominal suffixes. I have found no evidence for two distinct pronominal sets, and hence adopt the simpler analysis.

Examples with oblique bound pronouns are provided in (74). In each set of examples, the first sentence illustrates pronominal suffixation to a verb, and the second suffixation to a nominal. Oblique bound pronouns are obligatory when a full noun phrase is not present. For example, deleting the bound pronoun from (74a.i) gives *nyini apa mandhaa*, which translates as 'bring some water', without the dative/benefactive argument.

#### (74) OBLIQUE BOUND PRONOUNS IN CONTEXT

a.i nyini apa mandhaa-tha  
 2p water take.FUT-1SGOBL  
 You get water for me.

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.ii abarla-lu wumba-yi wur'a-tha  
child-ERG steal-PPERF money-1SGOBL  
The kid stole my money.

b.i aluu apa mandhaa-wana  
that.ERG water take.FUT-1PL  
He's bringing water for all of us.

.ii pundu-gu nguuti-nu paduda-wana  
rain-ERG wet-PIMPF dress-1PL  
The rain was wetting our dresses.

c.i ngayi piyarda-ba-nhii-nygu  
1p sorry-INCH-PAST-2OBL  
I'm feeling sorry for you (sg).

.ii nyini-thada, nhaa ini-nygu?  
2p-DU what name-2OBL  
You two, what are your (du) names?

d.i ngayi mandhaa-ra  
1p take.FUT-3OBL  
I'll take it from him.

.ii arda-ma-ga wiku-ra  
cut-VB-IMP stomach-3OBL  
Cut open his stomach!

Sentences with second- and third-person oblique bound pronouns are inherently ambiguous. For example, (74d.i) can also mean 'I'll take it from them two' or 'I'll take it from them (pl)'. When suffixed to nominals, there might appear to be a third-person possessive plural form, as in (75). However, the examples in (75) involve a combination of the third-person oblique bound pronoun and a following (nominal) plural suffix. In parallel cases where a third-person indirect object is found on a verb, the verb is simply marked with -ra, as expected, since -nu is a nominal plural suffix: wada-ga-ra! 'Sing it for them!'

## (75) OBLIQUE BOUND PRONOUN WITH PLURAL SUFFIX

- a. arda-ma-ga wiku-ri-nu  
cut-VB-IMP stomach-3OBL-PL  
Cut open their stomachs!
- b. nyarli-nu anhi-ya, cutka-ri-nu wanyja=wanyja-a ida=ngga  
woman-PL dance-PPERF arm-3OBL-PL dance-PPERF up=LOC  
Those women are dancing, shaking their arms in the air.

When a possessor noun occurs within the possessed noun phrase, the bound pronoun remains obligatory as shown in (76), where coreferential possessive pronominals are in bold. A sentence like (76a) without the oblique bound pronoun is ungrammatical: \*ngayunga yurdu ini-matka-nha. Whenever a possessor noun occurs, the possessed noun must occur with the appropriate oblique bound pronoun. In essence, possessive (oblique) bound pronouns function as the possessive arguments of nominals, with free forms optionally doubling to express focus or emphasis.

## (76) POSSESSOR NOUNS WITH POSSESSIVE BOUND PRONOUNS

- a. ngayunga yurdu-**tha** ini-matka-nha  
1p.POSS daughter-1SGOBL name-take.PRES-1SGDO  
My daughter is calling my name out.
- b. wumba-yi ngayi-thada-wu wur'a-**wana**  
steal-PPERF 1p-DU-DAT money-1PL  
[He] stole our (dual) money.
- c. abarla-lu wumba-yi nyini-thada-wu wur'a-**nygu**  
child-ERG steal-PPERF 2p-DU-DAT money-2OBL  
The kid stole your (dual) money.
- d. aluu wur'a-yi ala-ngura uthu-**ra**  
that.ERG shoot-PPERF that-POSS dog-3OBL  
He shot his dog.

Within the verbal system, however, a bound pronoun or a free pronoun may function as the sole indirect object of the verb. Where both are present, the argument in question is usually focused or emphasized. Compare (77a,b) where the indirect object argument is only expressed once, and (77c) where the indirect object is expressed as a free pronoun and as a bound pronoun.

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### (77) COMBINATIONS OF BOUND AND FREE OBLIQUE PRONOUNS

- a. nyini apa mandhaa-tha  
2p water take.FUT-1SGOBL  
You get water for me.
- b. nyini apa mandhaa ngayi-wu  
2p water take.FUT 1p-DAT  
You get water for me.
- c. nyini apa ngayi-wu mandhaa-tha  
2p water 1p-DAT take.FUT-1SGOBL  
You get water for me.

#### 3.3.2.3 *Subject clitics*

The third set of bound pronouns, shown in (78), are subject clitics, and encliticize to the first phonological word in the intonational phrase.

### (78) SUBJECT CLITICS (ENCLITIC TO 1ST PHONOLOGICAL WORD OF PHRASE)

Person/number	Subject clitic	Abbreviations used
1SG	-wa	1SGSUBJ
1DU, PL	-wana	1PL
2SG	-nyja	2SGSUBJ
3	unmarked	

The examples in (79) show subject clitics in first position, independent of the category of the first word of the phrase. Enclitics are found on nominal hosts (79a), verbal hosts (79b), particle hosts (79c), and interrogative hosts (79d).

### (79) SUBJECT CLITICS IN FIRST POSITION

- a. yawarda-wa innga-tii  
kangaroo-1SGSUBJ dead-PAST  
I killed a kangaroo.
- inya-ngu-wa yatka-nu  
this-EL-1SGSUBJ go-PAST  
I went from here.
- b. uma-nhaa-rnda-wa  
hit-FUT-2SGDO-1SGSUBJ  
I'll hit you.

yatka-ndha-wana wirlu-nggu ngutijada-ndha  
 go-NPAST-IPL sea-ALL swim-FUT  
 We're going to the sea to go swimming.

- c. malya-wa panda-ba-nhii  
 NEG-ISGSUBJ tired-INCH-PAST  
 I'm not tired yet.

malya-nyja wumba-yi?  
 NEG-2SGSUBJ steal-PPERF  
 You didn't steal it, did you?

- d. nhaa-wu-wa panda-ba-nhii?  
 what-DAT-ISGSUBJ tired-INCH-PAST  
 Why am I tired?

wandha-ra-nyja yatka-ndha?  
 where-3OBL-2SGSUBJ go-NPAST  
 Where are you going?

There are no third-person subject clitic forms — a fact that could be related to the absence of third-person independent pronouns.

The absence of a subject in non-imperative forms is typically interpreted as third person singular (80a,b), but as third person plural when the verb includes the -jadi/-jada (reciprocal) suffix (80c,d). When the discourse includes potential third-person singular and plural referents, reference is ambiguous, as shown in (80e).

(80) UNMARKED THIRD-PERSON SUBJECTS

- a. ayaka-wana-na  
 ask-IPL-COLL  
 [He] is asking all of us.
- b. malu-nggu inyja-a  
 shade-LOC stay-PRES  
 [He] is sitting in the shade.
- c. unggu-jada-nu  
 fight-RECIP-PIMPF  
 [They] were fighting.

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- d. wur'a-ndha-jada  
shoot-FUT-RECIP  
[They] will be shooting each other.
- e. aga, urdamundi wur'a-ndha-wana-na  
hey, directly shoot-FUT-1PL-COLL  
Hey, directly [he's/they're] gonna shoot us all.

Subject clitics are referred to in O'Grady, Voegelin, and Voegelin (1966:128) as 'disjunctive actor markers' that "close the first (or rarely the second) word of the contour". In the few cases where a bound subject pronoun occurs after the second word, the first word arguably forms a distinct intonational phrase. In all attested cases then, subject clitics take phrase-initial words as their hosts.

3.3.2.4 Summary and discussion

A summary of bound pronominals is shown in Table 3-6.

**Table 3-6. Summary of bound pronouns**

	DIRECT OBJECT	SUBJECT	OBLIQUE
1SG	-nha	-wa	-tha
1DU, PL	-wana	-wana	-wana
2SG	-nda	-nyja	-nygu
2DU, PL			-nygu
3SG	<i>unmarked</i>	<i>unmarked</i>	-ra
3DU, PL	-ndha	<i>unmarked</i>	-ra
Host	verbs	1st word of phrase	nouns/verbs

First singular, second singular, and third plural forms show no syncretism across grammatical functions. First plural -wana, on the other hand serves all three grammatical roles. There are no second plural bound pronouns apart from oblique -nygu, which appears to be an extension of the singular form.

Morphosyntactically, the three sets of bound pronouns are distinct. Nominal possessives are in a substitution class with nominal case markers (forming part of the syntactic word), and could be considered additional case suffixes. In (81a) the possessive occurs preceding the ergative suffix, in (81b) preceding the dative case suffix -wu, and in (81c) following the locative case marker.

## (81) POSSESSIVE BOUND PRONOUNS AS CASE SUFFIXES

- a. ardu-tha-lu           yarna-nda-yi-nha  
 spouse-ISOBL-ERG   crazy-CAUS-PPERF-ISOBL  
 My husband made me crazy.
- b. abarla       wula-nhaa   agu-ra-wu  
 child       cry-NPAST   mother-3OBL-DAT  
 The baby is crying for its mother.
- c. wigi       wanyja-yi   ngunda-gu-tha  
 spit       throw-PPERF   face-LOC-ISOBL  
 He spat in my face.

Oblique and direct object bound pronouns on verbs occur after inflectional tense-aspect suffixes. Ditransitive verbs like ‘give’, ‘lend’ take two direct objects. However, no examples of double direct object bound pronouns have been found and I was unable to elicit sentences like ‘He’ll give us them’ where both objects were expressed as bound pronouns. However, there are many examples of the direct object pronoun cooccurring with a second direct object nominal, as in (82a).

## (82) DOUBLE OBJECT CONSTRUCTIONS

- a. arliba-ga-nha   wur'a  
 lend-IMP-ISOBL   money  
 Lend me some money.
- b. induga       tharti-ya-ndha, ayaka-wana-na wur'a-wu  
 tomorrow   back-come-FUT   ask-IPL-COLL   money-DAT  
 He'll come back tomorrow, and ask us for money.
- c. wulhu-wu   ngayi   nhaka-ra  
 lice-DAT   1p   see-3OBL  
 I'm looking over him for lice.

I have found only one verb that appears to take both a direct object and a dative object, and that is *aya-*, *ayaka-* ‘ask (someone for something)’. Consider sentence (82b). Where one might expect a combination of *-ra* and *-wana* only the direct object bound pronoun occurs on the verb, with a full nominal dative argument. In sentences where two oblique arguments occur and both are expressed, the same is true: either both are free nominals, or one is a bound pronoun and the other a noun phrase. I have no examples of a sequence of oblique bound pronouns on a single verb, as might be expected in a sentence like (82c). Compare this situation



with that of nouns, which allow sequences of obliques, as in *agu-ra-wu* ‘for its mother’ in (81b).

Bound subject pronouns are arguably the most loosely bound of the bound pronouns. They occur following case suffixes (79a), direct object bound pronouns (79b), and oblique bound pronouns (79d), and are always final in the phonological word. (The collective *-na*, discussed in Section 3.2.2, has only been found to quantify over VP-internal arguments, not subjects.)

Bound pronouns in Nhanda differ quite markedly from those of Yingkarta and Wajarri, and from the more articulated system of Pintupi, as shown by the comparison sets in Table 3-7. For this subset of bound pronouns, the identity between Yingkarta, Wajarri, and Pintupi forms is quite striking: the only clear difference is the occurrence of Wajarri first singular accusative *-tha*, which may be a shortened form of the free uninflected *ngatha*, and Yingkarta *-nku*, corresponding to Pintupi *-ngku*. Nhanda forms, however, show more differences than similarities, in particular for first-person forms.

**Table 3-7. Bound pronouns in some central WA languages**

	Yingkarta	Wajarri	Pintupi	Nhanda
1SGSUBJ	-rna	-(r)na	-rna	-wa
1SGDO		-tha	-mi	-nha
1SGOBL	-ju	-ju, -junggu	-ju	-tha
2SGSUBJ	-n	-n	-n	-nyja
2SGDO	-nda	-nda	-nda	-rnda
2SGOBL	-n.gu		-nggu	-nygu

The Nhanda first-person singular subject clitic *-wa* is unique; I know of no Australian languages that have a bound first singular pronoun (of any case) of this form. Nhanda *-nha* could be related to the regular accusative suffix *-nha*, but in any case, it is not cognate with the Wajarri or Western Desert bound pronominal forms. Nhanda *-tha* also stands out in this comparison set, as there is no regular correspondence between Nhanda lamino-dentals and Wajarri/Yingkarta palatals (see Blevins 1999). Apart from obvious phonological differences, a major distinction in these bound pronoun systems is morphosyntactic. In Nhanda, as illustrated above, subject pronouns are first-position clitics, while direct object bound pronouns attach to verbs, and obliques to verbs or nouns. The complexity of this system distinguishes it again from the impoverished enclitic systems of Yingkarta and Wajarri, and also from the regular first-position clitic system of Pintupi.

### 3.4 Verb Morphology

Verbs in Nhandá are distinguished from other word classes by a distinctive set of derivational and inflectional suffixes. These suffixes are described in detail below, following the introduction of some general aspects of verbal morphology and argument structure.

#### 3.4.1 Verb Structure

Nhandá verbs consist of a root followed by zero or more derivational suffixes, followed by one or more inflectional tense/aspect/mood suffixes. These inflectional suffixes are in turn followed by zero or more bound pronouns, which in turn may be followed by the collective suffix:

[[[[[ROOT]-DERIVATION\*]-INFLECTION<sup>+</sup>]-PRO\*]- (COLL)]

For example, the verb form *ciiga-nda-yi-wana-na* ‘he shamed us all’ consists of the nominal root *ciiga* ‘shame’, followed by the causative suffix *-nda* which derives verbs from nominals, followed by the past perfect suffix *-yi*, followed by the first-person plural bound object pronoun *-wana*, followed by the collective *-na*. The reflexive suffix *-nyinda* is classed together with bound pronouns, on the grounds that it always follows inflection.

#### 3.4.2 Argument Structure and Conjugation Class

Verbs split into two main categories with respect to case marking: transitive and intransitive. Transitive verbs occur with ergative common noun subjects and absolutive common noun objects or specific-accusative common noun objects; recall that the absolutive case is unmarked. Intransitive verbs have single arguments that are expressed as absolutive subjects. Ditransitive verbs also occur in Nhandá; these verbs have ergative common noun subjects and two absolutive common noun objects. With transitive verbs, pronominal objects are marked with accusative case, and pronominal first- and second-person subjects are unmarked. Examples of each verb type are given in (83): (83a) show intransitive verbs, (83b) transitive verbs, and (83c) ditransitive verbs.

(83) TRANSITIVITY DISTINCTIONS

- a. *uthu-tha innga-ba-nhii*  
 dog-1SGOBL dead-INCH-PAST  
 My dog died.
- abarla wula-nhaa*  
 child cry-NPAST  
 The child is crying.

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- b. yugangga arnmanu-lu unhii nyarlu-nha  
yesterday man-ERG hit.PAST woman-SPACC  
The man hit the woman yesterday.

uthu-nggu wirdaa-tha aja-yi  
dog-ERG leg-ISGOBL bite-PPERF  
The dog bit my leg.

- c. arnmanu-lu ingii nyarlu-nha wur'a  
man-ERG give.PAST woman-SPACC money  
The man gave the woman money.

induga ngayi arliba-ndha nyini-nha wur'a  
tomorrow 1p lend-FUT 2p-ACC money  
Tomorrow I'll lend you some money.

In addition to these transitivity distinctions, we must distinguish two types of intransitive verbs. Unaccusative verbs are those in which the single argument of the intransitive verb is at some level the internal argument or object of the verb, though it may act in many respects as a surface subject. Unergative verbs are those in which the single argument of the intransitive verb is at all levels the external argument or subject of the verb. The case-marking frames of these two intransitive verb types are identical: both take single absolutive non-pronominal arguments. But the tense/aspect markers for unaccusative verbs and unergative verbs are distinct. Unergative verbs pattern with transitive verbs in what I refer to as the Y-class conjugation, while unaccusative verbs all fall into the NH-conjugation class. The unaccusative/unergative split is supported by the behavior of derived verbs: derived intransitives with the inchoative suffix *-ba*, which creates prototypical unaccusative verbs, all conjugate in the NH class, while derived transitives with the causative *-nda* are all Y-class verbs.

The two major conjugation classes are labelled NH and Y, based on the initial consonantism of the past and present tense suffixes, despite the fact that the [y] of Y-class verbs, where it occurs, is treated as epenthetic in (14) and below. The suffixes associated with these conjugation classes are shown in Table 3-8.

Notice that the NH class lacks categories present in the Y class. Past, present, and future tenses are distinguished in the Y class, while the NH class has only a past/non-past distinction. The perfective/non-perfective aspectual distinction present in the Y class (i'anu ajuga 'he was digging' vs. i'ayi ajuga 'he dug some') is also absent in the NH class.

**Table 3-8. Nhanda major conjugational classes**

	NH		Y
PAST	-nhii	PAST PERFECTIVE	-i
		PAST IMPERFECTIVE	-nu
NON-PAST	-nhaa	PRESENT	-a
		FUTURE REALIS	-ndha
FUTURE IRREALIS	-nda-ndha	FUTURE IRREALIS	-nda-ndha
IMPERATIVE	-ga, ∅	IMPERATIVE	-ga
AMBULATIVE	-nggula	AMBULATIVE	-nggula

As detailed in Section 2.3 regular alternations are conditioned by the two Y-class vowel initial suffixes: past perfective -i and present tense -a. For i- and u-final verb stems, the addition of the past perfective -i results in a long vowel [i:], while suffixation to a-final verbs results in y-glide epenthesis. When present tense -a occurs on a-final stems, a long vowel occurs, while an epenthetic glide homorganic with the preceding vowel occurs after i- and u-final stems. Representative Y-class verbs are shown in (84).

## (84) Y STEMS + VOWEL-INITIAL SUFFIXES

Stem	+ /-i/ PPERF	+ /-a/ PRES	+ /-ga/ IMP	Gloss
ada-	adayi	adaa	adaga	'take away'
anhi-	anhii	anhiya	anhiga	'dance'
awu-	awii	awuwa	awuga	'stoke'

Apart from these phonologically conditioned alternations, three minor rules are evidenced in the inflectional paradigm: base-final vowel umlaut triggered by the ambulative on a preceding inchoative suffix (see Section 2.6.1); denasalization triggered only by stem-final ra on a following past imperfective suffix (see Section 2.6.2); and nasal dissimilation of -nggula (see Section 2.6.3).

Table 3-9 shows representative inflected verbs from the NH class. The verb calyaba- is an inchoative, derived from the nominal stem calya 'glad, happy' plus the inchoative suffix -ba; pitu- 'want, eager to' is one of the few NH-class verbs that is neither inchoative, nor alternating with an unergative Y-class stem. Both verbs are intransitives, as are all regular NH-class verbs. For some NH verbs, including many of the inchoatives, there are two imperative forms; one, the bare stem, with final secondary stress, and another, with the regular imperative suffix -ga. When the imperative suffix is absent, secondary stress is still found on the final syllable: cályabà 'be happy!'. Conditioning factors for the two distinct imperative forms remain unclear.

**Table 3-9. NH-class verbs**

Stem	calyaba-	pitu-
PAST	calyabanhii	pitunhii
NONPAST	calyabanhaa	pitunhaa
NONPAST IRREALIS	calyabandandha	pitundandha
IMPERATIVE	calyaba(ga)	pituga
AMBULATIVE	calyabinggula	pitunggula
Gloss	'be happy'	'want, be eager to'

Intransitive unergatives, transitives, and ditransitives are Y-class verbs. Table 3-10 shows Y-class verbs with the full range of conjugational suffixes.

**Table 3-10. Y-class verbs**

Stem	aja-	arliba-	wada-
PAST PERF	ajayi	arlibayi	wadayi
PAST IMPF	ajanu	arlibanu	wadanu
PRESENT	ajaa	arlibaa	wadaa
FUT REALIS	ajandha	arlibandha	wadandha
FUT IRREALIS	ajandandha	arlibandandha	wadandandha
IMPERATIVE	ajaga	arlibaga	wadaga
AMBULATIVE	ajangula	arlibangula	wadanggula
Gloss	'bite' (tr)	'lend' (ditrans)	'sing' (intr)
Stem	wumba-	arndi-	awu-, a'u-
PAST PERF	wumbayi	arndii	awii
PAST IMPF	wumbanu	arndinu	awunu
PRESENT	wumbaa	arndiya	awuwa
FUT REALIS	wumbandha	arndindha	awundha
FUT IRREALIS	wumbandandha	arndindandha	awundandha
IMPERATIVE	wumbaga	arndiga	awuga
AMBULATIVE	wumbagula	arndigula	awunggula
Gloss	'steal' (tr)	'smell' (tr)	'light, stoke' (tr)

As in many other languages, verbs with particular semantics lend themselves to either unaccusative or unergative argument structure. In Nhandu, this is clear from the fact that certain verb stems can be conjugated in either the Y or NH class. For example, the verb stem *inada-* 'break' occurs in the Y conjugation as the transitive unergative verb 'break' (85a), and in the NH conjugation as the intransitive unaccusative verb 'break; be broken' (85b).

(85) UNERGATIVE AND UNACCUSATIVE CONJUGATIONS OF *inada-* 'break'

- a. *aluu armanu-lu inada-yi ngarnnga*  
 that.ERG man-ERG break-PPERF stick  
 That man broke the stick.
- b. *mambu-tha inada-nhii*  
 bone-1SGOBL break-PAST  
 My bone broke.

Similarly, the transitive verb *wumba-* 'steal' has an intransitive unaccusative entry that means 'hide, duck down, sneak away'. (Note how similar this pair is to English transitive *steal*, and intransitive *steal away*, *steal off*.) There are also simple intransitives that show both unergative and unaccusative conjugations. One example is *urnnga-* 'fall'. Examples are given in (86) where (86a) shows the unergative verb and (86b) the unaccusative.

(86) UNERGATIVE AND UNACCUSATIVE CONJUGATIONS OF *urnnga* 'fall'

- a. *yugungga ngayi cuga-yi, ala urnnga-nu*  
 yesterday 1p push-PPERF this fall-PPERF  
 Yesterday I pushed him, and he went falling down.
- b. *minda urnnga-nhii*  
 house fall-PAST  
 The house fell down.

As already noted, derived verbs in *-ba*, the inchoative, always fall into the NH class, while verbs with *-nda*, the causative suffix, are consistently Y class. Verbs derived from the nominal stem *calya-* 'happy, glad' in (87) illustrate the shift in conjugation-class membership with these two derivational suffixes.

## (87) PREDICTABLE CONJUGATION CLASS WITH INCHOATIVES AND CAUSATIVES

- a. *abarla calya-ba-nhii*  
 child happy-INCH-PAST  
 The baby was happy.
- b. *ardu-tha-lu calya-nda-yi-nha*  
 spouse-1SGOBL-ERG happy-CAUS-PPERF-1SGDO  
 My husband made me happy.

A handful of verb stems whose final consonant is apical fall into a special conjugation class that I will label 'D'. Unlike the NH and Y classes, in the D class argument structure of the verb does not appear to determine membership. Instead,

membership is partly determined by the presence of final present tense *-da/-ta*. Presently, paradigms are partial for most D stems, but the fullest paradigms are set out in Table 3-11.

**Table 3-11. D-class verbs**

Stem	uudada-	wathada-
PAST	uudadii	wathadii
PRESENT	uudada	wathada
FUTURE	uudadandha	wathadandha
FUT IRREALIS	uudandandha	wathadandandha
IMPERATIVE	uudadà	wathadà
AMBULATIVE	uudadanggula	wathadanggula
Gloss	'take sth away' (tr)	'wonder' (semi-tr)
Stem	wadada-	wadadicada-
PAST	wadadii	wadadicadii
PRESENT	wadada	wadadicada
FUTURE	wadadandha	wadadicadandha
FUT IRREALIS	wadadandandha	
IMPERATIVE	wadadà	
AMBULATIVE	wadadanggula	
Gloss	'hop' (intr)	'hopping along' (intr)

These verbs seem to be intermediate between NH class and Y class in terms of tense/aspect distinctions. There is a past/present/future distinction, but no aspectual distinction in the past. Morphologically, these verbs lack an overt imperative suffix, though there is still irregular secondary stress on the final syllable of imperative forms, marked with a grave accent on the final vowel. Apart from this irregular stress, present and imperative forms show syncretism.

In (88) I list all verbs that appear to instantiate part of the D-class paradigm.

(88) PROBABLE D-CLASS STEMS

acijada-	acijata-	'getting clothes on' (intr)
adanyjada-	adanyjata-	'flirting' (intr)
igada-	igata-	'stand' (intr)
maatijada-		'crawling' (intr)

In some cases, there is a *d/t* alternation in the stem-final syllable with indeterminate conditioning factors. In these cases, both stems are listed. Some of these stems appear to incorporate frozen instances of the reciprocal suffix */-jada/* and

could be participles (see Section 3.4.5.3.) They were typically translated with English *ing* forms, as shown by the glosses.

It is important to stress that not all verbs with final apical consonants fall into the D conjugation class. A near minimal pair is *warlida-* ‘spank, slap’, a regular transitive Y-class verb, and *wathada-* ‘wonder’, a semi-transitive D-class verb illustrated in Table 3-11 above.

The origins of final *-da* in these verbs is mysterious. This now inseparable string was perhaps once a separable formative, found synchronically in the participial ending *-jada* < \**-ja-da* (see Section 3.4.5.3).

### 3.4.3 Irregular Verbs

In addition to the two major conjugation classes Y and NH, and the small class of D stems, there is a handful of verbs in which syncretism occurs within paradigms, where tense/aspect categories are misaligned with morphological forms, or where suppletive forms occur. All attested irregular verbs are listed in (89). They are listed alphabetically within verb classes (NH, Y, and unclassified), with all irregularities noted below.

#### (89) IRREGULAR VERBS

NH class	Gloss	Unclassified	Gloss
<i>igada-</i>	‘stand, be standing’	<i>aya-</i>	‘ask’
<i>ngadiya-</i>	‘fall asleep’	<i>inga-</i>	‘give’
<i>nyina-</i>	‘sit; stay; stop’	<i>matka-</i>	‘take; give’
<i>wangga-</i>	‘talk, speak’	<i>uma-, unhi-</i>	‘belt, slap’
		<i>wurtka-</i>	‘tell sth to s.o.’
		<i>yatka-</i>	‘go; come’
Y class			
<i>arda-</i>	‘cut, chop’		
<i>athu-</i>	‘cook, burn’		
<i>atka-</i>	‘rub, spread’		
<i>atkada-</i>	‘take’		
<i>kuya-</i>	‘wail’		
<i>ngala-, ngarnma-</i>	‘eat, drink’		
<i>nha-, nhaka-</i>	‘see, look at’		
<i>pada-</i>	‘tear, rip’		
<i>wirda-</i>	‘wait’		

Compounds headed by the irregular verbs in (89) are also irregular. For example *kada+yatka-* has the same conjugation as *yatka-*, while *ada+matka-*, *arda+matka-*, etc. pattern with *matka-*. One exception, *malu+nha-*, is noted in the



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text below. Predicted but unattested forms are marked with a double asterisk. In the vocabulary, irregular verbs are marked 'IRR'.

Within the NH class, there are very few irregular verbs. The verb *wangga-* 'talk, speak' shows a perfectivity contrast for past tense forms that is not attested for any other NH-class verb:

Stem	wangga-
PAST PERFECTIVE	wangganhii
PAST IMPERFECTIVE	wangganhaa
NON-PAST	wangganhaa
FUT IRREALIS	waggandandha
IMPERATIVE	wanggaga
AMBULATIVE	waggagula
Gloss	'talk, speak' (NH/IRR)

*Ngayithada wangganhii* means 'We two had a talk', while *ngayithada wangganhaa* can mean 'We two were talking'. The verb *nyina-* 'sit; stay; stop' is another NH verb that is slightly irregular. The imperative is *nyinaa*, as opposed to the expected *\*\*nyinaga*. Similarly, the imperative of *ngadiya-* 'fall asleep' is *ngadiyaa*, not the expected *\*\*ngadiyaga*. In addition, a past perfective form, *ngadinyii* co-occurs with past *ngadiyanhii*. Otherwise these two verbs inflect the same as other NH verbs. The verb *igada-* 'stand, be standing', like *ngadiya-* 'sleep', has a past perfective form *igadinyii*, in addition to the past imperfective *igadanhii*.

The intransitive Y-class verb *wirda-* 'wait' shows a parallel syncretism, with present and imperative *wirdaa*, instead of the expected imperative *\*\*wirdaga*. The same is true of *atkada-* 'take' with imperative *atkada*. The Y verb *kuya-* 'wail' has an irregular past perfective form *kuyaw*, in place of *\*\*kuyayi*. Otherwise, it is regular. As mentioned in Section 2.3, the present tense of *athu-* is *athura*, not *\*\*athuwa*; this verb also has irregular imperative *athuraga* with regular *athuga*. The stem *nha-* 'see, look at' has a near regular Y conjugation, as shown below:

Stem	nha-
PAST PERFECTIVE	nha'i
PAST IMPERFECTIVE	nha'i
PRESENT	nhaka
FUT REALIS	nhaandha
FUT IRREALIS	nhaandandha
IMPERATIVE	nhaga
AMBULATIVE	nhakanggula
Gloss	'see, look at' (Y/IRR)

The only differences between *nha-* and regular Y-class verbs are that: first, the two past forms have merged, with the sound change \*y > ' occurring; second, the present marker is *-ka*, not *-a*; and third, the ambulative is added to the present tense stem *nhaka-*, not the bare stem *nha-*. Compound verbs headed by *nha-* have the same conjugation. The one exception is *malunha-* 'look in mirror', which has a regular past tense *malunhayi*, not the expected \*\**malunha'i*. In addition to these irregular Y-class verbs, there are at least two other Y-class verbs with irregular present tense *-ka*, where one expects regular *-a*:

Stem	<i>arda-</i>	<i>atka-</i>
PAST PERFECTIVE	<i>ardayi</i>	<i>atkayi</i>
PAST IMPERFECTIVE	<i>ardanu</i>	<i>atkanu</i>
PRESENT	<i>ardaka</i>	<i>atkaka</i>
FUT REALIS	<i>ardandha</i>	<i>atkandha</i>
FUT IRREALIS	<i>ardandandha</i>	<i>atkandandha</i>
IMPERATIVE	<i>ardaga</i>	<i>atkaga</i>
AMBULATIVE	<i>ardanggula</i>	<i>atkanggula</i>
Gloss	'cut, chop' (Y/IRR)	'rub, spread' (Y/IRR)

The transitive Y-class verb *pada-* 'rip, tear', also shows a parallel irregular present tense form *padaka*.

I now turn to the truly irregular verbs which have their own unique paradigms. The verb *yatka-* 'go' shows a simple past/non-past tense distinction, with no aspectual distinction in past tense forms. The imperative shows the *-da* formative found in the D class. Formation of 'come' involves suffixation of the directional *-yu/-yana* indicating movement toward the speaker (see Section 3.4.5.5). For 'come', tense/aspect distinctions are realigned, with a simple distinction between future and non-future. The 'go/come' paradigm is set out in Table 3-12.

**Table 3-12. Nhanda verbs 'come' and 'go'**

Stem	<i>yatka-</i>	<i>yatka+yu-</i> , <i>yatka+yana-</i>
PAST	<i>yatkanu</i>	<i>yatkayu</i>
PRESENT	<i>yatkandha</i>	<i>yatkayu</i>
FUTURE	<i>yatkandha</i>	<i>yatkandhayana</i>
IMPERATIVE	<i>yatkada</i>	<i>yatkayu</i>
AMBULATIVE	<i>yatkanggula</i>	<i>yatkayu</i>
Gloss	'go' (IRR)	'come' (IRR)

The verbs *matka-* 'take, give, bring' and *wurtka-* 'tell sth (to someone)' are also irregular, with conjugations illustrated in Table 3-13.

**Table 3-13. Nhanda verbs ‘take’ and ‘tell’**

Stem	matka-	wurtka-
PAST	matii	wurtii
PRESENT	matka	wurtka
FUT REALIS	mandhaa	wurndhaa
FUT IRREALIS	mandhandha	wurndhandha
IMPERATIVE	mata	wurta
AMBULATIVE	matkanggula	wurtkanggula
Gloss	‘take; give’ (IRR)	‘tell sth (to s.o.)’ (IRR)

Other compound verbs headed by matka- have the same conjugation. These include: ada+matka- ‘jerk, grab sth away’; ini+matka- ‘call out someone’s name’; thuri+matka- ‘get sunny, hot again (after rain)’.

Another irregular verb is ditransitive inga- ‘give’:

Stem	inga-
PAST PERFECTIVE	ingii
PAST IMPERFECTIVE	inginu
PRESENT	ingгаа
FUT REALIS	inganhaa
FUT IRREALIS	ingandandha
IMPERATIVE	ingгаа
AMBULATIVE	inggagula
Gloss	‘give’ (IRR)

Notice the stem-final alternation between ng and ngg, and the final long vowel in the present and imperative forms.

Another verb with suppletive stem forms is ngala-, ngarnma- ‘eat, drink’:

Stem	ngala-, ngarnma-	
PAST PERFECTIVE	ngalayi	
PAST IMPERFECTIVE	ngalaw	
PRESENT	ngalaa	PRES PARTICIPLE ngalungga
FUT REALIS	ngarnmanhaa	
FUT IRREALIS	ngarnmandandha	
IMPERATIVE	ngala	
AMBULATIVE	ngalunggagula	
Gloss	‘eat, drink’ (IRR)	

Notice above that the perfective/imperfective contrast for ‘eat’ patterns with Y-class verbs, but the future realis form is one from the NH paradigm. This is one of the few verbs with a special participial form, *ngalungga*. The sentences *ngayi ngalungga* and *ngayi ngalaa* both mean ‘I am eating’, but in the first example containing the participle, there is more focus on the ongoing activity. This is also one of the few verbs where secondary stress was not recorded for the final syllable of the imperative verb form.

Another irregular verb is *uma-*, *unhi-* ‘belt, smack, hit with the hand’:

Stem	<i>unhi-</i> , <i>uma-</i>
PAST PERFECTIVE	<i>unhii</i>
PAST IMPERFECTIVE	<i>unhinu</i>
PRESENT	<i>umaa</i>
FUT REALIS	<i>umanhaa</i>
FUT IRREALIS	<i>umandandha</i>
IMPERATIVE	<i>umaa</i>
AMBULATIVE	<i>umanggula</i>
Gloss	‘belt, smack’ (IRR)

The conjugation of this verb parallels that of *ngala-/ngarnma-* ‘eat, drink’ in terms of tense/aspect suffixes and positions of suppletive stems. The only real difference is in the imperative forms, where *ngala* lacks the final long vowel found in *umaa*.

Like *unhi-/uma-* the transitive verb *aya-* ‘ask, talk to’ shows a past perfective/imperfective contrast that mixes the NH- and Y-conjugation suffixes. Like *nha-*, it also shows irregular present tense *-ka*:

Stem	<i>aya-</i>
PAST PERFECTIVE	<i>ayanhii</i>
PAST IMPERFECTIVE	<i>ayanu</i>
PRESENT	<i>ayaka</i>
FUT REALIS	<i>ayandha</i>
FUT IRREALIS	<i>ayandandha</i>
IMPERATIVE	<i>ayaga</i>
AMBULATIVE	<i>ayanggula</i>
Gloss	‘ask, talk to’ (IRR)

The occurrence of present tense *-ka* in many irregular verbs (e.g., *ardaka*, *atkaka*, *ayaka*, *matka*, *nhaka*, *wurtka*, *yatka*) suggests a possible *\*-ga* for the regular present tense of the Y-conjugation class, with loss of the suffix-initial *\*g* intervocalically, and strengthening of *\*g>k* subsequent to sonorant fortition (see

Section 2.8.4). In *inga*-‘give’, where neither loss nor strengthening applied, the *-ga* suffix is maintained. Generally, the initial consonant of *\*-ga* was retained in what are reconstructed as monosyllabic verb stems (see Table 3-14 below), and lost elsewhere.

The class of irregular verbs in Nhandá overlaps with the class of monosyllabic verb stems reconstructed by Dixon (1980:403–07). A comparison of Nhandá verbs with Dixon’s reconstructions (which I interpret as Proto–Pama–Nyungan) is shown in Table 3-14. For further discussion of phonological developments in irregular verb forms, see Blevins (1999:312–13).

**Table 3-14. Nhandá reflexes of Pama–Nyungan monosyllabic verbs**

Nhandá stem	pPN stem	Gloss
<i>ngala-</i> (IRR)	<i>*nga-l</i>	‘eat, drink’
<i>matka-</i> (IRR)	<i>*maa-n</i>	‘take’
<i>uma-</i> (IRR)	<i>*pu-m</i>	‘hit’
<i>nha-</i> (Y/IRR)	<i>*NHaa-ng</i>	‘see’
<i>inga-</i> (IRR)	<i>*yu-ng</i>	‘give’
<i>yatka-</i> (IRR)	<i>*ya-n</i>	‘go’
<i>nyina-</i> (NH/IRR)	<i>*NYii-n</i>	‘sit’

### 3.4.4 Verbal Inflectional Suffixes

Inflectional tense/aspect suffixes have been shown above with verb conjugation classes. Here, each suffix is listed, with a range of examples provided to give a sense of how each is used. Recall that in the NH class, there is a simple distinction between past *-nhii* and non-past *-nhaa*, and additionally an irrealis suffix *-nda* which is coupled with the non-past to provide a future irrealis form. In fact, the past/non-past distinction is somewhat more complex, as detailed below.

For non-stative verbs in the NH class, this semantic characterization is fairly accurate. Examples of active (non-stative) NH verbs contrasting past and non-past forms are shown in (90). In these examples, the past tense covers both imperfective (90a) and perfective (90b) aspects, and the non-past suffix is used for present (90c,d) and future events (90e).

(90) PAST/NON-PAST CONTRAST IN ACTIVE NH VERBS

- a. *yugangga maru=ngga ala wutka-nhii*  
 yesterday night=LOC2 that snore-PAST  
 Last night he was snoring.

- b. thani-nggu ngayi nha-'i arnmanu parlu-ngu inda-nhii  
 outside-LOC 1p see-PAST man hill-EL go down-PAST  
 Outside I saw the man climb down from the hill.
- c. abarli-nu wumba-nhaa  
 child-PL hide-NPAST  
 The children are hiding.
- d. nhaa-wu-nyja wula-nhaa?  
 what-OBL-2SGSUBJ cry-NPAST  
 Why are you crying?
- e. iga-da! malya, ngayi urnnga-ndha! wirdaa-tha inada-ngga-nhaa!  
 stand-IMP NEG 1p fall-FUT leg-1SGOBL break-LOC2-NPAST  
 Stand up! No, I'll fall! My legs will break off!

Compare the examples in (90) with examples of stative NH verbs in (91). For statives, what we would normally translate into a present tense in English in examples like (91d-f) occurs with the PAST suffix -nhii. I suggest that this is because states are non-punctual; typically, a present state extends, even if briefly, into the past, the time before the utterance. For this reason, the past suffix occurs.

(91) PAST/NON-PAST CONTRAST IN STATIVE NH VERBS

- a. yugangga arndi-nu thudu puga-ba-nhii  
 yesterday smell-PIMPF meat rotten-INCH-PAST  
 Yesterday he smelled the meat rotting.
- b. abarla-bardu innga-ba-nhii  
 child-PITY dead-INCH-PAST  
 The poor dear child died.
- c. ngayi wiyabarndi-ba-nhii  
 1p young-INCH-PAST  
 I was feeling younger.
- d. nyinunga ngunyu-nygu winyja-ba-nhii  
 2p.POSS hair-2OBL grey-INCH-PAST  
 Your hair is going grey.

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- e. *nhaa-wu-nyja panda-ba-nhii? malya-wa panda-ba-nhii*  
 what-OBL-2SGSUBJ tired-INCH-PAST NEG-1SGSUBJ tired-INCH-PAST  
 Why are you tired? I'm not tired yet.
- f. *ngayi pitu-nhii, ngayi-thada yatka-ndha apa-nggu*  
 1p eager-PAST 1p-DU go-NPAST water-LOC  
 I'm eager to, so we (du) will go to the ocean.
- g. *ngayi piyarda-ba-nhii-nygu, nyini matharda-ba-nhaa*  
 1p sorry-INCH-PAST-2OBL 2p sick-INCH-NPAST  
 I'm feeling sorry for you, because you're getting sick.
- h. *induga nyini ciiga-ba-nhaa*  
 tomorrow 2p shame-INCH-NPAST  
 Tomorrow you'll really feel shame come on you.
- i. *ngayi manggawarla-tha ija-yi uthudu-nggu. pinda-ba-nhaa.*  
 1p hat-1SGOBL leave-PPERF ground-LOC dirty-INCH-NPAST  
 I put my hat on the ground. It will get dirty.

Support for this view comes from inceptive states as in (91g): in this example *-nhaa* is used, since the state is just beginning and does not extend into the past. Because the majority of stative verbs in the NH class are derived by addition of the inchoative *-ba*, it might appear that this shift in tense/aspect contrast is a result of *-ba* suffixation. However, at least one non-derived NH stative, *pitu-* (91f) shows the same patterning, with *-nhii* used for a state continuing into the present, translated into English in the present tense. Compare also the questions in (90d) and (91e): from these, it seems clear that the unmarked present stative is non-inceptive, while the unmarked present active is punctual. Throughout this grammar, *-nhii* is glossed as *PAST*, even when it is translated by an English present tense, as in the examples just discussed.

Some examples of the future irrealis are given in (92). Notice that in (92c), the *if*-clause occurs in the irrealis, while the consequent takes the simple future realis *-nhaa*.

(92) NH CLASS *-nda-ndha* 'FUTURE IRREALIS'

- a. *arnmanu-ba-nda-ndha*  
 man-INCH-IRR-FUT  
 He might become a man (through the law).

- b. ngayi panda-ba-nda-ndha  
 1p tired-INCH-IRR-FUT  
 I might get tired.
- c. aluu uthu-nggu ngamma-nda-ndha thudu paacinu-waa,  
 that.ERG dog-ERG eat-IRR-FUT meat poison-COM  
 If that dog eats the poisoned meat,  
 urdamundi innga-ba-nhaa  
 then dead-INCH-NPAST  
 then he'll die.

As noted earlier, Y-class verbs have a perfectivity contrast in the past tense which is absent in NH-class verbs. Examples are given in (93).

(93) PAST PERFECTIVE/IMPERFECTIVE CONTRAST IN Y CLASS

- a. indaacu-lu uthu-nggu aja-yi-nha  
 big-ERG dog-ERG bite-PPERF-1SGDO  
 The big dog bit me.  
 uthu-nggu aja-nu arnmanu  
 dog-ERG bite-PIMPF man  
 The dog was biting the man.
- b. armanu-lu wur'a anyjati-i wagurla-nggu  
 man-ERG rock shove-PPERF hole-LOC  
 The man shoved a rock into the hole.  
 ngayi warla-tha ngayi apa-nggu anyjati-nu  
 1p head-1SGOBL 1p water-LOC shove-PIMPF  
 I was putting my head into the water.
- c. armanu-lu wajanu artpa-yi  
 man-ERG fire light-PPERF  
 The man lit a fire.  
 ngayi artpa-nu pamba-galu  
 1p burn-PIMPF hard ground-PATH  
 I used to burn along the flat ground.



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The past perfective focuses on the event as a completed action, while the past imperfective is used for ongoing past events, highlighting the event as a process. Sentence pairs in (93) illustrate the contrast: in each case, the first sentence exemplifies the perfective aspect and the second, the imperfective. Notice in (93c) how the past imperfective can also function as a past habitual.

The contrast between present, future realis, and future irrealis for Y-class verbs is illustrated by the sentence sets in (94). In each set, the first sentence illustrates the present, the second the future realis, and the third the future irrealis.

#### (94) PRESENT/FUTURE CONTRAST IN Y CLASS

- a. *ngayi-thada wangga-nhaa; wutkatpajadi uthu-nggu aja-a nyarlu*  
1p-DU talk-NPAST meanwhile dog-ERG bite-PRES woman  
We two are talking; meanwhile the dog is biting the woman.

*urda aja-ndha-rnda*  
*soon bite-FUT-2SGDO*  
Directly he'll bite you.

*aluu uthu-nggu aja-nda-ndha-rnda, ngayi wur'a-ndha*  
that.ERG dog-ERG bite-IRR-FUT-2SGDO 1p shoot-FUT  
If that dog bites you, I'll shoot him.

- b. *arnmanu-lu wur'a-a yawarda*  
man-ERG shoot-PRES kangaroo  
The man is shooting a kangaroo.

*aga, urdamundi aluu wur'a-ndha-wana-na*  
hey directly that.ERG shoot-FUT-IPL-COLL  
Hey, directly he's going to shoot all of us.

*ngayi wur'a-nda-ndha yawarda, mandha-ndha warnba-caa*  
1p shoot-IRR-FUT kangaroo take.IRR-FUT go off-AGT  
I would have shot the kangaroo, if I had taken a gun.

Examples with the regular imperative suffix *-ga* are shown in (95). As noted earlier, a second-person subject (singular, dual or plural) is understood. Compare the positive imperatives in (95a) with the negative imperatives with *malya* in (95b). Examples with clitics following *-ga* are also provided in (95c). The exclamation *urli* meaning 'now; go on and V; get Ving!' is often found with imperatives as in (95d).

## (95) IMPERATIVE -ga

a. aci-ga abarla

dress-IMP child

Dress the child!

nha-ga inya kuwirtpa-nha

see-IMP this funny-SPACC

Look at this funny one!

b. malya wumba-ga; ngayi-nha malya ca'u-nda-ga

NEG steal-IMP 1p-ACC NEG fool-CAUS-IMP

Don't steal! Don't make a fool of me!

c. wada-ga-ra

sing-IMP-3OBL

Sing it for him!

malya atpirda-ga-tha

NEG lie-IMP-1SGOBL

Don't lie to me!

d. urli, nada adama-ga

now note pull out-IMP

Quickly, pull a note out!

urli aga-ga

now get up-IMP

Get up now!

Examples of the ambulative suffix -nggula are given in (96). The ambulative suffix -nggula has been classed together with other tense/aspect suffixes for two reasons. First, it occurs after the verb stem, occupying the same morphological position as other tense/aspect suffixes. Second, its meaning, for active verbs, is usually partly progressive 'while going along, while walking along', an action that is continuous or repetitive over the space (96a) or time (96b) dimension. Recall that the ambulative triggers vowel umlaut on preceding inchoative -ba (96c) (see Section 2.6.1), and itself undergoes nasal dissimilation (96d) (see Section 2.6.3). The participial nature of -nggula is apparent in (96e): in a sequence of tenses, the verb formed with -nggula picks up the tense of the matrix verb. In (96f), a bound pronoun follows the ambulative suffix.

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### (96) AMBULATIVE -nggula

- a. armanu-lu ija-nggula wur'a-nha uthudu-nggu  
man-ERG put-AMB rock-SPACC ground-LOC  
The man is putting rocks along on the ground.
- b. ngayi wanyjida-nggula  
1p listen-AMB  
I'm listening along (as you're talking).
- c. calya-bi-nggula  
glad-INCH-AMB  
[She's] cheering up while going along.
- d. nyarlu-nggu abarla-nha warnda-gula  
woman-ERG child-SPACC carry-AMB  
The woman is carrying along the baby.
- e. ngayi nha-'i ngana kada-yatka-nggula  
1p see-PAST someone sneak-go-AMB  
I saw someone going along creeping.
- f. aluu nhaka-nggula-wana  
that.ERG see.PRES-AMB-IPL  
He's looking along at us.

### 3.4.5 Verbal Derivational Suffixes

The two most common verbal derivational suffixes have already been mentioned and exemplified. These are the inchoative *-ba*, and the causative *-nda*. I discuss these in turn, and then turn to other seemingly non-inflectional verbal suffixes.

#### 3.4.5.1 Inchoative *-ba*

The inchoative is typically added to a nominal stem, N, resulting in an intransitive, unaccusative verb stem meaning 'being N, becoming N'. The intransitivity of the verb stem is clear from its occurrence with single nominal arguments, while the unaccusativity of the verb stem is indicated by the conjugation of all derived *-ba* verbs in the NH class. As far as I can tell, *-ba* suffixation is completely productive: for any nominal, N, a verb stem [N-*ba*-] is possible. A range of examples of derived verbs is given in (97).

## (97) VERBAL DERIVATION WITH INCHOATIVE -ba

Nominal stem	Gloss	Derived verb	Gloss
arnmanu	'man'	arnmanu-ba-	'become a man'
inda	'big'	inda-ba-	'grow up'
idangga	'up high'	idangga-ba-	'be up high'
catka	'burned'	catka-ba-	'be burned up'
ciiga	'shame'	ciiga-ba-	'be ashamed'
yinnga	'dead'	yinnga-ba-	'die'
matharda	'sick'	matharda-ba-	'be sick'
panda-	'tired'	panda-ba-	'be tired'
puga	'rotten'	puga-ba-	'rot, be rotten'
urda	'mad, wild'	urda-ba-	'get angry'
wandha	'where?; somewhere'	wandha-ba-	'be where?, disappear'

Note that the class of nominals from which inchoatives are derived in (97) includes meanings that are canonically expressed as adjectives, e.g., 'big', and adverbs, e.g., 'up there', 'where?', in many languages. However, as noted in Section 3.1 and again in Section 3.2.8, there is no grammatical basis for distinguishing among these nominals in Nhandu. In some cases, the nominal source for the stem to which -ba is suffixed is no longer recoverable. For example, the verb *wurtka-mangarda-ba-* 'forget' appears to be a compound of *wurtka* 'ear' with *mangarda*, an unrecognizable formative. There are no examples of -ba suffixed to a verb stem. Given this fact, -ba could be viewed as a simple verbalizer, with inchoative semantics and unaccusative syntax.

3.4.5.2 *Causative* -nda

Some examples of derived causatives are given in (98).

## (98) VERBAL DERIVATION WITH CAUSATIVE -nda

Nominal stem	Gloss	Derived verb	Gloss
atpirda	'lie'	atpirda-nda-	'tell s.o./sth lies'
catka	'burned'	catka-nda-	'burn s.o./sth'
ca'u-	'fool'	ca'u-nda-	'make a fool of s.o.'
ciiga	'shame'	ciiga-nda-	'shame s.o.'
cindi	'quiet'	cindi-nda-	'quiet s.o./sth down'
mirla	'flat'	mirla-nda-	'squash, flatten s.o./sth'
panda-	'tired'	panda-nda-	'make s.o./sth tired'
urda	'mad, wild'	urda-nda-	'make s.o./sth wild'
war'a	'bad'	war'a-nda-	'make s.o./sth bad'

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The causative -nda is also suffixed to nominal stems, but in all cases suffixation results in a transitive verb. The transitivity of the derived verb is clear from its occurrence with two or more nominal arguments, with ergative case marking on nominal subjects. As expected, causatives conjugate consistently in the Y class. The productive rule of -nda suffixation in Nhanda always derives a causative verb from a nominal stem. There is only one dubious example of -nda suffixed to a verb stem: *wirdati-nda-* ‘kick s.o./sth’, from the intransitive verb stem *wirdati-* ‘kick’. However, *wirdati*, from *wirdaa* ‘leg’, could be a noun ‘kick’, with zero derivation for the intransitive, and direct -nda suffixation for the derived causative. A possible frozen instance of causative formation is the pair *ya'u* ‘none’ and *yadu-nda-* ‘do, do something’, where the literal meaning was perhaps ‘do nothing (in particular)’. A more transparent case of lexicalization is the pair *wigi* ‘spit, saliva’ and *wigi-nda-* ‘talk about someone or something’. Compare English *spit it out!*

Pairs of example sentences with inchoatives and causatives derived from the same nominal stem are given in (99).

#### (99) DERIVED INCHOATIVES AND CAUSATIVES

- a. *warndu-tha catka-ba-nhii*  
throat-1SGOBL dry-INCH-PAST  
My throat was dry.
- arnmanu-lu catka-nda-yi*  
man-ERG dry-CAUS-PPERF  
The man burnt it.
- b. *induga nyini ciiga-ba-nhaa*  
tomorrow 2p shame-INCH-NPAST  
Tomorrow you'll really feel shame come on you.
- aluundu ciiga-nda-yi-wana-na*  
that.ERG.PL shame-CAUS-PPERF-IPL-COLL  
Those lot of people made us all shamed.
- c. *nyarlu panda-ba-nhii*  
woman tired-INCH-PAST  
The woman is tired.
- nguti-jadi panda-nda-yi-nha*  
wet-PART tired-CAUS-PPERF-1SGDO  
The swimming made me tired.

Note the NH conjugation of the inchoatives versus the Y conjugation of the causatives, and the ergative case marking of nominal subjects of causative verbs.

### 3.4.5.3 *Reciprocals with -jadi and related forms*

The reciprocal suffix *-jadi* is added to transitive verb stems to form reciprocal verbs meaning ‘do V to each other’. For example, from the stem *atpi-* ‘tie’, a verb *atpi-jadi* ‘tie each other up’ is formed. Reciprocal verb forms have plural subjects, and subject nominals take ergative case. Syntactically then, the reciprocal suffix *-jadi* appears to function as the direct object of the transitive verb. Because all inchoatives derived with *-ba* are unaccusative intransitives where single argument is at some level the object of the verb, *-jadi* is never suffixed to stems ending in *-ba*. Examples of derived reciprocals are given in (100).

#### (100) DERIVED RECIPROCAL VERBS WITH *-jadi*

Verb stem	Gloss	Derived reciprocal	Gloss
<i>athu-nda-</i>	‘burn’	<i>athu-nda-jadi</i>	‘burn e.o.’
<i>atka-</i>	‘rub’	<i>atka-jadi</i>	‘rub e.o.’
<i>atpi-</i>	‘tie’	<i>atpi-jadi</i>	‘tie e.o. up’
<i>cugi-</i>	‘push’	<i>cugi-jadi</i>	‘push e.o.’
<i>milutpa-</i>	‘wink at’	<i>milutpa-jadi</i>	‘wink at e.o.’
<i>muthida-</i>	‘drown’	<i>muthida-jadi</i>	‘drown e.o.’
<i>ngarda-</i>	‘chase’	<i>ngarda-jadi</i>	‘chase e.o.’
<i>pitu-di-</i>	‘want s.o. to’	<i>pitu-di-jadi</i>	‘want e.o. to’
<i>unggi-</i>	‘fight’	<i>unggi-jadi</i>	‘fight e.o.’
<i>wur'a=ngga-</i>	‘shoot at’	<i>wur'a=ngga-jadi</i>	‘shoot at e.o.’

All reciprocals are unergative verbs, and therefore they occur in the Y- or D-conjugation class, as shown by the examples in (101).

#### (101) RECIPROCAL AS Y-CLASS VERBS

- a. *ngayi-thada atka-jadi-nu*  
 1p-DU grease-RECIP-PIMPF  
 We two were greasing one another.
- b. *nyarlu-thada-lu ngarda-jadi-nu*  
 woman-DU-ERG chase-RECIP-PIMPF  
 The two women were chasing one another.
- c. *induga nyarlu-thada-lu unggu-jadi-ndha*  
 tomorrow woman-DU-ERG fight-RECIP-FUT  
 Tomorrow the two women will fight each other.

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The reciprocal suffix, like the tense/aspect suffixes, follows all derivational suffixes. While the reciprocals in (100) all involve affixation to a verb stem, there is some freedom of order between the reciprocal and tense/aspect/mood suffixes. For example, (101a) is judged better than *ngayithada atka-nu-jadi*, but this sentence was not judged as ungrammatical, simply not as good as (101a). See also the variable order of reciprocal and future suffix in (103). With irregular verbs, *-jadi* is added to the inflected suppletive verb form, as shown in (102).

### (102) IRREGULAR VERBS WITH *-jadi*

<i>nha'i-jadi</i>	'looked at e.o.' (PAST)
<i>nhaka-jadi</i>	'are looking at e.o.' (PRES)
<i>ingga-jadi</i>	'are giving e.o.' (PRES)

The morphological form *-jadi* appears to have bimorphemic origins: *\*-ja-di*, where the second vowel, as part of the D-conjugation class (see Section 3.4.2) alternates between *i* in the past and *a* in the present. This alternation continues when a verb in *-jadi* is combined with future *-ndha*; in this case, as shown by the examples in (103), the suffix form is *-jada*.

### (103) FUTURE *-ndha* WITH *-jada*

- a. *induga nyarlu-thada-lu atka-ndha-jada-na*  
tomorrow woman-DU-ERG grease-FUT-RECIP-COLL  
Tomorrow the two women are going to grease one another.
- b. *unggi-jada-ndha*  
fight-RECIP-FUT  
[They're] going to fight one another.

A handful of verb stems, all intransitive, appear to have lexicalized instances of this suffix. They are listed in (104) with conjugation class marked.

### (104) INTRANSITIVE VERB STEMS WITH LEXICALIZED INSTANCES OF *-jadi*

<i>acijadi-</i> (NH)	'dress, get dressed'
<i>adanyjadi</i> (D)	'was/were flirting'
<i>maatijadi-</i> (Y)	'crawl'
<i>ngutijadi</i> (D)	'was/were swimming'

A small number of nouns also appear to have frozen instances of the *-jadi* suffix. Note the homophony between *acijadi* 'clothes' and *acijadi-* 'get dressed', or *atkajadi* 'ointment' and *atka-jadi-* 'rub each other'. These are listed with other transparent examples in (105). In all cases, the root of the derived noun is a transitive verb.

## (105) NOMINALS WITH LEXICALIZED INSTANCES OF -jadi

Verb stem	Gloss	Nominal	Gloss
aci-	'dress'	acijadi	'clothes, clothing'
aji-	'bite'	ajajadi	'tobacco, cigarettes'
atka-	'rub'	atkajadi	'rubbing stuff, ointment'
manggurda-	'poke'	manggurdajadi	'stabbing knife'
parda-	'rip, tear'	pardajadi	'ripped, torn, ragged'

A possibly related verbal suffix is -cada/-cadi 'along' which indicates movement along a path in time or space. In line with the D-class inflectional paradigm, -cada is present tense and -cadii is past. This suffix is typically found with verbs of movement, as shown by the examples in (106). I gloss this as PART for 'participle', since these verb forms can occur as participles.

## (106) VERBS WITH PARTICIPIAL -cadi/-cada 'ALONG'

a. urnnga-nhii-cadi

fall-PAST-PART.PAST

He was falling along, stumbling along.

b. yawarda wadadi-cada

kangaroo hop-PART.PRES

The kangaroo is hopping along.

c. yawarda wadadi-cadi, ngayi wur'a-yi

kangaroo hop-PART.PAST 1p shoot-PPERF

While the kangaroo was hopping along, I shot him.

Like the examples with -jadi in (105), this suffix appears frozen in at least two interesting lexical items shown in (107).

## (107) ADVERBS WITH LEXICALIZED -cadi

Stem	Gloss	Adverb	Gloss
wandha=ga-	'at where?; at somewhere'	wandhagacadi	'when; sometime'
wurtkatpa-	'sleep'	wutkatpacadi	'meanwhile'

Like the agentive suffix -caa (see Section 3.2.3) -cadi/-cada cannot occur as an independent word, but appears to fall midway between suffix and compound formative. It is bimoraic, satisfying the Minimal Word Constraint, and, by the regular stress rule, consistently attracts secondary stress to its initial syllable. But the voicelessness of the initial consonant is anomalous, since intervocalic voiceless consonants are all morpheme-internal in the native vocabulary. As with -caa, the



voicelessness of the initial consonant suggests a boundary weaker than that in compounds, but stronger than that of *-jadi/-jada*.

#### 3.4.5.4 *Reflexive -nyinda*

The reflexive suffix in Nhanda is *-nyinda*. Unlike the reciprocal which is sometimes followed by tense markers, the reflexive consistently follows all tense/aspect markers, and is final in the verb (not including following optional bound pronouns). Like reciprocals, reflexives take ergative nominal subjects, showing that the verb remains grammatically transitive. Examples with the reflexive suffix are shown in (108).

#### (108) REFLEXIVE *-nyinda*

- a. *ngayi nha'i-nyinda*  
1p see.PAST-REFL  
I saw myself.
- b. *ngayi-thada unhii-nyinda*  
1p-DU hit.PAST-REFL  
We two hit ourselves.
- c. *yugangga abarla-lu wumbura-yi-nyinda*  
yesterday child-ERG urinate-PPERF-REFL  
Yesterday the kiddie wet himself.
- d. *arnmanu-lu unhii-nyinda*  
man-ERG hit.PAST-REFL  
The man hit himself.

The suffix *-nyinda* does not appear to be related to any other morpheme in Nhanda, but compare the second-person singular personal pronoun *nyinda* in other Western Australian languages, which can be reconstructed for Proto-Kartu (69). A distinct adverb, *pathu* ‘by oneself, alone, on one’s own’, discussed in Section 3.5, indicates the absence of other participants.

#### 3.4.5.5 *Directional -yu/-yana*

Direction in Nhanda can be expressed through directional nominals, case-marked locatives, adverbs, and also by verbal affixation. The non-future and future suffixes *-yu* and *-yana*, used with verbs of movement, indicate direction towards one or more participants in the discourse, or a reverse direction from the stem. For example, the verb *yatka-* ‘go’ when suffixed with *-yu* has roughly the meaning of the verb ‘come’. With other verbs like *atkada-* ‘take, bring’, *-yu* suffixation results in the meaning ‘take back, bring back.’ This suffix is peculiar in that it inflects. The non-future form is *-yu* and the future form is *-yana*. In this sense, it could be

considered a post-verb, possibly a historical derivative of the verb \*ya- 'go'. Examples of these inflected directionals are given in (109).

(109) DIRECTIONAL -yu/-yana

- a. walajadi yatkan-ndha-yana  
 storm go-NPAST-DIR.FUT  
 A storm will be coming.
- b. yarnba ardidi-yu  
 bush fire crackle.PAST-DIR.NFUT  
 The fire is coming along crackling.
- c. aluu atkadi-yu wuthada yawarda-thada  
 that.ERG take-DIR.NFUT two kangaroo-DU  
 That one brought back two kangaroos.
- d. mutha-ngu nguba wardadi-yu  
 nose-EL blood flow-DIR.NFUT  
 Blood is pouring out from my nose.
- e. wadadi-yu  
 hop-DIR.NFUT  
 He's hopping towards you.

#### 3.4.5.6 Poorly attested verbal suffixes

A small number of verbs appear to be formed by the addition of -ta or -(r)ti though the meaning of these suffixes is unclear. Derived verbs include *ingga-rti* 'kill' (cf. *ingga* 'dead'); *parlada-ta* 'frighten' (cf. *parlada* 'be afraid, frightened'); *nyili-ga-ta* 'get late in the afternoon' (cf. *nyili* 'late afternoon'); and *wirda-ti* 'kick' (cf. *wirdaa* 'leg').

Another apparent derivational verb formative is -ngga, possibly an instance of the frozen locative discussed in Section 3.2.1.4. Examples include: *parlada-ngga* 'run away, run off' (cf. *parlada* 'be afraid, frightened'); *tharda-la-ngga* 'slip, slide' (cf. *tharda* 'knee'); and *wur'a-ngga* 'shoot at' (cf. *wur'a* 'shoot'). There are two examples in the corpus of inchoative verbs with -ba taking a further suffix -cu, resulting in a derived nominal meaning 'stuff causing one to V', where V is the inchoative verb: *yarnabacu* 'grog, liquor' from *yarna-ba* 'get drunk, become mad'; and the name of a tree with long yellow seed pods, *yarlinyubacu*, literally 'causing one to elope or run off and get married', from *yarlinyuba* 'go courting, elope, run away'. It was said that if you pick one seed off this kind of tree, you get married and run off.

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Another poorly attested suffix is a questionable purposive *-gu* ‘in order to’, glossed as *PURP??* below. O’Grady, Voegelin, and Voegelin (1966:124) show *ngadi-gu* ‘in order to camp’, but Lucy Ryder never used this suffix spontaneously, and firmly judged purposive phrases with it as non-Nhanda. Some elicited purposives are shown in (110): in all cases, as marked by (*\*-gu*), the sentence was judged ungrammatical if *-gu* was included.

#### (110) PURPOSIVES

- a. *nyarlu-nggu athu-nu thudu, ingga-nhaa(\*-gu) abarli-nu*  
woman-ERG cook-PIMPF meat give-FUT-PURP?? child-PL  
The woman was cooking meat to give to the children.
- b. *arnmanu yatka-ndha idalu, ngarda-ndha(\*-gu) yawarda-nha*  
man go-NPAST north chase-FUT-PURP?? kangaroo-SPACC  
The man is going north to chase the kangaroos.
- c. *ala-thada i'a-a, yawarda athu-ndha(\*-gu) uthudu-nggu*  
that-DU dig-PRES kangaroo cook-FUT-PURP?? sand-LOC  
Those two are digging in order to cook the kangaroo in the sand.

A causal suffix *-wu* (homophonous with the nominal dative case suffix) was found indicating the reason for or purpose of an event, but it was consistently optional, and absent in all spontaneous utterances. Two examples are give in (111).

#### (111) CAUSALS

- a. *ngayi athu-nu thudu, ngayi kucidu-ba-nhii-(wu)*  
1p cook-PIMPF meat 1p hungry-INCH-PAST-CAUS  
I cooked the meat because I was getting hungry.
- b. *ngayi ngadiya-nhaa, panda-ba-nhii-(wu)*  
1p sleep-NPAST tired-INCH-PAST-CAUS  
I’m going to sleep because I’m tired.

In both of these sentences, there was a major intonational break after the first clause. The same was true of other sentences similar to those in (111) with causal meaning, where causation was indicated by simple phrasal apposition.

Recall that the Nhanda dative and causal *-wu* can be derived from the Proto-Pama-Nyungan purposive *\*-gu* via the regular sound change in (33).

One other verb-final suffix with phrasal scope noted by O’Grady, Voegelin, and Voegelin (1966:124) is optative *-tha'i*, in *inggarti-tha'i* ‘let him kill it’. I have found no evidence of this as a Nhanda suffix.

### 3.4.6 Compound Verbs

A small number of verb stems are root compounds. Some of these have already been mentioned in Section 3.4.3, since they conjugate in accordance with properties of the second element, which heads the verbal word. For example *malu+nha* ‘look in mirror’ is a compound of *malu* ‘shadow, reflection’ and *nha* ‘see, look at’. Other compound verbs headed by *matka* ‘take’ include: *ada+matka* ‘jerk, grab sth away’; *ini+matka* ‘call out someone’s name’ (cf. *ini* ‘name’); *thuri+matka* ‘get sunny, hot again (after rain)’ (cf. *thuri* ‘sun’). Two adverbial compound-initial formatives appear to be productive: *kada* ‘sneakily’ and *tharti* ‘back, in the other direction’. (The stem *tharti-ya-* also occurs as a regular Y-class verb meaning ‘return, come back’.) Examples with these adverbials include: *kada+yatka* ‘sneak away, creep around’; *kada+wumba* ‘steal while no one’s looking’; *tharti+yatka* ‘come back’; *tharti+yingga* ‘give back’; *tharti+nha* ‘look back’. As with other compounds, both formatives may carry primary stress: *kadayátkayu* or *kadayàtkayu* ‘he snuck away’.

Reduplication in verbs also appears to be a form of compounding, indicating intensity, plurality, or distributivity of the event over time or space. The first two syllables of the verb stem, minus inflectional affixes, are copied, and serve as the initial compound element: *acal+acalu* ‘sneeze and sneeze’, from *acalu* ‘sneeze’; *matka+matka* ‘feeling about’ from *matka* ‘take, get’; *pada+pada* ‘tear through, tear at (of wind)’ from *pada* ‘tear, rip’; *pidi+pidi* ‘mess around, move things around, upset things’ from *pidi* ‘touch, feel’; *wangga+wangga* ‘talk alot’ from *wangga* ‘talk’; *wanyja+wanyja* ‘shake (all around) in the air’ from *wanyja* ‘throw, swing’. Examples in context are give in (112).

#### (112) VERBAL REDUPLICATION

- a. *ali-nu nyarlu-nu anhi-ya, cutka-ri-nu wanyja+wanyja-a idangga*  
 that-PL woman-PL dance-PRES arm-3OBL-PL RED+throw-PRES up high  
 Those women are dancing, shaking their arms in the air.
- b. *uudinu-lu pada+pada-nu ngunyu-tha*  
 wind-ERG RED+tear-PIMPF hair-1SGOBL  
 The wind was tearing at my hair.

## 3.5 Adverbs

In addition to nouns and verbs, which both take derivational and inflectional morphology, there are two uninflected categories in Nhandá: adverbs and interjections. Adverbs include temporal, locational, manner, and quantificational modifiers. However, most words with locational and manner adverbial functions

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are nouns or verbs. Some adverbs are listed in (113) with representative examples of their use in (114).

(113) TRUE ADVERBS

	Adverb	Gloss
TEMPORAL	induga	'tomorrow'
	yugangga	'yesterday'
	urda	'directly, soon'
	urdamundi	'directly, soon'
	urli	'directly, now, quickly'
	warlu	'by and by, later'
	ciidii	'a long time ago'
	wutkatpacadi	'meanwhile'
MANNER	pathu	'alone, by oneself, on one's own'
SYNCATEGOREMATIC	malya	NEGATIVE
	aatiku	'regardless, anyhow, no matter'

(114) ADVERBS IN CONTEXT

- a. induga ngayi nhaa-ndha malyu-tha  
 tomorrow 1p see-FUT sister-1SGOBL  
 Tomorrow I'm going to see my sister.
- b. ngayi pathu inyja-a  
 1p alone stay-PRES  
 I'm staying alone.
- c. ngayi malya athu-ndha  
 1p NEG cook-FUT  
 I won't cook it.
- d. ngayi aatiku yatka-ndha  
 1p anyway go-NPAST  
 I'm going anyway.
- e. ngayi-thada wangga-nhaa; wutkatpacadi abarla thadatpa-yi  
 1p-DU talk-PIMPF meanwhile child wipe-PPERF  
 We two were talking; meanwhile she was wiping the child.

One adverb found in Hale's (1960) fieldnotes is *thunu* 'yet, still, soon'. This could be a borrowing from English *soon*, though compare \**thunu* 'one' for many languages of Cape York.

While the class of adverbs is generally non-inflecting, one adverb, *urli* 'now' is found with the focus marker *-ganu* (Section 4.9). The syntactic behavior and distribution of adverbs is discussed further in Section 4.

### 3.6 Interjections

Interjections are uninflected words that are used with special discourse functions, like expressing pain, surprise, fear, etc. These words are always initial in the intonational phrase, and form independent phonological phrases. A sample of interjections is given in (115).

#### (115) SOME INTERJECTIONS

Interjection	Rough gloss	Context used
<i>aga</i>	'aaah! yikes! man alive!'	when surprised, frightened, alarmed
<i>alaka</i>	'look out! watch out!'	when frightened, alarmed
<i>inyaka</i>	'look out! watch out!'	when frightened, alarmed
<i>balayi</i>	'look out! watch out!'	when danger is near
<i>urli</i>	'go on then! let's get moving!'	to urge someone to act
<i>yagayi</i>	'ouch!'	to express pain
<i>'e'e</i>	'yes, uh-huh'	to show agreement with speaker

The examples in (116) show interjections in their discourse context.

#### (116) INTERJECTIONS IN CONTEXT

- a. *aga!*      *urdamundi wur'a-ndha-wana-na*  
*yikes!*      *directly*      *shoot-FUT-IPL-COLL*  
 Yikes! Directly [they're] gonna shoot us all.
- b. *inyaka,*      *thayidi*  
*watch out*      *snake*  
 Watch out, there's a snake!
- c. *urli*      *idithunda-ga*  
*go on*      *pinch-IMP*  
 Go on and pinch her!

The interjections *alaka* and *inyaka* appear to derive from demonstratives *ala* ‘that’ and *inya* ‘this’, while *aga* could be related to the verb *aga-* ‘get up’. As noted in Section 2.2, the word *'e'e* is exceptional in terms of vowel quality: it is the only native Nhanda word with a mid-front vowel, and both vowels are laryngealized.

### 3.7 Affix Order

Though affixes have for the most part a fixed position within the nominal or verbal word, there are exceptions. Some of these have been already noted, where individual suffixes are discussed. Here, I summarize the range of variability in affix order for nouns and verbs.

For nominals, the dual and plural number suffixes *-thada* and *-nu* may precede or follow case suffixes (see Section 3.2.2.) This variability in affix order distinguishes Nhanda from many Australian languages where number suffixes consistently precede case suffixes. In pronouns, however, affix order is fixed with number markers preceding case markers (see Table 3-4).

Bound (possessive/oblique) pronouns on nominals normally follow case markers (117a,b), but precede number markers (117c). However, in double possessives (117d), the oblique bound pronoun precedes the dative case marker. (Sentence (117d) is the only example of this type in the database.)

#### (117) ORDER OF BOUND PRONOUNS

- a. *ala-ganu wucpalaa uthu-nggu-ra aja-'i-nha*  
that-FOC whitefella dog-ERG-3OBL bite-PPERF-1SGDO  
The whiteman’s dog bit me. [KH:88]
- b. *abarla nyina-nhii murna-nggu-ra agu-ra*  
child sit-PAST lap-LOC-3OBL mother-3OBL  
The child is sitting on her mother’s lap.
- c. *arda-ma-ga wiku-ri-nu*  
cut-VB-IMP stomach-3OBL-PL  
Cut open their stomachs!
- d. *wandha ardu-nygu-wu badgutu-ra?*  
where spouse-2SGOBL-DAT bread-3OBL  
Where’s your wife’s food? [KH:87]

The same bound pronouns occur freely preceding or following the locative case suffix, as in: *warla-nggu-tha* or *warla-tha-nggu* ‘on my head’; *murna-ra-nggu*,

murna-nggu-ra ‘on her lap’, etc. A representative template for affix order within nominals, then, might look as follows, where square brackets enclose the inflectional suffix domain:

NOMINAL ROOT-DER\*-[CASE\*-(BOUND PRO)-(NUMB)-CASE\*]

If bound pronouns are viewed as nominal agreement markers within possessive noun phrases (recall that they are obligatory), then the ordering of these elements within the inflectional suffix complex is easier to understand.

For verbs, affix order is more or less fixed, with the exception of reciprocal -jadi, discussed in Section 3.4.5.3. This suffix normally precedes tense/aspect inflection, but is also found following these suffixes. A general template for affix order within verbs, then, might look as follows, where INFL covers all tense/aspect/mood suffixes:

VERBAL ROOT-DER\*-(RECIP)-INFL\*-(RECIP)-(BOUND PRO)

Recall that noun and verb roots may be compound, in which case the second root serves as morphological head of the word. The variable ordering of the reciprocal suffix may represent its ambiguous status between derivational suffix and bound pronominal.



## 4 Syntax

In this section I describe phrase structure in Nhanda. Like many Australian languages with similar case systems, word order is relatively free, syntactic structures are primarily appositional, and headedness (particularly within the noun phrase) is largely indeterminate. Arguments are often unexpressed at the sentence level, with their interpretation based on the larger discourse context. While no true texts were available to enable an investigation of discourse-level syntax, Lucy Ryder often quoted conversations she had overheard involving two or more participants, and short passages from oftentold stories. In these discourse contexts, there was no evidence of cross-referencing of arguments (i.e., no examples of same-subject or switch-reference markers.)

### 4.1 Simple Sentences

All simple sentences in Nhanda contain a main verb or predicative nominal. Intransitive verbs have a single subject argument, which may or may not be expressed overtly. The general split-ergative case-marking pattern is summarized in Table 4-1, where nominal subjects of intransitive and transitive verbs show distinct case marking, while pronominal subjects do not. Recall that the class of nominals includes demonstratives and interrogatives.

**Table 4-1. Nhanda case marking**

	Subject of intransitive	Subject of transitive	Object
Nominals	<i>unmarked</i> ABSOLUTIVE	-nggu, -lu ERGATIVE	-nha SPECIFIC ACCUSATIVE
Pronouns	<i>unmarked</i> NOMINATIVE	<i>unmarked</i> NOMINATIVE	-nha ACCUSATIVE

Simple intransitive sentences are given in (118). Within the ergative nominal case-marking system, intransitive subjects take absolutive case which is unmarked (118a). Within the nominative/accusative case-marking system of pronominals, intransitive subjects take nominative case, which is also unmarked (118b). Sub-

jects may also be expressed as bound pronouns, which occur encliticized to the first word of the intonational phrase (118c) (see Section 3.3.2.3). Finally, the subject may be unexpressed. This is the usual case for third-person pronouns (118d), and (second-person) subjects of imperatives (118e), but it is also common when the subject is understood from the discourse (118f).

## (118) SIMPLE INTRANSITIVE SENTENCES

- a. nyarlu yatika-ndha idalu  
 woman go-NPAST north  
 The woman is going north.
- b. urda ngayi yatika-ndha  
 soon 1p go-NPAST  
 I'll be going soon.
- c. yatika-ndha-wana  
 go-NPAST-IPL  
 We're going.
- d. yatika-ndha  
 go-NPAST  
 [He/she/it/they] will be going.
- e. yatika-ga  
 go-IMP  
 Get going!
- f. ngayi idandi-i yugungga parlu-nggu, induga tharti-yatika-ndha  
 1p climb-PAST yesterday hill-LOC tomorrow back-go-NPAST  
 Yesterday I climbed up the hill, and tomorrow I'll go back.

Simple transitive sentences are given in (119). Transitive verbs have a subject, and a direct object, both of which are optionally expressed. Nominal case markers are described in Section 3.2.1. Within the ergative case-marking system of nominals, transitive subjects take ergative case (-lu/-nggu) and absolutive non-specific direct objects are unmarked, while specific direct objects can occur with the specific accusative suffix -nha (119a). Within the nominative/accusative pronominal case-marking system, transitive subjects are nominative (unmarked), and direct objects take accusative -nha (119b). Arguments may also be expressed as bound pronouns: direct object bound pronouns follow all inflectional suffixes on the verbs, while subject clitics attach to the first word of the intonational phrase

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(119c). Finally, one or both arguments may be unexpressed. This is the usual case for all third-person subject pronouns and third-person singular object pronouns (119d), and (second-person) subjects of imperatives (119e), but it is also common when the subject and/or object is understood from the discourse (119f). Some transitive cognate object verbs, like *wada-* ‘sing’ often occur without the cognate object, but retain an ergative subject (119g).

(119) SIMPLE TRANSITIVE SENTENCES

- a. *nyarlu-nggu yawarda-(nha) nha'i*  
woman-ERG kangaroo-SPACC see.PAST  
The woman saw the kangaroo.
- b. *ngayi nha'i nyini-nha*  
1p see.PAST 2p-SPACC  
I saw you.
- c. *inngarti-ndha-rnda-wa*  
kill-FUT-2SGDO-1SGSUBJ  
I'll kill you.
- d. *urda aja-ndha*  
directly bite-FUT  
Directly [he]'ll bite [him].
- e. *urli, aja-ga*  
go on bite-IMP  
Go on, bite him!
- f. *ngayi yani-(nha) ardama-ndha wuthada-nda-ndha*  
1p log-SPACC cut-FUT two-CAUS-FUT  
I'm going to cut the log and make [it] into two.
- g. *nyarlu-nggu (thurdadu) wada-a*  
woman-ERG song sing-PRES  
The woman is singing (a song).

Simple ditransitive sentences are shown in (120). Ditransitive verbs like ‘give’ and ‘lend’, have two direct objects. The distribution of these arguments is the same as that of transitive verbs, except that I have yet to find examples where both arguments are expressed as bound pronouns. In (120a) the direct object status of the two verbal arguments is apparent from the possibility of the specific accu-

sative marker on either or both specific nominals, while in (120b) an object pronoun takes obligatory accusative case, and co-occurs with a direct object nominal marked specific accusative. In (120c) one direct object is expressed as a bound pronoun, and the other as a nominal, while in (120d) both third-person direct objects are unexpressed.

## (120) SIMPLE DITRANSITIVE SENTENCES

- a. arnmanu-lu arliba-yi nyarlu-(nha) wur'a-(nha)  
 man-ERG lend-PPERF woman-SPACC money-SPACC  
 The man lent the money to the woman.
- b. induga ngayi arliba-ndha nyini-nha nayapu-nha  
 tomorrow 1p lend-FUT 2p-SPACC knife-SPACC  
 Tomorrow I'll lend you the knife.
- c. arliba-ga-nha wur'a  
 lend-IMP-1SGDO money  
 Lend me some money!
- d. malya arliba-ga  
 NEG lend-IMP  
 Don't you lend it to him!

Other verbs, like 'ask' in (121) occur with a direct object and a dative (which is non-locative/non-directional) argument.

## (121) ARGUMENT STRUCTURE OF aya- 'ASK'

- a. nyarlu-nggu aya-nu arnmanu-(nha) wur'a-wu  
 woman-ERG ask-PIMPF man-SPACC money-DAT  
 The woman asked the man for money.
- b. induga thartiya-ndha, aya-ka-wana-na wur'a-wu  
 tomorrow come back-FUT ask-PRES-1PL-COLL money-DAT  
 He'll come back tomorrow and ask us all for money.
- c. nhaa-wu-nyja aya-ka-nha?  
 what-DAT-2SGSUBJ ask-PRES-1SGDO  
 What are you asking me for?

With other transitive verbs, like those in (122), a direct object co-occurs with a locative or directional. For verbs like ija- 'put' and ma- 'take', locative or directional

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noun phrases are normally expressed (122a), but they may take the form of bound oblique object pronouns (122b), or be absent altogether (122c).

### (122) SIMPLE TRANSITIVE SENTENCES WITH LOCATIVES/DIRECTIONALS

- a. armanu-lu yawarda-(nha) ija-yi wajanu-nggu  
man-ERG kangaroo-SPACC put-PPERF fire-LOC

The man put the kangaroo in the fire.

- ngayi matii abarla-ngu nayapu  
1p take.PAST child-EL knife

I took the knife from the child.

- b. ngayi mandha-ra  
1p take.FUT-3OBL

I'll take it from him.

- c. ngayi ija-yi  
1p put-PPERF

I left [it] there.

In general then, the only obligatory constituent in the sentence is the verb. Third-person singular pronominal direct objects and all third-person pronominal subjects are normally unexpressed. The use of deictics in such cases imparts focus or emphasis as mentioned earlier. In addition, any argument that can be understood from the discourse can be left unexpressed.

## 4.2 Constituent Order

Constituent order in Nhanda, as in many other Australian languages, is quite flexible. Examples illustrating constituent order freedom are provided in (123). In all of these sentence sets, the first sentence was a spontaneous utterance, and the following alternative word orders were elicited. However, it was not uncommon for Mrs. Ryder to say a particular sentence, and then, when asked to repeat it, provide a different constituent order. Mrs. Ryder's judgements were that all sentence sets that differed only by constituent order were semantically equivalent. Her typical response to my queries involving constituent order was: "Yeah, you can say it that way if you like. It still means the same thing. You can say it that way if you want to." In intransitive sentences, S(ubject) V(erb) and VS orders are attested. In transitive sentences, SO(bject)V, SVO, VSO, and OSV orders are attested. In (123a) the locative nominal is preferred phrase-finally or phrase-initially, but possible in other positions as well. The same is true of the instrumental nominal in (123c).

## (123) CONSTITUENT ORDER FREEDOM

a.	armanu-lu	wur'a	anyjatii	wagurla-nggu	S O V LOC
	armanu-lu	anyjatii	wur'a	wagurla-nggu	S V O LOC
	anyjatii	armanu-lu	wur'a	wagurla-nggu	V S O LOC
	anyjatii	wur'a	armanu-lu	wagurla-nggu	V O S LOC
	wur'a	anyjatii	armanu-lu	wagurla-nggu	O V S LOC
	wur'a	armanu-lu	anyjatii	wagurla-nggu	O S V LOC
	wagurla-nggu	armanu-lu	wur'a	anyjatii	LOC S O V
	armanu-lu	wur'a	wagurla-nggu	anyjatii	S O LOC V
	man-ERG	rock	hole-LOC	shove.PAST	

The man shoved a rock into the hole.

b.	abarla-lu	wumba-yi	wur'a-tha	s v o
	abarla-lu	wur'a-tha	wumba-yi	s o v
	wumba-yi	abarla-lu	wur'a-tha	v s o
	wumba-yi	wur'a-tha	abarla-lu	v o s
	wur'a-tha	wumba-yi	abarla-lu	o v s
	wur'a-tha	abarla-lu	wumba-yi	o s v
	money-ISOBL	child-ERG	steal-PPERF	

The child stole my money.

c.	arda-ka	ngayi	wajanu	yadiwaa-lu	V S O INSTR
	arda-ka	wajanu	ngayi	yadiwaa-lu	V O S INSTR
	ngayi	arda-ka	wajanu	yadiwaa-lu	S V O INSTR
	ngayi	wajanu	arda-ka	yadiwaa-lu	S O V INSTR
	wajanu	arda-ka	ngayi	yadiwaa-lu	O V S INSTR
	wajanu	ngayi	arda-ka	yadiwaa-lu	O S V INSTR
	yadiwaa-lu	ngayi	wajanu	arda-ka	INSTR S O V
	ngayi	yadiwaa-lu	wajanu	arda-ka	S INSTR O V
	lp	axe-INSTR	wood	chop-PRES	

I'm going to cut some firewood with an axe.

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- d. yawarda-nha nyarlu-nggu parlada-yi o s v  
 yawarda-nha parlada-yi nyarlu-nggu o v s  
 nyarlu-nggu parlada-yi yawarda-nha s v o  
 nyarlu-nggu yawarda-nha parlada-yi s o v  
 parlada-yi nyarlu-nggu yawarda-nha v s o  
 parlada-yi yawarda-nha nyarlu-nggu v o s  
 frighten-PPERF kangaroo-SPACC woman-ERG

The woman frightened the kangaroo.

Interrogatives have a strong tendency to occur in sentence-initial position. Examples are given in (124). Interrogatives *ngana* and *ngandu* ‘who’ are restricted to phrase-initial position (124a), while *nhaa* ‘what’, is sometimes allowed in non-initial position (124b), and other times not (124c). Adjuncts *wandha* ‘where’ *wandhagacadi* ‘when’, and *nhaawu* ‘why’ are normally phrase-initial, but can occur elsewhere as shown by the alternative constituent orders in (124d,e,f). In sentences where the interrogative is non-initial, the initial element of the phrase is interpreted as focused.

(124) QUESTION WORDS PHRASE-INITIALLY AND ELSEWHERE

- a. *ngana athu-ndha maru-nggu?*  
 who cook-FUT night-LOC  
 Who is cooking tonight?  
 (\**athu-ndha maru-nggu ngana*)
- b. *nhaa-nyja atka?*  
 what-2SGSUBJ hold.PRES  
 What do you have?
- nyini nhaa atka?*  
 2p what hold.PRES  
 What do you have?
- c. *nhaa ini-nygu?*  
 what name-2OBL  
 What’s your name?  
 (\**ini-nygu nhaa*)

- d. wandha-ngu-nyju yatka-yu?  
 where-EL-2SGSUBJ go-DIR.NFUT  
 Where did you come from?  
 nyini wandha-ngu yatka-yu?  
 nyini yatka-yu wandha-ngu?  
 2p go-DIR.NFUT where-EL  
 Where did you come from?
- e. wandhagacadi nyini yatka-ndha-yana?  
 nyini wandhagacadi yatka-ndha-yana?  
 nyini yatka-ndha-yana wandhagacadi?  
 2p go-NPAST-DIR.FUT when  
 When are you coming back?
- f. nhaa-wu nyini panda-ba-nhii?  
 nyini nhaa-wu panda-ba-nhii?  
 2p what-DAT tired-INCH-PAST  
 Why are you tired?

The negative particle *malya* ‘no, not, don’t’ tends to immediately precede the main verb (125a–f), though it may occur elsewhere (125g–h) when there is contrastive focus.

(125) NEGATIVE *malya*

- a. ngayi malya ciiga  
 1p NEG shame  
 I’m not shamed.
- b. ngayi-nha malya ca’u-nda-ga  
 1p-ACC NEG fool-CAUS-IMP  
 Don’t make a fool of me!
- c. nyinunga ardu-nygu yawarda malya ngalungga  
 2p.POSS husband-2OBL kangaroo NEG eat.PRES  
 (But) your husband doesn’t eat kangaroo.
- d. malya atpida-ga  
 NEG lie-IMP  
 Don’t lie!



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- e. malya ija-a ilu ardu-nha?  
 NEG keep-PAST this.ERG spouse-SPACC  
 This one doesn't keep his wife?
- f. malya-nyja ciiga?  
 NEG-2SGSUBJ shame  
 Aren't you shamed?
- g. malya ngubanu ngayi nha'i, ngayi nha'i uthu  
 NEG dingo 1p see.PAST 1p see.PAST dog  
 I saw a dog, not a dingo.
- h. ngayi malya ngubanu ingii, ngayi ingii uthu thudu  
 1p NEG dingo give.PAST 1p give.PAST dog meat  
 I didn't give (it) to the dingo, I gave meat to the dog.

Like the instrumentals and locatives in (123), time adverbials have a strong tendency to come either phrase-initially or phrase-finally, but other orders are also found. In (126), all orders are grammatical, and all were attested in spontaneous speech.

(126) ORDER OF TIME ADVERBIALS

yugangga arnmanu-lu inida-yi nyarlu-nha  
 arnmanu-lu yugangga inida-yi nyarlu-nha  
 arnmanu-lu inida-yi yugangga nyarlu-nha  
 arnmanu-lu inida-yi nyarlu-nha yugangga  
 man-ERG kiss-PPERF woman-SPACC yesterday  
 Yesterday the man kissed the woman.

The adverb *wutkatpacadi* 'meanwhile' always occurs phrase-initially, preceded by a phrase introducing the paired ongoing event. Examples are in (127).

(127) INITIAL POSITION OF *wutkatpacadi* 'MEANWHILE'

- a. ngayi-thada wangga-nhaa; wutkatpacadi uthu-nggu aja-a  
 1p-DU talk-PRES meanwhile dog-ERG bite-PRES  
 We two are talking; meanwhile the dog is biting her.
- b. ngayi i'a-nu ajuga; wutkatpacadi ngadinyii  
 1p talk-PRES ajuga meanwhile sleep.PAST  
 I was digging ajuga; meanwhile she was sleeping.

### 4.3 Constituency within Noun Phrases

Noun phrases tend to be contiguous strings of nominals, with case marking and number marking on one (128a), or all constituents (128b).

(128) COMPLEX NOUN PHRASES

a. *indaacu uthu-nggu aja-ndha-wana-na*

big dog-ERG bite-FUT-IPL-COLL

The big dog's going to bite us all.

b. *indaacu-lu uthu-nggu wur'ada-lu aja-yi-nha*

big-ERG dog-ERG black-ERG bite-PPERF-1SG

The big black dog bit me.

In general, if only one nominal within the contiguous noun phrase is case marked, it is the last. However, exceptions to this occur with the specific accusative, as in the following example:

*wuthada-nha-wa yawarda inngartii*

two-SPACC-ISGSUBJ kangaroo kill.PAST

I killed the two kangaroos.

Whether this is because the specific accusative is not a true case suffix, or because in general, a single case-marked nominal within the NP can occur in any position, is not clear. When a noun phrase is discontinuous, case marking occurs on all nominals. Compare (128a) with (129).

(129) A DISCONTINUOUS NOUN PHRASE

*uthu-nggu aja-ndha-wana-na indaacu-lu*

*indaacu-lu aja-ndha-wana-na uthu-nggu*

big-ERG bite-FUT-IPL-COLL dog-ERG

The big dog's going to bite us all.

(\**indaacu aja-ndha-wana-na uthu-nggu*)

(\**uthu aja-ndha-wana-na indaacu-lu*)

Possessive noun phrases were discussed in Section 3.3.1, with examples in Table 3-5. Recall that within a possessive phrase, possessive marking can occur on both the head noun and the possessor (130a), or on the head only (130b).

(130) POSSESSIVE NOUN PHRASES

a. *ngalayi-nyja thudu-tha ngayunga*

eat.PPERF-2SGSUBJ meat-1SGOBJ 1p.POSS

You ate my meat.

- b. wangayi-lu ala-ganu ciipu milu-ra atkadii  
 crow-ERG that-FOC sheep eye-3OBL take.PAST  
 That crow got the sheep's eye out.

Recall that in double possessives (117d), the oblique bound pronoun precedes the dative case marker.

## 4.4 Constituency within Verb Phrases

In contrast to noun phrases, there are no strong arguments for constituency within the verb phrase. The relatively free order of sentential constituents shown in (123) includes VSO and OSV patterns, where verb and direct object are non-adjacent. There are no clear cases of VP fronting or VP ellipsis. One verb, *pitu-*, 'eager to, wanting to' acts as a VP proform, as shown in (131).

(131) VP PRO-FORM WITH *pitu-* 'EAGER TO, WANTING TO'

- a. nyini yatka-ndha apa-nggu? 'e'e, ngayi pitu-nhii  
 2p go-NPAST water-LOC yes 1p eager-PAST  
 Are you going to the ocean? Yes, I want to.
- b. arnmanu-lu yatka-ndha-yana yawarda wur'a-ndha? pitu-nhii  
 man-ERG go-NPAST-DIR.FUT kangaroo shoot-FUT eager-PAST  
 Will the men go to shoot kangaroos? They want to.

However, since proforms can operate on semantic rather than syntactic structure, they do not provide probative evidence for syntactic structure.

## 4.5 Relative Clauses, Subordinate Clauses and Complements

Syntactic relations expressed by relative clauses, subordinate clauses, and complements in other languages are expressed by simple juxtaposition in Nhanda. Nhanda exemplifies the 'adjoined relative clause' type described in Hale (1976). Examples in (132) show how modification expressed via relative clauses in other languages are typically expressed in Nhanda. The semantic head being modified is in bold. In all cases, prosodic factors like phrasal intonation, and possible pause after the NP in bold in (132a,b,d) suggest that the main clause has a simple NP object that is modified by an independent juxtaposed phrase. In other words, all examples appear to involve two independent juxtaposed clauses.

## (132) RELATIVE CLAUSE EQUIVALENTS

- a. arnmanu-lu widaa-yi **karlaya-nha** apa ngalungga  
 man-ERG spear-PPERFEMU-SPACC water drink.PART  
 The man speared the emu that was drinking water.
- b. ngayi nhaka-ra **ngarnnga-wu** ngayi warlida-yi yawardi-nu  
 1p see-3OBL stick-DAT 1p slap-PPERF kangaroo-PL  
 I'm looking for the stick that I hit the kangaroos with.
- c. **arnmanu-lu** unhii-nha nhaka-nygu  
 man-ERG hit.PAST-1SGDO see.PRES-2OBL  
 The man who hit me is looking for you.
- d. ngayi athu-ndha **yawarda** nyini widaa-yi  
 1p cook-FUT kangaroo 2p spear-PPERF  
 I'll cook the kangaroo that you speared.

Similarly, subordination at the sentential level involves syntactic clausal apposition. The only true subordinator I have found is wutkatpacadi 'mean-while' (133i-k). Elsewhere, temporal (133a-d) and causal (133e-h) relationships between clauses are determined on the basis of context.

## (133) EXPRESSION OF SUBORDINATION

- a. nguutu parladangga-nu ngayi nha'i  
 horse gallop-PPERF 1p see.PAST  
 The horse was galloping along when I saw him.
- b. nyarlu-nggu abarla-nha ingii milgi ngayi wangga-nhaa  
 woman-ERG child-SPACC give.PAST milk 1p talk-NPAST  
 The woman gave the baby milk while I was talking.
- c. ngayi inida-nu abarla-nha arnmanu yatka-yu  
 1p kiss-PIMPF child-SPACC man go-DIR.PAST  
 I was kissing the baby when a man came in.
- d. ngabu-barta-lu wunyba-a wajanu arda-ka  
 fat-AUG-ERG whistle-PRES wood cut-PRES  
 The fat man is whistling while he chops firewood.

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- e. aluu uthu-nggu aja-nda-ndha-rnda, ngayi wur'a-ndha  
 that.ERG dog-ERG bite-IRR-FUT-2SGDO 1p shoot-FUT  
 If that dog bites you, I'll shoot him.
- f. nyini yatka-ndha-gula, ngayi piyarda-ba-nhaa-nygu  
 2p go-NPAST-AMB 1p sorry-INCH-NPAST-2OBL  
 If you go along, I'll be sorry for you.
- g. ngayi ciiga ngayi wumba-yi wur'a  
 1p shame 1p steal-PPERF money  
 I'm ashamed because I stole some money.
- h. wilu-nggu ngayi apa mandaa nguutu-wu wajilu-ba-nhii  
 river-LOC 1p water take.FUT horse-DAT thirsty-INCH-PAST  
 I will get water from the river for the horses because they're thirsty.
- i. ngayi-thada wangga-nhaa; wutkatpacadi yawarda atpi-ya  
 1p-DU talk-NPAST meanwhile kangaroo tie-PRES  
 We two are talking; meanwhile he's tying up a kangaroo.
- j. ngayi-nu wangga-nhaa; wutkatpacadi ajuga i'a-nu  
 1p-PL talk-NPAST meanwhile ajuga dig-PIMPF  
 We were talking; meanwhile they were digging up ajuga.
- k. wurdu-tha walganyja-a; wutkatpacadi palgatpa-a uthu  
 son-1SGOBL paint-PRES meanwhile bark-PRES dog  
 My son is painting; and meanwhile, the dog is barking.

Very few verbs in Nhanda appear to subcategorize VPs or sentential complements. The verb *pitu-* 'eager, want to' can be viewed as taking VP or sentential complements (134a–d). Notice in these examples that *pitu-* behaves in all ways as an unaccusative verb (NH conjugation, absolute subject), and that the VP or clausal complement has a verb marked for tense/mood/aspect. The example in (134e) shows *nha-* 'see' with what looks like a relative clause object headed by (specific accusative) *nyarlunha*, but, again, prosodic factors suggest this is a juxtaposed sentential complement or modifier.

## (134) EXPRESSION OF COMPLEMENTATION

- a. ngayi pitu-nhii yatka-ndha  
 1p eager-PAST go-NPAST  
 I'm eager to go.
- b. abarli-nu pitu-nhii yatka-ndha wilu-nggu nguti-jada  
 child-PL eager-PAST go-NPAST sea-LOC swim-PART  
 The children are eager to go swimming in the sea.
- c. nyarlu pitu-nhii mardiji-ba-nhaa  
 woman eager-PAST married-INCH-NPAST  
 The woman wants to get married.
- d. nyini pitu-nhii yurdu-nygu mardiji-ba-nhaa?  
 2p eager-PAST daughter-2OBL married-INCH-NPAST  
 Do you want your daughter to get married?
- e. ngayi nhaka nyarlu-nha athu-ra thudu  
 1p see.PRES woman-SPACC cook-PRES meat  
 I am looking at the woman cooking meat.

**4.6 Coordination**

As with subordination, coordination involves simple phrasal parataxis. The examples in (135) illustrate sentential coordination (135a,b), VP coordination (135c), NP coordination (135d,e), and coordination with verb ellipsis or gapping (135f). Again, as with the examples in Section 4.4 and Section 4.5, all examples appear to involve two independent juxtaposed clauses.

## (135) EXPRESSION OF COORDINATION

- a. ngayi cugi-nu arnmanu-nha, urnnga-nu parnba-gu  
 1p push-PIMPF man-SPACC fall-PIMPF ground-LOC  
 I was pushing the man, and he fell on the hard ground.
- b. watpa-nggu ngalaka yawarda, ardu-nygu malya ngalungga  
 other-ERG eat.HAB kangaroo spouse-2OBL NEG eat.PRES  
 That other fellow eats kangaroo, but your husband doesn't.

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- c. arnmanu-lu wanyja-yi widaa unhii yawarda  
man-ERG throw-PPERF spear hit.PAST kangaroo  
The man threw a spear and hit a kangaroo.
- d. pundu-gu nguuti-i acijadi-wana mirla-wana  
rain-ERG wet-PPERF clothes-IPL rug-IPL  
The rain wet our clothes and our rugs.
- e. uthu purndu pitkili nhurndi pitkili  
dog back bald tail bald  
The dog has a mangy back and a mangy tail.
- f. nyini yatka-da mutha=ngga ngayi urndu=galu  
2p go-IMP nose=LOC2 1p back=PATH  
You go in the front and I'll go behind.

The O'Grady (1966) and Hale (1960) corpus and Bates (n.d. 85) contain a coordinate particle *kala* unattested in Mrs. Lucy Ryder's speech. This particle coordinates NPs (136a), VPs (136b), and entire sentences (136c). The lexical item *kala* could be a feature of central and southern dialects, absent in northern Nhanda, and possibly borrowed from a neighboring language. The examples in (136) are from Ken Hale's (1960) fieldnotes; because the morphology differs slightly from that reported in Chapter 3, I have not provided morph-by-morph glosses.

(136) COORDINATE PARTICLE *kala* (O'GRADY AND HALE CORPUS ONLY)

- a. ala-kanu thudu ada-matka ngayuu kala nyinii  
He's cutting the meat for you and me.
- b. inya-ngu-wa yatka-nu kala in.gartii yawarda  
I went from here and killed a kangaroo.
- c. kala atkari-nha ngayi-nha takta-gu kala malya-wa innga-ba-nhii  
And they took me to the doctor, and I didn't die.

Notice in (136c) that the first- position first-person singular subject clitic *-wa* does not cliticize to *kala*, but to the first word of the following coordinate clause, the negative particle *malya*.

## 4.7 Yes/No Questions

Yes/no questions are expressed by what would otherwise be declaratives, with special intonation contours. The most common contour adds a sharp falling accent on the last main stress in the phrase, with a slight phrase-final rise in pitch on the phrase-final syllable. In (137) an acute accent marks the position of the phrasal pitch accent.

(137) SOME YES/NO QUESTIONS

- a. nyini pánda-ba-nhii?  
2p tired-INCH-PAST  
Are you tired?
- b. nyini yatka-ndha wúmbu-gu?  
2p go-NPAST urinate-LOC  
Are you going to have a wee?
- c. nyini wanyjida inya nyárlu?  
woman hear.PRES this woman  
Do you hear this woman?

In addition to morpho-syntactically unmarked questions of the sort shown in (137), the O'Grady and Hale (1960) corpus contains a yes/no question particle *ari* which is unattested in Lucy Ryder's speech. This particle appears phrase-initially in (138a-c); if we assume for (138d) that [*inya waka'i*] is a topic NP, and forms a distinct syntactic phrase, then the phrase-initial generalization can be maintained. As above, because the morphology and lexicon differs slightly from that reported in Chapter 3, I have not provided morph-by-morph glosses.

(138) QUESTION PARTICLE *ari* (O'GRADY AND HALE CORPUS ONLY)

- a. *ari wiinta alakanu wunngarnu idangga' nyinii?*  
Did the tree fall on you? [KH:95]
- b. *ari-nyja abarla-nha waji-mundi'?*  
Did you wash the baby? [KH:114]
- c. *ari-nyja ardandha'i alakanu wajanu?*  
Did you cut wood? [KH:116]
- d. *inya waka'i ari yandaa ngayuu?*  
Is this snake coming to me? [KH:92]



## 4.8 Syntax of Imperatives

Imperative sentences are given in (139). Imperative verbs have the same syntax as non-imperative forms, except that they lack an overt subject noun phrase, and a second-person subject is understood. The regular imperative suffix is *-ga* for all conjugation classes (139a,d,e,g). Some NH-class verbs, particularly inchoatives with *-ba*, have alternative imperatives that consist of the bare stem (139b). Certain irregular verbs have bare stem imperatives as well (139f), and others have imperatives marked by *-da* (139c).

Recall that the regular imperative suffix *-ga* has unexpected secondary stress which must be considered a lexical property of this suffix.

### (139) IMPERATIVES

- a. *cindi-ba-ga*  
quiet-INCH-IMP  
Be quiet!
- b. *cindi-ba*  
quiet-INCH-IMP  
Be quiet!
- c. *malya yatka-da pundu-gu*  
NEG go-IMP rain-LOC  
Don't go out in the rain!
- d. *aci-ga abarla-nha*  
dress-IMP child-SPACC  
Dress the child!
- e. *wirdaa-ra atpi-ga*  
leg-3OBL tie-IMP  
Tie up his legs!
- f. *watpa-nha inggaa-nha*  
other-SPACC give.PRES-1SGDO  
Give me another one!
- g. *malya arliba-ga*  
NEG lend-IMP  
Don't lend it to him!

Irregular imperative forms are discussed in Section 3.4.3. As far as I could tell, there were no syntactic conditioning factors for these morphologically irregular imperative forms. However, I did not elicit imperatives for all verb stems.

In all imperatives, the argument structure of the imperative verb is unchanged from its basic form, and the same range of bound pronouns can follow the inflected verb. Negative imperatives are preceded by the negative particle *malya*.

## 4.9 Focus Marking

The suffix *-ganu* occurs on a small class of stems, and appears to mark focus. Attested forms are shown in (140).

(140) FOCUS MARKER *-ganu*

Focused form	Gloss (with emphasis)	Stem	Gloss
<i>alaganu</i>	'that one'	<i>ala</i>	'that'
<i>atuganu</i>	'that there'	<i>atu</i>	'there'
<i>inyaganu</i>	'this one'	<i>inya</i>	'this'
<i>ituganu</i>	'this here'	<i>itu</i>	'here'
<i>nhaaganu</i>	'something'	<i>nhaa</i>	'what; something'
<i>nganaganu</i>	'someone'	<i>ngana</i>	'who; someone'
<i>urliganu</i>	'that's enough!'	<i>urli</i>	'go on!'

Examples appear in (141).

(141) FOCUS MARKER *-ganu* IN CONTEXT

- a. *ala-ganu wula-nhaa*  
that-FOC cry-NPAST  
That one's crying.
- b. *nhaa-ganu atalu ngayi nha'i*  
something-FOC down 1p see.PAST  
I saw something down there.
- c. *ngana-ganu wujanu yatka-yu?*  
who-FOC stranger go-DIR.NFUT  
Who's that stranger coming?

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The fact that this suffix occurs primarily on demonstratives and interrogatives and indefinites supports the view of these items as a special subclass of nominals. Though the exact semantics are unclear, -ganu seems to act as a focus marker. This suffix appears to be cognate with Panyjima -ganu ‘only’ and Wajarri -ganu ‘nothing but’. The word urliganu is the only example of suffixation to an adverb in the corpus.

# Lexicon

The Nhanda-English lexicon that follows is a list of all attested Nhanda stems and basic words, their grammatical category, and their approximate meanings. English alphabetical order is used, with glottal stop (') added as a last member. The Nhanda-English section is followed by a list of Nhanda suffixes and a list of Nhanda names for languages, people, and places.

Compounds and derived nouns and verbs are listed when their meanings are lexicalized or not entirely compositional. Bound nominals (see section 3.2.8) are followed by a dash. For demonstratives, interrogatives, and pronouns, only the unmarked nominative/absolute singular forms are given. The reader is referred to sections 3.2.7 and 3.3 for full inflectional paradigms. For verbs, the stem is listed along with its conjugation class. See section 3.4.2 for the inflectional paradigms of regular NH-, Y-, and D-class verbs, and section 3.4.3 for inflectional paradigms of all irregular verbs. If a verb is not marked transitive or intransitive, it occurs in both case frames. Verbs marked with '(?)' are those for which conjugation class is undetermined. If a loan source is identifiable, it is listed in parentheses at the end of the entry.

Any vocabulary item from my own fieldwork is unmarked for source. Vocabulary items from other sources are marked. If the notation in the original source is ambiguous in any way, it is given in its original form in italics. Abbreviations for original sources are:

DB	Bates (n.d. 85)	OG	O'Grady (1966)
RTG	Goldsworthy (1886b)	AO	Oldfield (1865)
KH	Hale (1960)		

Other abbreviations used in the lexicon are:

ADV	adverb	Ny	Nyungar loan
D	D-conjugation class	PN	proper noun
Eng	English loan	PRO	pronoun
INT	interjection	sth	something
IRR	irregular verb	s.o.	someone
I/I	interrogative/indefinite	V	verb
ko	kind of	Vintr	intransitive verb
LOC	locational nominal	Vtr	transitive verb
N	nominal	Waj	Wajarri loan
NH	NH-conjugation class	Y	Y-conjugation class

## Nhanda-English

### A

- aatiku** ADV regardless, anyway, anyhow
- abarla** N child, baby
- abarlaba**-Vintr (NH) act like a child
- abarlawaa** N pregnant
- acalu**- sneeze
- acalacalu** sneeze
- aci**- Vtr (Y) dress, put clothes on
- acijadi**- Vintr (NH) getting dressed
- acijadi** N clothes
- acijata**- Vintr (D) get dressed
- ada**- Vtr (Y) take sth away (from s.o.)
- adamatka**- Vtr (IRR) snatch, jerk, grab sth away (from s.o.)
- adanyja** N pelican [OG; RTG]
- adanyjata**- Vintr (D) flirt, court
- adumba** N wattle tree with yellow flowers, *Acacia aneura*
- aga** INT look out! (used when frightened or alarmed)
- aga**- Vintr (Y) get up
- agu** N mother
- agurda** N bush yam – *Discorea hastifolia*; this term is used when plant grows in the rocky hill country where roots are shallow; on the sandplain, the same plant is called ajuga
- aja** N little dear, little sweetie (used in calling to a grandson)
- aja**- Vtr (Y) bite
- ajadi** N son-in-law
- ajajadi** N tobacco, cigarette
- ajuga** N bush yam – *Discorea hastifolia*; this term is used when plant grows on the sandplain, where roots are deep; in rocky country, the same plant is called agurda
- ala** DEM that (proximate)
- aliipala** ADV early (Eng)
- ama** N father
- Amangu, Ammong** PN name for southern group of Nhanda and their language, spoken from Champion Bay south to Hill River and inland to Mullewa [DB]
- ambarnoo* N father-in-law [DB]
- ami** N brother-in-law
- andadi** N grandparent, grandchild
- anha** DEM that (distant)
- anhi**- Vintr (Y) dance
- anhiya** N corroboree, dance
- anyjati**- Vtr (Y) shove
- apa** N water (fresh or salt)
- apanggu** N alcohol, grog
- apawaa** N drunk
- arda**- Vtr (Y/IRR) cut, halve
- ardamatka**- Vtr (IRR) cut, chop
- ardanda**- Vintr (D) break
- ardanda**- Vtr (Y) break
- ardathada** N short-cut; halfway
- ardidi**- Vintr (D) crackle
- ardu** N spouse, sweetheart, lover
- ari** question particle [KH; OG]
- arliba**- Vtr (Y) lend sth (to s.o.)
- arndanyu** N mouse; bush rat
- arndi**- Vtr (Y) smell
- arnmanu** N man; person, human
- arnmanuba**- Vintr (NH) become a man through the law
- arnngaandi** N people from the east, desert people
- arnngalu** LOC east
- artarda** N many, lots, dozens, a lot
- artpa**- Vtr (Y) burn, burn off, light a fire
- athalu** LOC down, deep down, below
- athu** N spider [AO]
- athu**- Vtr (Y/IRR) cook, burn
- atilu** LOC close, near
- atka**- Vtr (Y/IRR) rub, spread, grease

**atkada-** Vtr (Y/IRR) take, carry, have  
**atkajadi** N ointment, cream, salve  
**atpi-** Vtr (Y) tie, tie up  
**atpicaa** N policeman  
**atpirda** N lie, prevarication  
**atpirda-** Vtr (Y) lie, prevaricate  
**awu-, a'u-** Vtr (Y) stoke up, light a fire  
**aya-** Vtr (IRR) ask

## B

**Babajidangga** PN placename, on Murchison, going up towards Yallalong  
**badgutu** N bread (Eng 'very good')  
**balayi** INT watch out, look out! (MAL)  
*balyokurra* N turtle [DB]  
**bangara** N large black goanna  
**bardi** N grub, witchety grub (Waj)  
**bataa** N cheeky  
*bat-tje* N wooden bowl, coolamon [AO]  
**bidida** N long flat claypan, salt flats (MAL)  
**bigurda** N big red kangaroo  
**bilhida** N fighting spear  
**Bilhidawaa** PN placename, Pillawarra Hill  
**bimarda** N water snake  
**Bindari** PN Bindari Well, up from Betty Crossing on Murchison River  
**bindibindi** N horns  
*boon-go* N fishing net [AO]  
**Budu'ungin** PN placename, Gregory Rocks  
**Buku** PN placename, Bookah Spring, north of Betty Crossing on Murchison  
**buli** N slender-billed corella, little corella; pubic hair (woman), woman's privates  
**Buli** PN placename, Bully Pool  
**bulya** N magic, sorcery  
**bunyadi-** Vtr (Y) blow out, put out  
**bunyja-** Vtr (Y) suck, taste [OG]  
**buraada** N skinny, thin (of legs)

## C

**caalu** N no good, bad, worthless  
**Cadiguru** PN Godfrey Ryder's nickname  
**cagurdu** N mulga nut or seed  
**calya** N glad, happy  
**candi** N sister-in-law  
**cangga** N dried up, withered up; ripe, cooked [AO]  
**capa** N supper (Eng)  
**catka** N crusty, overcooked, burnt dry  
**ca'u-** N cunning, joking  
**ca'ubilhi** N cunning, con  
**ca'unda-** Vtr (Y) make a fool of s.o.  
**cici** N woman's private parts  
**cidijidi** N ko bird, willy-wagtail  
**ciidii** ADV a long time, long ago  
**ciiga** N shame, ashamed  
**ciipu** N sheep (Eng)  
**cijici** N scissors (Eng)  
**cindi** N quiet  
**citkacitka** N mangy, scraggy  
**citkada** N echidna, porcupine  
**citu** N belly button, navel; small damper when cooked on top of a large one  
**coopu** N soap (Eng)  
**Cucala** PN placename, Tutula Spring on north bank of Murchison  
**cugi-** Vtr (Y) push  
**curdu** N whole stomach, tripe of sheep  
**cutka** N arm

## D

**damba** N damper (Eng)

## G

**Gabagaba** PN placename, Red Bluff at Kalbari  
**gali** N gully (Eng)  
*ganbar* N spider [DB]

LEXICON

**I**

**ibi** N breast, nipple, breastmilk  
**icici-** N pain, hurt  
**iciciba-** Vintr (NH) be painful, hurt  
**ida-** Vintr (NH) be up, be high  
**ida-** Vtr (IRR) climb up, go up  
**idaji** N tooth, teeth, mouth  
**idalu** N north  
**idi** N nail, fingernail, toenail  
**idi** N ko insect, little black stinging ants  
**ididibarni** N mythical water snake, water serpent  
**Ididibarni** PN placename, a water hole that will swallow you up, north of the Murchison going up towards Barrow Well  
**ididinggada** LOC down (hill), down (into a hollow)  
**idinba** N moon  
**idinggada** N a lot, a pile  
**idinyja** N flood, floodwater  
**idithunda-** Vtr (Y) pinch  
**idiwirdi** N legless lizard, quiet harmless snake  
**Idiyada** PN placename, a rocky thicket on the south side of the Murchison down from Janga thicket, good for digging ajuga  
**igada-** Vintr (NH/IRR) be standing still  
**igada-** Vtr (Y) stand s.o./sth up  
**ija-** Vtr (Y) put, leave  
**ijanatpa-** Vtr (Y) send along, send away, send over  
**ili** N dry  
**iludadi** ko bird, green kingfisher, little green bird with deep nests on the ground, lived in the sandhills  
**imba** N gum from wattle or gum tree  
**inada-** Vintr (NH) break  
**inada-** Vtr (Y) break sth  
**inba-** Vtr (Y) torment s.o., pick on s.o.; touch s.o. (to wake them up)

**inda** N big, big one; big toe  
**inda-** Vintr (NH) get down from sth, go down, climb down  
**indaacu** N big, big one, heavy  
**indaji** N ribs  
**indiya** N star  
**indu-** Vintr (NH) come, arrive  
**induga** ADV tomorrow  
**inga-** Vtr (IRR) give, pass, hand sth to s.o.  
**inggili** N English (Eng)  
**ini** N name  
**ini-** Vtr (Y) name s.o.  
**inida-** Vtr (Y) kiss s.o.  
**inimatka-** Vtr (IRR) call out someone's name  
**inna** N dead; spirit, ghost, devil  
**innabalayi** N ko bird, owl, tawny frog-mouth  
**innatinda-** Vtr (Y) kill  
**inya** DEM this, this one  
**inyi-** Vtr (Y) shut, close  
**inyja-** Vintr (Y) rest, stay, sit  
**irdabili** N cheeks, jaw, chin, lips  
**itu** DEM here, in this place  
**i'a-** Vtr (Y) dig  
**i'u** LOC south

**J**

**jabi** N small lizard, gecko  
**Jambinbi** PN Champion Bay, Geraldton  
**jangara** N featherfoot, ghost  
**Jarndi** PN placename, old camping ground near Wilgimaya  
**Jianga** PN placename, Janga thicket, a big thicket  
**jibi** N ko bird, sandlark  
**Jibi Wujayi** PN placename, place on north shore of the Murchison where a sandlark went into a hole, and came out miles away

**jida** N larrikin girls

**jidamarda** N larrikins, flirts

**Jidamarda** PN placename, Gidamarra  
Spring, once flowed near Kalbari center,  
now filled in

**Jijayi** PN placename, GeeGie outcamp

**jiji** N horse (babytalk)

**Jilinha** PN Lucy Ryder's maternal grandmother

**Jiwaa** PN placename, first river crossing  
upriver from Murchison House past  
the cemetery, with steep bank on north  
shore

**juna** N short wooden axe with sharp blade

**junada** N axe for fighting

**Junadawaa** PN placename, Jannawa  
Hill, one of two square hills on the  
north bank of the lower Murchison,  
where much fighting took place

## K

**kaadu** N sugar

**kaalyu** N lungs, lights (of a person or an  
animal)

**kaamalu** N camel (Eng)

**Kaaragurdu** PN placename, Carroll-  
gouda Well, place where crows flew up  
and found water

**kabarla** N puppy, pup

**kada-** ADV sneaky, sneakily, on the sly  
(initial element in compound verbs)

*kadarra* N turtle [DB]

**kadayatka-** Vtr (IRR) sneak away,  
creep around

**Kadháagurdu** PN placename, Shark  
Bay

**kaga** N cousin

*kaggajee* N nephew [DB]

*kaggajittee* N aunt [DB]

**kagurli** N head of animal [DB; AO]

**Kajitgurdu, Kajitgura** PN placename,  
lookout point on the south side of the  
mouth of the Murchison

**kaju** N sky

*kakkoo* N soft [DB]

**kalya** N armpit, underarm

**kalya ngunya** N underarm hair

**kanangga** N true, truth

**kanbaagu** N little devil who runs along  
the ground lighting fires

**kan.garti-** Vtr (D) wake s.o. up

**kanggado** N cold, cough, flu

**kanggatpa-** Vtr (Y) cough

**kardagali** N twisted, bent, crooked

**karlaaba** N flour

**karlaya** N emu

**karlu** N belly, stomach (internal)

**katu** N larrikin, flirt

**kayanu** ADV gently, with no worries

**kayiga(??)** *ky-e-ga* [AO], *kaiga* [DB]; N  
charcoal

**kayili** N sweet pea tree, small tree with  
yellow flowers

**kiráaku** N beer, grog (Eng)

**kuca** N testicles, testes, balls

**kucawarla** N testicles, testes, balls

**kucidu** N hunger, hungry

**kujidu** N nausea, nauseous, vomit

**kuka** N small boy (used in calling out to  
one)

**Kukuláaya** PN placename, at bend of  
Murchison where Thaawurda country  
begins

**kulyigulyi** N mischievous, silly

**kumudu** N blind

**Kunabadalinyja** PN placename, Goon-  
erburallager Pool, on Murchison  
south of Thulunga Point

**kundugati** N ko tree, bush with small  
yellow seeds which only some people  
find edible

**Kuranha** PN placename, Murchison  
waterfall downstream from Thurlanga  
point

**kurda** N mate, friend



LEXICON

**kurdubiya** N ko insect, small grubs in trees, used for fishing bait

**kurinyguriny** N dizzy

**kurlanu** N bush potato, bush onion (with pink flesh)

**kurlayhi** N river red gum, *Eucalyptus camaldulensis*

**kurliipu** N bullock, cow (Eng)

**Kurlimaya** PN placename, Buli Pool, good freshwater and full of water fowl

**kurnaaku** N crayfish, yabbie (Ny)

**kurndi** N club, fighting stick

**kutiya** N one

**kuuki** N cook (Eng)

**kuwirtpa** N funny

**kuya-** VINTR (Y/IRR) cry, wail, be in mourning

**ku'arlu** N good, well, nice, fine, lovely, beautiful, right

**M**

**maaca** N boss, master (Eng)

**maatijada** VINTR (D) crawling

**madi** N sore, cut, wound

**magurda** N dream [OG], photograph

*mai maiungoo* N leech [DB]

**Majjiniu** PN placename, Murchison Station (Eng)

**malu** N shade, shadow, reflection

**malunha-** VINTR (IRR) look in the mirror, dress up

**Maluwaa** PN placename, place down the river from Murchison House

**malya** ADV negative particle

**malyu** N younger sister

**mambu** N bone; hard

**mandulba** N ko plant with black and green berries, Tom Watson's Watermelon

**mangga** N bird's nest

**manggawarla** N hat

**manggurda-** VTR (Y) stick, poke, scratch, stab

**mara** N hand, fingers

**maraga-** VINTR (Y) put one's hand out, show one's hand

**mardala** N light clouds, cool weather clouds

**mardida** N ko fish, kingfish

**mardiji** N married (Eng)

**marla** N clay, mud

**marlu** N blue kangaroo

**marnda** N banksia cones, banksia knobs; behind, buttocks, ass

**marniwidi** N red

**marnngurdu** N three

**maru** N night, dark

**marudi** N liver

**marulybidi** N jet black, a proper black one

**mar'u** N ko bird, rainbird, black-faced cuckoo shrike

**matha** N ko plant with edible root, bush carrot

**matharda** N sick, not well

**matka-** VTR (IRR) take, bring, get, give, have, gather, grasp, catch

**matkaw** N ko tree, prickly kurrara tree, wood used for digging sticks, boomerangs, and pipes

**maya** N house, hut (Ny)

**mayali** N ko tree

**mayamaya** N know-it-all, trouble-maker, gossip

*melanyoo* N bat [DB]

**mida-** VINTR (Y) sing out, shout, call out, cry out

**miga** N hollow (in a tree, log, etc.), place where parrots lay their eggs

**miinba-** VINTR (Y) bleat (of sheep)

**mijiji** N white woman, Mrs. (Eng)

**mika-** N fun, play, playing

**mikaba-** VINTR (NH) have fun, play

**mikanda-** Vtr (Y) play with s.o./sth  
**milgi** N milk (Eng)  
**milingga** N forehead  
**milu** N eye  
**milu kumudu** N blind  
**milutpa-** V (Y) wink, wink at  
*min-a-ra* N rainbow [AO]  
**minda** N house, home  
**mindinyu** N maggot  
**minga** N ant (generic), meat ant  
**mini** N light, white, shiny, bright  
**miniga-** V (Y) get light, shine light  
**miniyada** N centipede  
**minyju** N purse, small bag  
**mirla** N rug; flat  
**mirla-** Vtr (Y) pop, flatten (a blister)  
**mirlamirla** N flat, flattened out  
**mithu** N bowels, rectum, descending colon (of animal)  
**mi'inda-** Vtr (Y) light (a fire) [OG]  
*moora* cooked [DB]  
*moora* N cicatrice on chest [AO]  
*moorawa* N initiate [AO]  
*mooreburndee* N widow, widower [DB]  
*moothaboongo* N hole bored through nose [AO]  
*mo-yar-ra* N net bag [AO]  
**muga** N deep  
**mugunya** N ko plant, bush figs, salty bush with pink figs  
**munda** N poor, without money  
**mundamunda** N poor-looking, raggedy  
**munggulba** N ko plant, creeper with black edible berries which hang down like grapes, *Astrolama* sp.  
**munharda** N deaf  
**Munimaya** PN placename, Northampton  
**muri** N fish gizzard  
**murna** N lap  
**mutha** N nose; plug tobacco  
**muthadi-** V (D) drown

**muthangga** LOC in front, at the front  
**mutikaa** N motorcar, car (Eng)

## N

**nani** N goat (Eng)  
*nanyee* N niece [DB]  
*nar-rin-yu* N salt [AO]  
**nata** N note (of money) (Eng)  
**nayapu** N knife (Eng)  
**niilu** N needle (Eng)

## NG

*ngaabeera* N butterfly [DB]  
**ngabada** N chest  
**ngabari** N brother-in-law (Waj)  
**ngabu** N fat, grease, oil (of emu)  
**ngacku** N ko plant, bush potato with spring onion top  
**ngadi-** Vintr (D) lie down, sleep, rest  
**ngadici-** Vtr (?) sleep with, make love  
**ngadiya-** Vintr (NH/IRR) fall asleep  
**ngagalyada** N major mitchell cockatoo  
**Ngagalyadagurdu** PN placename on the Murchison  
**ngala-** V (Y/IRR) eat, drink  
**ngalungga** N dinner, supper  
**ngamarda-** Vintr (Y) go fishing, fish  
**Ngamba** PN Nhanda name of Grandma Mallard, Pearl Whitby's grandmother  
**ngana** I/I who; someone  
**nganbanganba** N airplane  
**Nganggalada** PN Nhanda name of Tommy Nhanggalada  
**nganggarda-** Vintr (Y) tell stories, spin yarns  
**nganggati-** Vtr (D) wake someone up  
**Nganyjunganyju** PN Nhanda name of Doug Drage  
**ngarda-** Vtr (Y) chase  
**ngarlida-** Vtr (?) chase away  
**ngarn.ga** N beard, whiskers, moustache

## LEXICON

**ngarni-** Vtr (Y) pour something out  
**ngarnmanu** N inside of mouth, gullet, throat  
**ngarnnga** N stick, splinter  
**ngarnuwada** N ko plant, wild potato, small bushy parsley-like leaves, with root like a sweet potato  
*ngarrea* N mother-in-law [DB]  
**ngayi** PRO 1st person singular  
**ngayijinda-** Vtr (Y) keep someone company, accompany s.o.  
*ngoolyambeerdee* N hole bored through nose [DB]  
**nguba** N blood  
**ngubaba-** Vintr (NH) bleed  
**ngubanu** N dingo, wild dog  
**nguda** N camp, home, house, humpy  
**ngudaburtu** N camping  
**ngulya** N ko bird, white-tailed black cockatoo  
**ngunda** N face  
**ngundamini** N pale-face, white person  
**ngundinu** N mucus, snot  
**ngunyu** N hair  
**ngutijada** Vintr (D) swimming, washing, bathing  
**ngutpa-** Vintr (Y) wait for  
**nguuti-** Vtr (Y) wet, get s.o./sth wet  
**nguutiyu** N pregnant, starting to show  
**nguutu** N horse  
**nguutubarta** ADV on horseback  
**nguyadu** N soft faeces, diarrhea (associated with stomach ache)  
**nguyu** N raw (of meat)

## NH

**nha-** Vtr (Y/IRR) see, look at  
**nhaa** I/I what; something  
**nhaabarndi** I/I why, what for  
**nhaawu** I/I why, what for

**nhadumba** N older sister  
**Nhaguja** PN name of language and people between Nhanda and Wajarri; appears to be the northern Nhanda name for Central Nhanda  
**Nhanda** PN name of (northern) Nhanda language and people  
**Nhanganyja** PN placename, a spring up on a hill on the Murchison  
**nhannga** N back of neck, nape of neck  
**nhurndi** N tail; penis

## NY

**nyambi** N ko dance where one twists the legs  
**nyanyi** N pubic hair  
**nyarlu** N woman, female, girl  
**Nyarlunggu Ngardajadi** PN placename, on Murchison, a place across from Nanny Goat, literally 'women chasing each other'  
**nyili** N late in the afternoon, just before sundown, dusk  
**nyimi** N wing  
**nyina-** Vintr (NH/IRR) sit, stay, stop  
**nyini** PRO 2nd person singular  
**nyuju** N elbow

## O

*oona moorka* N stick to put through nose-hole [AO]  
*oongarnoo* N ashes [DB]

## P

**paacinu** N poison (Eng)  
**paacpalyu** N sweaty; mixed up, not right (of language)  
**pada-** Vtr (Y/IRR) rip, tear  
**padaka** N ripped, torn, raggedy  
**paduda** N dress  
**palharda** N shingleback, bobtail, or blue-tongued skink, lizard (Waj)

- pambada** N hump on the back, hunch-back, with a hump or bump
- panaji** N duck (generic)
- panda-** N tired
- pandaba-** Vintr (NH) be tired
- panggi** N swag, swaggie
- panggibarta** N swag, big bag
- Parata** PN placename, Perth (Eng)
- parduda** N bush turkey, bustard
- parlada-** V (Y) be frightened; frighten someone
- parladangga** Vintr (NH) run away
- parladata-** Vintr (D) be frightened
- Parlatubanu** PN placename, red rocky ridge across from Buku Soak, with a cave at front where Nhanda used to camp
- parlba** N ankle (Waj)
- parlгутpa-** Vintr (Y) bark (of dog)
- parlu** N hill, mountain
- parnba** N hard ground, flat ground, clear ground
- parnda** N guts, large intestine, big tripe, sheep's stomach
- parnnga** N long-tailed yellow goanna
- pathanu** N anthill; cave
- pathu** ADV alone, by oneself, on one's own
- pibarlu** N paper (Eng)
- pidi-** V (Y) feel, touch, feel around
- pididi** N shoulder; flat, broad
- pijibiji** N caterpillar, caterpillar's nest, and itch from it
- pilaru** N everlasting flower
- Pilyada** PN proper name, Horace Drage's nickname
- pilyandi** N ko plant, Wilson's grevillea, with red nectar-laden flowers
- pindadi** N storm, thunder clouds, thunder
- pindha** N dirt, dirty
- Pininyudhanhanha** PN placename, Mt. Curious
- pirditha** N branches from bushes for serving and eating off of, leaves
- pirlinggati** N rug
- pirлу** N boomerang
- pirлurda** N sand, white sand, sandbar
- pititijadi** Vintr (?) split from each other, separate
- pitkili** N bald, shiny, bare
- pitu-** Vintr (NH) eager, anxious, wanting to
- Piwaladi** PN proper name, Stevie Drage's nickname
- piwi** N ko bird, mudlark
- piyagu** N ko bird, galah, pink and grey cockatoo
- Piyagurdu** PN placename, flats on the Murchison, just east of Murchison House
- piyarda-** N sorry
- piyardaba-** Vintr (NH) feel sorry (for s.o.)
- pi'i** N uncle
- pudhabudha-** N tired, drowsy, sleepy, exhausted
- pudhabudhaba-** Vintr (NH) get tired, get sleepy
- pudi** N small, little, light (in weight)
- pudi abarla** N newborn baby
- puga** N rotten, stinking
- puguda** N old person
- pulha** N many, alot, mobs; clever, wise
- pulhabarta** N clever man, sorcerer, doctor
- Pulhagurdu** PN placename, Hamelin Pool (Mal)
- pundha** N blunt, dull
- pundu** N rain
- puraaku** N dress, frock (Eng)
- purdidi** N potato; ache, hurt (of head)
- purdidiba-** Vintr (NH) be aching
- purndu** N back (of body)
- purndutu** N hunchback, humpyback

LEXICON

**purtku** N short  
**puru** N light mist, haze  
**puruburu** N fog  
**puuci** N pouch; pussy cat (Eng)  
**puudardi** N ko fish, bream

**TH**

**Thaamarli** PN placename, Tamala Station  
**thaapirli-** Vtr (?) con s.o., trick s.o.  
**Thaawurda** PN name of Yallalong people and their language  
**thada-** N larrikin, flirt  
**thadaba-** Vintr (NH) to become larrikins  
**thadatpa-** Vtr (Y) wipe  
**thadilyi** N the silver wattle tree, *Acacia dealbata*  
**thalanyu** N tongue  
**thalba** N heel (of foot), ankle  
**thalha** N mud, grease, greasy, sticky  
**Thalinyja** PN spring near Murchison House where someone drowned  
**Thamaci** PN Gwen Ryder's nickname  
**thamba** N bark of a tree  
**Thamburligurdu** PN placename, Tumlagooda Hill, bald mountain on north side above mouth of Murchison  
**thangga** N crack  
**thani** N outside, the open  
**tharda** N knee  
**thardaji** N pants, dungarees  
**thardalangga-** Vintr (NH) slip, slide  
**tharti** ADV back, from where it came  
**thartimundi** ADV back  
**thartiya-** Vintr (Y) be back, be here  
**thartiyatka-** Vintr (irrY) return  
**thartpi-** V (?) make a bed  
**thartpirlu** N stuff to lay out like a mat, rug, or old bag  
**thayalu** N blackboy tree, grass tree, *Xanthorrhoea australis*, and its gum or resin

**thayicaa(??)** *ty-ca* 'soft' [AO]  
**thayidi** N snake (generic)  
**thidaa** N ko fish, yellowtail  
**thidandi** N ko bird, the red-tailed black cockatoo  
**Thidhandhan** PN placename, hill east of the shearing shed at Murchison House Station  
**thindhalu** N soft faeces, diarrhea (associated with stomach ache)  
**thinggi** N dirty, filthy, smelly  
**Thinggilidi** PN Nhanda name of Sara Drage  
**thiyinu** N sinew (Eng)  
**thiyinyu** N mosquito  
**Thucula** PN placename, Tutula  
**thudu** N meat, flesh  
**thugudhugu** N dust, dusty  
**thugunyu** N ko bird, Port Lincoln ring-neck parrot, twenty-eight parrot  
**thumbirlidi** N stubborn, not listening  
**thunu** ADV soon [KH]  
**thurdadu** N song  
**thurdu** N banksia tree, banksia bush  
**thuri** N sun, heat, hot  
**thurla-** N goodbye, parting  
**thurlawaa** N going away for good  
**Thurlinga** PN placename, Toolonga  
**thurnba** N ko bird, small wild pigeon  
**thurtpa** N plug tobacco

**U**

**ugurda-** N cold  
**ugurdadi-** N cold  
**ugurdadiba-** Vintr (NH) be cold  
**ugurdanda-** Vtr (Y) cool s.o./sth off  
**ujica-** Vtr (Y) sneak up on  
**uku-** Vintr (Y) fall down  
**ukuma-** Vintr (NH) fall, fall down  
**uma-** Vtr (IRR) belt, slap

**unggijadi-** Vtr (Y) fight  
**unurdu** N big old dry ajuga from the year before, often found together with a fresh root  
**uraga** N spear thrower, woomera [AO]  
**urda** N wild, angry  
**urdaa** ADV directly, soon, now  
**urli** INT hortative particle, come on now, go on, let's get moving  
**urndadicada-** Vintr (D) limp along  
**urndugalu** ADV behind, at the back  
**urnnga-** Vintr (Y) fall over, fall down  
**ur'u** N buttocks, bum, behind, ass  
**uthu** N domestic dog, tame dog  
**uthudu** N country, land, ground, dirt, earth, sand  
**uudada-** Vtr (D) take, take away  
**uudinu** N wind  
**uuduu** N grass, straw  
**uundadu** N kangaroo skin bag or pouch, carried on the back  
**uundama-** Vtr (IRR) track s.o./sth, follow

## W

**waba** N penis, man's privates  
**wabadi** N penis, man's privates  
**wabagu** N eaglehawk; also penis, man's privates  
**wabayadi-** V (Y) fornicate, have sex with  
**wabirda** N ko fish, snapper  
**waca-** Vtr (Y) wash (Eng)  
**wacidu** N broken-hearted, very sorry  
**wacka** N nits, lice eggs  
**wacu** N west  
**wada-** Vtr (Y) sing  
**wadadi-** Vintr (D) jump, hop  
**wadadicada-** Vintr (D) jumping along, hopping along  
**wadayi** N ko insect, fly, housefly

**wadula** N long, tall  
**Wagawey** PN placename, Walkaway (Eng)  
**wagudu** N bush peach, quandong  
**wagurla** N hole in the ground, hollow  
**wajanu** N fire, firewood, campfire  
**wajida** N cousin  
**wajilu** N thirsty, thirst  
**wajinya** N thin, skinny, lean  
*wajjoo* N road [DB]  
**waka** N work (Eng) [OG]  
**wakanda-** Vtr (Y) work (Eng)  
**walajadi** N thunderstorm, storm clouds  
**walaka-** N scavenger  
**walakaba-** Vintr (NH) scavenge, hang around looking for scraps  
**walga-** N stripe, mark, design  
**walganyja-** Vintr (Y) write, draw, paint  
**walgawaa** N striped, with stripes (like emu chicks)  
**wana** N digging stick  
**wanamalu** N ko bird, shag, cormorant  
**wanaw** N swan  
**wandha** I/I where, somewhere  
**wandhagacadi** I/I when  
**wandidu** N frog  
**wangayi** N ko bird, crow  
**wangga-** V (NH/IRR) speak, talk  
**wangganhaa** N language, talk, speech, words  
**wanya** N ko tree, with sweet gum  
**wanyja-** Vtr (Y) throw, cast, swing, buck  
**wanyjayitpa-** Vtr (Y) throw away, throw off  
**wanyjida-** Vtr (Y) listen, hear, know, understand  
**Waranggadi** PN Nhanda name of Jack Councillor  
**warda** N brains; marrow  
**wardadi-** Vintr (D) flow out, pour out, flow

LEXICON

- wardaga** N woman's privates
- wardumba** N willy-willy, cock-eyed  
Bob, whirlywind
- warduardu** N ko tree, like a water tree,  
with small water-filled roots, tall like  
the woody pear tree
- warla** N head; egg
- warlanda-** Vtr (Y) spoil, pet s.o. up
- warlanu** N a fighting stick used for  
knocking people in the head
- Warlapathanugurdu** PN Nanny Goat  
Soak, on Murchison House Station
- warla pitkili** N bald
- warlgabur'u** N white fluff left in hair by  
little devils
- warlida-** Vtr (Y) slap, smack, spank, hit,  
belt
- warlu** ADV later, later on
- warna** N larrikin, flirt
- warnba-** Vintr (NH) go off (as a gun)
- warnda-** Vtr (Y) pick up, carry, take
- warndu** N throat, neck, gullet  
*warrungoo* flower [DB]
- war'a** N bad, evil, naughty, wrong
- war'abardu** N poor bloke, poor fellow
- war'u** N sun
- Watchandi** PN name for central group of  
Nhanda and their language, spoken in  
and around present-day Port Gregory  
and Northampton
- wathadi-** Vintr (D) wonder about s.o.,  
wonder where s.o. is
- wathoo* N scorpion [DB]
- watpa** N other, another, different one, left  
(hand)
- wawrla** N alive, live, living
- wayudu** N boil, blister, pus
- wicaa** LOC far out, a long way, further out
- wicka** N fish (generic); mullet
- widaa** N spear (generic)
- widaa-** Vtr (Y) spear
- wigi** N saliva, spit
- wigilidi** N froth, foam
- wiginda-** Vtr (Y) talk about someone
- wiipu** N whip (Eng)
- wiku, witku** N stomach, belly (external),  
source of feelings and emotions
- wilgi** N red ochre
- Wilgurdu** PN placename, sand well  
where Nhanda used to dig ajuga and  
camp, across road from Tucula, near  
Murchison
- wilhilya** N ko fish, tailor
- wilidi** N white; ko bird, white cockatoo
- wilu** N sea, ocean, sea water, stream,  
creek, river
- Wilunya** PN name for the Nhanda people,  
used by other tribes
- wilya** N shell, pearl shell
- Wilyamutharinyja** PN placename,  
camping place around the corner from  
Ajana
- wilyawilya** N seagull
- winyja** N old, grey hair, old person
- wirda, wirdaa** N leg
- wirda-** Vintr (Y/IRR) wait
- wirdati-** Vtr (D) kick
- wirdidi** N emu chicks
- wirdinyu** N long intestine, large intes-  
tine, runners (of animal)
- wirlaka** N a white or light spot on the skin  
of an Aborigine
- wirlakawaa** N spotted black and white
- wirlu** N ko bird, curlew
- wirna** N wet
- wirtpa** N sweat
- wirtpa-** Vintr (Y) sweat
- wiruu** N rat kangaroo, ko small wallaby
- Withikara** PN placename, Wittecarra
- witu** N seed; jam tree with seeds inside  
pods
- wiyabarndi** N boy, young man, young,  
youth
- wiyarda** N possum

**Wiyarnagurdu** PN placename,  
Weerinoogudda Soak, off Murchison  
River, past Betty Crossing  
**woorthoo** N straight [DB]  
**wootha** N rainbow [DB]  
**wubirlu** N wave, waves, surf  
**wudilu-** N winded, breathless  
**wudiluba-** Vintr (NH) be winded, be out  
of breath, be breathless  
**wudinyu** N young woman, girl  
**wudiyadi** Vintr (?) running away, gone  
**Wudumalu** PN Kalbarri, mouth of the  
Murchison River  
**wuja** N hole, opening, tunnel  
**wuja-** V (Y) go down, set, go through,  
enter, go into  
**wujanu** N stranger, foreigner  
**wula-** Vintr (NH) cry, weep  
**wulhu** N louse, lice, head lice  
**wumba-** Vintr (NH) hide, duck down,  
sneak around  
**wumba-** Vtr (Y) steal sth from s.o.  
**wumbu** N urine  
**wumbura-** Vtr (Y) urinate  
**wuna** N faeces  
**wunangga-** Vintr (?) laugh  
**wunara-** Vtr (Y) defecate  
**wunbi-** Vtr (Y) leave, let be, leave alone  
**wundilu** N poor thing  
**wunyba-** Vintr (Y) whistle  
**wurda** N brother  
**wurdu** N son  
**wurdudu** N heart  
**wurnda** N shield  
**wurndi** N bandicoot [C,S]  
**wurtka** N ear  
**wurtka-** Vtr (IRR) tell sth (to s.o.)  
**wurtka-** Vintr (NH) snore, sleep  
**wurtka munharda** N deaf  
**wurtka munhardaba-** Vintr (NH)  
forget

**wurtkati-** Vintr (D) roar along  
**wurtkatpa-** Vtr (NH) wake up  
**wurtpi** N skin  
**wur'a** N rock, stone; money, chains  
**wur'a-** Vtr (Y) shoot  
**wur'ada** black; black person, Aborigine  
**wur'awaa** N policeman  
**wuta-** Vtr (D) tell  
**wuthada** N two  
**wutkatpacadi** ADV meanwhile  
**wutpalaa, wucpalaa** N whitefella  
**wutpaw** N ko bird, magpie

## Y

**yaa'inda-** Vtr (Y) open  
**yadiwa** N stone or metal axe for chopping  
wood  
**yadunda-** Vtr (Y) do, do something  
**yagayi** INT cry of pain, 'ouch'  
**yagu** N old, grown up  
**yajalu** N friend, mate  
**yajuwada** N ko tree, sheoak, *Casuarina*  
sp  
**yami-** Vtr (Y) growl at, yell at  
**yanda-** V (Y) sew, sew sth  
**yandi** N ko tree, York gum, *Eucalyptus*  
*loxophleba*  
**Yandula** PN placename, gully after Boobah,  
near Murchison  
**yanga** N tree (generic) [DB]  
**yangajarra** N turtle [DB]  
**yangga-** Vintr (Y) pour down (of rain)  
**yanggarda** ADV again  
**yani** N stump, log  
**yarda-** Vtr (Y) bury, cover up (a hole),  
smother (a fire)  
**yarlinyu-** N courting, run-away  
**yarlinyuba-** Vintr (NH) go courting,  
elope, run away  
**yarlinyubacu** N ko tree, big tree (like a  
sandalwood), with long yellow seed



## LEXICON

- pods. If you pick one seed off the tree,  
      you get married and run away
- yarna** N crazy, mad, insane
- yarnabacu** N grog, liquor, drink (lit.  
      ‘stuff that makes you mad’)
- yarnba** N fire, bushfire
- yarnda** N big turd, pile of faeces
- yatha** N cave
- Yathu** PN placename, Yalthoo
- yatka-** Vintr (NH) be gone
- yatka-** Vintr (IRR) go, walk, come
- yatkajaa** N lonely, alone, on one’s own
- yawarda** N kangaroo, grey kangaroo
- ya’u** N none, nothing
- yina** N foot, feet, track, footprint
- yinabuka** N shoe
- yitka** N coals, embers
- yuda** N bullrushes, reeds
- Yudadi** PN placename, spring that water-  
      snake went through
- yuga** N winter clouds, cool weather  
      clouds
- yugangga** N yesterday
- yugayuga** N afternoon, late afternoon
- yugurdu** N smoke
- yurdu** N daughter
- yurnda** N hips, thighs, haunches
- yutu** N scrub, low bush, thicket
- yutubarta** N big thicket, dense scrub
- ’
- ’e’e** INT yes, yeah, uh-huh (used in agree-  
      ment after or while s.o. is speaking)

## List of Affixes

- a** Y, D class present tense verbal suffix
- ba** inchoative verbalizing suffix
- bagaa** proprietive nominal suffix,  
      ‘belonging to N’
- bardu** nominal derivational suffix ‘poor,  
      pitiful’
- barta** nominal augmentative suffix ‘big,  
      alot’
- buraada** ‘skinny, thin’ nominal suffix
- caa** agentive nominal suffix
- cada** present tense participial verbal  
      suffix
- cadi** past tense participial verbal suffix
- cu** nominalizing suffix ‘Ving stuff’
- ga** verbal imperative suffix
- ganu** demonstrative/interrogative focus  
      marker
- gayi** nominal derivational suffix, ‘with N  
      showing, revealing N’
- gurtku** locative nominal suffix ‘by N,  
      alongside N’
- i** Y, D class past perfect verbal suffix
- jada** ‘cherished, dear’ nominal suffix
- jada** present tense reciprocal verbal  
      suffix
- jadi** reciprocal verbal suffix
- jata** present tense participial/reciprocal  
      verbal suffix
- jati** past tense participial/reciprocal  
      verbal suffix
- ka** Y class irregular present tense verbal  
      suffix
- lada** ‘long’ nominal suffix
- lu** ergative/instrumental nominal suffix  
      for stems greater than two moras
- na** collective suffix, meaning ‘both; the  
      whole lot, all’ used with dual and  
      plural nouns, and following dual and  
      plural bound pronouns
- nda** causative verbalizing suffix
- nda** irrealis mood verbal suffix
- ndha** 3rd person plural verbal direct  
      object bound pronoun
- ndha** Y class future tense suffix
- nganu** similative nominative suffix
- =ngga** (frozen) locative nominal suffix

- nggalu** locative path nominal suffix  
'through, along'
- nggu** ergative/instrumental nominal  
suffix for bimoraic stems
- nggu** locative nominal suffix
- nggu** allative nominal suffix
- nggula** ambulative verbal suffix
- ngu** ablative nominal suffix
- nha** accusative pronominal case suffix
- nha** specific accusative nominal suffix
- nha** 1st person singular direct object  
bound pronoun
- nhaa** NH class non-past verbal suffix
- nhii** NH class past verbal suffix
- nu** plural suffix
- nu** Y class past imperfective verbal suffix
- nygu** 2nd person possessive/oblique  
bound pronoun
- nyida** privative nominal suffix
- nyinda** reflexive verbal suffix
- nyja** 2nd person singular (first position)  
subject bound pronoun
- ra** 3rd person possessive/oblique bound  
pronoun
- rnda** 2nd person singular direct object  
bound pronoun
- tha** 1st person singular posses-  
sive/oblique bound pronoun
- thada** dual suffix
- wa** 1st person singular (first position)  
subject bound pronoun
- waa** nominal comitative suffix
- wana** 1st person dual and plural bound  
pronoun
- wu** nominal dative suffix
- yana** future directional suffix
- yu** non-future directional suffix

### Names of Languages, People, and Places

- Amangu, Ammong* name for southern  
group of Nhanda and their language
- Arngaandi** people from the east, desert  
people
- Babajidangga** placename, on Murchi-  
son, going up towards Yallalong
- Bilhidawaa** placename, Pillawarra Hill
- Bindari** placename, Bindari Well, up  
from Betty Crossing on Murchison  
River
- Budu'ungin** placename, Gregory Rocks
- Buku** placename, Bookah Spring, north of  
Betty Crossing on Murchison
- Buli** placename, Bully Pool
- Cadiguru** Godfrey Ryder's nickname
- Cucala, Thucula** placename, Tutula  
Spring on north bank of Murchison
- Gabagaba** placename, Red Bluff, coastal  
sandstone at Kalbarri
- Ididibarndi** placename, a water hole that  
will swallow you up, north of the  
Murchison going up towards Barrow  
Well
- Idiyada** placename, a rocky thicket on the  
south side of the Murchison, down  
from Janga thicket, good for digging  
ajuga.
- Jambinbi** placename, Champion Bay,  
Geraldton
- Jarndi** placename, old camping ground  
near Wilgimaya
- Jianga** placename, a big thicket
- Jibi Wujayi** placename, place on north  
shore of the Murchison where a sand-  
lark went into a hole, and came out  
miles away
- Jidamarda** placename, Gidamarra Spring  
(now filled in, near Kalbarri center)
- Jijayi** placename, GeeGie outcamp
- Jilinha** Lucy Ryder's maternal grand-  
mother
- Jiwaa** placename, first river crossing  
upriver from Murchison House past

LEXICON

the cemetery, with steep bank on north shore

**Junadawaa** placename, Jannawa Hill, one of two square hills on the north bank of the lower Murchison, where much fighting took place

**Kaaragurdu** placename, Carrollgouda Well, place where crows flew up and found water

**Kadháagurdu** placename, Shark Bay

**Kajitgurdu, Kajitgura** placename, lookout point on the south side of the mouth of the Murchison

**Kukuláaya**; placename, at bend of Murchison where Thaawurda country begins

**Kunabadalinyja** placename, Gooner-burrallager Pool, on Murchison south of Thulunga Point

**Kuranha** placename, Murchison waterfall downstream from Thurlanga Point

**Kurlimaya** placename, Buli Pool, good freshwater and full of water fowl

**Majijinu** placename, Murchison Station

**Maluwaa** placename, place down the river from Murchison House

**Munimaya** placename, Northampton

**Ngagalyadagurdu** placename on the Murchison

**Ngamba** Nhanda name of Grandma Mallard, Pearl Whitby's grandmother

**Nganggalada** Nhanda name of Tommy Nhanggalada

**Nganyjunganyju** Nhanda name of Doug Drage

**Nhaguja** northern Nhanda name for Central Nhanda

**Nhanda** name of (northern) Nhanda language and people

**Nhanganyja** placename, a spring up on a hill on the Murchison

**Nyarlunggu Ngardajadi** placename, on Murchison, a place across from

Nanny Goat, literally 'women chasing each other'

**Parata** placename, Perth

**Parlatubanu** placename, red rocky ridge across from Buku Soak, with a cave at front where Nhanda used to camp

**Pilyada** Horace Drage's nickname

**Pininyudhanhanha** placename, Mt. Curious

**Piwaladi** Stevie Drage's nickname

**Piyagurdu** placename, flats on the Murchison, just east of Murchison House

**Pulhagurdu** placename, Hamelin Pool

**Thaamarli** placename, Tamala Station

**Thaawurda** name of Yallalong people and their language

**Thalinyja** spring near Murchison House where someone drowned

**Thamaci** Gwen Ryder's nickname

**Thamburligurdu** placename, Tumlagooda Hill, bald mountain on north side above mouth of Murchison

**Thidhandhan** placename, hill east of the shearing shed at Murchison House

**Thinggilidi** Nhanda name of Sara Drage

**Thurlinga** placename, Toolonga

**Wagawey** placename, Walkaway

**Waranggadi** Nhanda name of Jack Councillor

**Warlapathanugurdu** Nanny Goat Soak, on Murchison House Station

*Watchandi* name for central group of Nhanda and their language

**Wilgurdu** placename, sand well where Nhanda used to dig ajuga and camp, across the road from Tucula, near Murchison

**Wilunya** name for the Nhanda people, used by other tribes

**Wilyamutharinyja** placename, camping place around the corner from Ajana

**Withikara** placename, Wittecarra

**Wiyarnagurdu** placename,  
Weerinoogudda Soak, off Murchison  
River, past Betty Crossing  
**Wudumalu** Kalbarri, mouth of the  
Murchison River

**Yandula** placename, gully after Bookah,  
near Murchison  
**Yudadi** placename, spring that water-  
snake went through

## English-Nhanda Finder-list

Aborigine **wur'ada**  
accompany s.o., to **ngayijinda-**  
ache **purdidi**  
aching, to be **purdidiba-**  
afternoon **yugayuga**  
afternoon, late **nyili, yugayuga**  
again **yanggarda**  
airplane **nganbanganba**  
alcohol **apunggu, yarnabacu**  
alive **wawrla**  
alone **pathu, yatkajaa**  
alot **artarda, idinggada, pulha**  
angry **urda**  
ankle **parlba, thalba**  
another **watpa**  
ant (generic) **minga**  
ant, meat **minga**  
ant, black stinging **idi**  
anthill **pathanu**  
anxious **pitu-**  
anyhow **aatiku**  
anyway **aatiku**  
arm **cutka**  
armpit **kalya**  
arrive, to **indu-**  
ashamed **ciiga**  
ashes *oongarnoo*  
ask, to **aya-**  
asleep, to fall **ngadiya-**  
aunt *kaggajittee*  
axe **yadiwa**

axe, fighting **junada**  
axe, short **juna**  
baby **abarla, pudi abarla**  
back (of body) **purndu**  
back **tharti, thartimundi**  
back, to be **thartiya-**  
bad **caalu, war'a**  
bag, kangaroo skin **uundadu**  
bag, net *mo-yar-ra*  
bag, small **minyju**  
bald **pitkili, warla pitkili**  
bandicoot **wurndi**  
banksia **thurdu**  
banksia cone **marnda**  
bare **pitkili**  
bark (of tree) **thamba**  
bark (of dog), to **parlgutpa-**  
bat *melanyoo*  
bathing **ngutijada**  
beard **ngarn.ga**  
bed, to make a **thartpi-**  
beer **kiráaku**  
behind **urndugalu**  
belly **karlu, wiku, witku**  
belly-button **citu**  
below **athalu**  
bent **kardagali**  
big **indaacu, inda**  
big toe **inda**  
birthmark **wirlaka**  
bite, to **aja-**

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- black **wur'ada**  
black, jet **marulybidi**  
Black person **wur'ada**  
blackboy tree **thayalu**  
bleed, to **ngubaba-**  
bleat (of sheep), to **miinba-**  
blind **kumudu, milu kumudu**  
blister **wayudu**  
blood **nguba**  
blow out, to **bunyadi-**  
blue-tongued skink **palharda**  
blunt **pundha**  
bobtail **palharda**  
boil **wayudu**  
bone **mambu**  
boomerang **pirлу**  
boss **maaca**  
bowels **mithu**  
boy **wiyabarndi**  
boy, small **kuka**  
brain **warda**  
branches **pirditha**  
bread **badgutu**  
break, to **ardanda-, inada-**  
bream **puudardi**  
breast, woman's **ibi**  
breastmilk **ibi**  
breathless **wudilu-**  
bright **mini**  
bring, to **matka-**  
broad **pididi**  
brother **wurda**  
brother-in-law **ami, ngabari**  
bullock **kurliipu**  
bullrushes **yuda**  
burn, to **artpa-**  
burn, to (of food, etc.) **athu-**  
burn off, to **artpa-**  
burnt **catka**  
bury, to **yarda-**  
bush, low **yutu**  
bushfire **yarnba**  
bustard **parduda**  
butterfly *ngaabeera*  
buttocks **marnda, ur'u**  
call out, to **mida-**  
call s.o.'s name, to **inimatka-**  
camel **kaamalu**  
camp **nguda**  
campfire **wajanu**  
camping **ngudaburtu**  
car **mutikaa**  
carrot, bush **matha**  
carry, to **atkada-, warnda-**  
cast, to **wanyja-**  
Casuarina tree **yajuwada**  
cat **puuci**  
caterpillar **pijibiji**  
caterpillar's nest **pijibiji**  
cave **pathanu, yatha**  
centipede **miniyada**  
chains **wur'a**  
charcoal **kayaga(??)**  
chase, to **ngarda-, ngarlida-**  
cheeks **irdabili**  
cheeky **bataa**  
chest **ngabada**  
chew, to **aja-**  
child **abarla**  
childish, to be **abarlabar-**  
chin **irdabili**  
chop **ardamatka-**  
cicatrice *moora*  
cigarette **ajajadi**  
clay **marla**  
claypan **bidida**  
clever **pulha**  
clever man **pulhabarta**  
climb down, to **inda-**  
climb up, to **ida-**

- close **atilu**  
 close, to **inyi-**  
 clothes **acijadi**  
 clothing **acijadi**  
 cloud, ko **mardala, yuga**  
 cloud, thunder **walajadi**  
 cloud, winter **yuga**  
 club **kurndi**  
 coals **yitka**  
 cockatoo, Major Mitchell **ngagalyada**  
 cockatoo, red-tailed black **thidandi**  
 cockatoo, white **wilidi**  
 cockatoo, white-tailed black **ngulya**  
 cockatoo, pink and grey **piyagu**  
 cold **ugurda-, ugurdadi-** N cold  
 colon **mithu**  
 come, to **indu-, yatka-**  
 con **ca'ubilhi**  
 con s.o., to **thaapirli-**  
 cone, banksia **marnda**  
 cook **kuuki, athucaa**  
 cook, to **athu-**  
 cooked **cangga, moora**  
 coolamon *bat-tje*  
 corella, slender-billed **buli**  
 cormorant **wanamalu**  
 corroboree **anhiya**  
 cough (N) **kanggadu**  
 cough, to **kanggatpa-**  
 country **uthudu**  
 court s.o., to **adanyjata-**  
 courting **yarlinyu-**  
 cousin **kaga, wajida**  
 cow **kurlipu**  
 crack **thangga**  
 crackle, to (of a fire) **ardidi-**  
 crawling **maatijada**  
 crayfish **kurnaaku**  
 crazy **yarna**  
 creek **wilu**  
 crooked **kardagali**  
 crow **wangayi**  
 crusty **catka**  
 cry, to **kuya-, wula-**  
 cunning **ca'u-, ca'ubilhi**  
 curlew **wirlu**  
 cut (N) **madi**  
 cut, to **arda-, ardamatka-**  
 damper **damba, citu**  
 dance **anhiya**  
 dance, ko **nyambi**  
 dance, to **anhi-**  
 dark **maru**  
 daughter **yurdu**  
 dead **innga**  
 deaf **munharda, wurtku munharda**  
 deep **muga**  
 defecate, to **wunara-**  
 desert people **arnngaandi**  
 design **walga-**  
 devil **innga**  
 devil, little **kanbaagu**  
 diarrhea **nguyadu, thindhalu**  
 different, **watpa**  
 dig, to **i'a-**  
 dingo **ngubanu**  
 directly **urdaa**  
 dirt **pindha**  
 dirty **pindha, thinggi**  
 dizzy **kurinyguriny**  
 do sth, to **yadunda-**  
 doctor **pulhabarta**  
 dog, tame **uthu**  
 dog, wild **ngubanu**  
 down **athalu, ididinggada, inda-**  
 down, to go **inda-**  
 downhill **ididinggada**  
 draw, to **walganyja-**  
 dream **magurda**  
 dress **paduda, puraaku**

LEXICON

dress, to **aci-**, **acijadi-**  
 dressed, to get **aci-**, **acijadi-**, **acijata-**  
 drink, to **ngala-**  
 drown, to **muthadi-**  
 drowsy **pudhabudha-**  
 drunk **apawaa**  
 dry **cangga**, **ili**  
 dry (from cooking) **catka**  
 duck (generic) **panaji**  
 dull **pundha**  
 dusk **nyili**  
 dust **thugudhugu**  
 eager **pitu-**  
 eaglehawk **wabagu**  
 ear **wurtka**  
 early **aliipala**  
 earth **uthudu**  
 east **arnngalu**  
 eat, to **ngala-**  
 echidna **citkada**  
 egg **warla**  
 elbow **nyuju**  
 embarrass s.o., to **ca'unda-**  
 embarrassed **ciiga**  
 embers **yitka**  
 emu **karlaya**  
 emu chicks **wirdidi**  
 everlasting flower **pilaru**  
 evil **war'a**  
 eye **milu**  
 face **ngunda**  
 faeces **wuna**  
 faeces, big pile of **yarnda**  
 fall down, to **urnnga-**, **uku-**, **ukuma-**  
 far **wicaa**  
 fat **ngabu**  
 father **ama**  
 father-in-law *ambarnoo*  
 featherfoot **jangara**  
 feel, to **pidi-**

feet **yina**  
 fig, bush **mugunya**  
 fight, to **unggijadi-**  
 fine **ku'arlu**  
 finger **mara**  
 fingernail **idi**  
 fire **wajanu**, **yarnba**  
 firewood **wajanu**  
 fish (generic) **wicka**  
 fishing, to go **ngamarda-**  
 flat **mirla**, **mirlamirla**, **pididi**  
 flirt **jida**, **jidamarda**, **katu**, **thada-**,  
**warna**  
 flirt, to **adanyjata-**  
 flood **idinyja**  
 floodwaters **idinyja**  
 flour **karlaaba**  
 flow, to **wardadi-**  
 flower *warrungoo*  
 fluff, white **warlgabur'u**  
 fly (insect) **wadayi**  
 foam **wigilidi**  
 fog **puruburu**  
 fool of, to make a **ca'unda-**  
 foot **yina**  
 footprint **yina**  
 forehead **milingga**  
 foreigner **wujanu**  
 forget, to **wurtka munhardaba-**  
 fornicate, to **wabayadi-**  
 friend **kurda**, **yajalu**  
 frighten, to **parlada-**  
 frightened, to be **parlada-**, **parladata-**  
 frog **wandidu**  
 front, in **muthangga**  
 froth **wigilidi**  
 fun **mika-**  
 funny **kuwirtpa**  
 galah **piyagu**  
 gecko **jabi**

gently **kayanu**  
 get, to **matka-**  
 get up, to **aga-**  
 ghost **innga, jangara**  
 girl **nyarlu, wudinyu**  
 give, to **inga-**  
 gizzard, fish **muri**  
 glad **calya**  
 go, to **yatka-**  
 go into, to **wuja-**  
 go off, to **warnba-**  
 go through, to **wuja-**  
 goanna, large black **bangara**  
 goanna, long-tailed yellow **parnnga**  
 goat **nani**  
 gone **wudiyadi**  
 gone, be **yatka-**  
 good **ku'arlu**  
 goodbye **thurla-**  
 gossip **mayamaya**  
 grab sth from s.o., to **adamatka-**  
 grandchild **andadi**  
 grandparent **andadi**  
 grass **uuduu**  
 grass tree **thayalu**  
 grease **ngabu, thalha**  
 grease, to **atka-**  
 grey (of hair) **winyja**  
 grog **apanggu, kiráaku, yarnabacu**  
 ground **parnba, uthudu**  
 growl at, to **yami-**  
 grown-up **yagu**  
 grub **bardi**  
 grub, small **kurdubiya**  
 gullet **ngarnmanu, warndu**  
 gully **gali**  
 gum (from tree) **imba**  
 gum tree, river red **kurlayhi**  
 guts **parnda**  
 hair **ngunyu**

hair, underarm **kalya ngunya**  
 hair, pubic **buli, nyanyi**  
 halfway **ardathada**  
 halve, to **arda-**  
 hand **mara**  
 happy **calya**  
 hard **mambu**  
 hat **manggawarla**  
 haunches **yrurnda**  
 have, to **atkada-**  
 haze **puru**  
 head **warla**  
 head (of animal) **kagurli**  
 hear, to **wanyjida-**  
 heart **wurdudu**  
 heavy **indaacu**  
 heel **thalba**  
 here **itu**  
 hide, to **wumba-**  
 high **ida-**  
 hill **parlu**  
 hips **yrurnda**  
 hole **wagurla, wuja**  
 hollow **miga, wagurla**  
 home **minda, nguda**  
 hop, to **wadadi-**  
 horns (of animal) **bindibindi**  
 horse **jiji** (babytalk), **nguutu**  
 horseback, on **nguutubarta**  
 hot **thuri**  
 house **minda, maya, nguda**  
 human being **arnmanu**  
 hump **pambada**  
 hunchback **pambada, purndutu**  
 hungry **kucidu**  
 hurt **icici-, purdidi**  
 hurt, to **iciciba-**  
 hurt feelings **wacidu**  
 husband **ardu**  
 hut **maya**



LEXICON

**I ngayi**

initiate *moorawa*  
 initiated, to be **arnmanuba-**  
 insane **yarna**  
 intestine, large **parnda, wirdinyu**  
 jaw **irdabili**  
 jerk sth away, to **adamatka-**  
 joking **ca'u-**  
 jump, to **wadadi-**  
 kangaroo (generic) **yawarda**  
 kangaroo, big red **bigurda**  
 kangaroo, blue **marlu**  
 kangaroo, grey **yawarda**  
 kick, to **wirdati-**  
 kill, to **inngatinda-**  
 kingfish **mardida**  
 kingfisher, green **iludadi**  
 kiss, to **inida-**  
 knee **tharda**  
 knife **nayapu**  
 know, to **wanyjida-**  
 kurrara tree **matkaw**  
 land **uthudu**  
 language **wangganhaa**  
 lap (N) **murna**  
 larrikin **jida, jidamarda, katu, thada-,  
 warna**  
 later **warlu**  
 laugh, to **wunangga-**  
 lean **wajinya**  
 leave, to **ija-, wunbi-**  
 leech *mai maiungoo*  
 left (hand) **watpa**  
 leg **wirda, wirdaa**  
 lend, to **arliba-**  
 let be, to **wunbi-**  
 lice **wulhu**  
 lie **atpirda**  
 lie down, to **ngadi-**  
 light **mini**

light (in weight) **pudi**  
 light, to get **miniga-**  
 light a fire, to **artpa-, awu-, a'u-,  
 mi'inda-**  
 lights (of animal) **kaalyu**  
 limp, to **urndadicada-**  
 lips **irdabili**  
 liquor **apanggu, yarnabacu**  
 listen, to **wanyjida-**  
 little **pudi**  
 live **wawrla**  
 liver **marudi**  
 lizard, legless **idiwirdi**  
 lizard, small **jabi**  
 log **yani**  
 lonely **yatkajaa**  
 long **wadula**  
 long ago **ciidii**  
 long time **ciidii**  
 long way **wicaa**  
 look at, to **nha-**  
 look in the mirror, to **malunha-**  
 louse **wulhu**  
 lover **ardu**  
 lungs **kaalyu**  
 mad **yarna**  
 maggot **mindinyu**  
 magic **bulya**  
 magpie **wutpaw**  
 man **arnmanu**  
 man, young **wiyabarndi**  
 man, to become a man (through the law)  
**arnmanuba-**  
 man's privates **waba, wabadi, wabagu**  
 mangy **citkacitka**  
 many **artarda, idinggada, pulha**  
 mark **walga-**  
 married **mardiji**  
 marrow **warda**  
 mate **kurda, yajalu**

- meanwhile **wutkatpacadi**  
 meat **thudu**  
 milk **milgi**  
 mischievous **kulyigulyi**  
 mist **puru**  
 mixed up **paacpalyu**  
 money **wur'a**  
 moon **idinba**  
 mosquito **thiyinyu**  
 mother **agu**  
 mother-in-law *ngarrea*  
 mountain **parlu**  
 mouse **arndanyu**  
 moustache **ngarn.ga**  
 mouth **idaji**  
 mouth (inside) **ngarnmanu**  
 mucus **ngundinu**  
 mud **marla, thalha**  
 mudlark **piwi**  
 mulga nut **cagurdu**  
 mullet **wicka**  
 nail **idi**  
 name **ini**  
 name, to **ini-**  
 nape (of neck) **nhannga**  
 naughty **war'a**  
 nauseous **kujidu**  
 navel **citu**  
 near **atilu**  
 neck **warndu**  
 neck, back of **nhannga**  
 needle **niilu**  
 nephew *kaggajee*  
 nest **mangga**  
 net, fishing *boon-go*  
 nice **ku'arlu**  
 niece *nanyee*  
 night **maru**  
 nipple **ibi**  
 nits **wacka**
- no **malya**  
 none **ya'u**  
 north **idalu**  
 nose **mutha**  
 nose-hole *moothaboongo,*  
*ngoolyambeerdee*  
 not **malya**  
 note (of money) **nata**  
 nothing **ya'u**  
 ocean **wilu**  
 ochre, red **wilgi**  
 oil **ngabu**  
 ointment **atkajadi**  
 old **winyja, yagu**  
 old person **puguda**  
 one **kutiya**  
 onion, bush **kurlanu**  
 open, to **yaa'inda-**  
 opening **wuja**  
 other **watpa**  
 outside **thani**  
 overcooked **catka**  
 owl **inngabalayi**  
 pain **icici-**  
 painful, to be **iciciba-**  
 paint, to **walganyja-**  
 pants **thardaji**  
 paper **pibarlu**  
 parrot, Port Lincoln ring-neck **thugunyu**  
 parrot, twenty-eight **thugunyu**  
 peach, bush **wagudu**  
 pearl shell **wilya**  
 pelican **adanyja**  
 penis **nhurndi, waba, wabadi,**  
**wabagu**  
 person **arnmanu**  
 person, old **puguda**  
 photograph **magurda**  
 pick on s.o., to **inba-**  
 pick up, to **warnda-**

LEXICON

- pigeon, ko **thurnba**  
 pile **idinggada**  
 pinch, to **idithunda-**  
 plant, ko **munggulba, mugunya,**  
**mandulba, pilyandi**  
 play **mika-**  
 poison **paacinu**  
 poke, to **manggurda-**  
 policeman **atpicaa, wur'awaa**  
 poor **munda**  
 poor fellow **war'abardu**  
 poor thing **wundilu**  
 pop (a blister), to **mirla-**  
 porcupine **citkada**  
 possum **wiyarda**  
 potato **purdidi**  
 potato, ko bush **agurda, ajuga,**  
**kurlanu, ngacku, ngarnuwada,**  
**unurdu**  
 pouch **puuci**  
 pouch, kangaroo skin **uundadu**  
 pour, to **ngarni-**  
 pour down, to **yangga-**  
 pour out, to **wardadi-**  
 pregnant **abarlawaa, nguutiyu**  
 prevarication **atpirda**  
 pubic hair (woman's) **buli, nyanyi**  
 puppy **kabarla**  
 purse **minyju**  
 pus **wayudu**  
 push, to **cugi-**  
 put, to **ija-**  
 put clothes on, to **aci-, acijadi-, acijata-**  
 put out (a fire), to **bunyadi-**  
 quandong **wagudu**  
 quiet **cindi**  
 raggedy **mundamunda**  
 rain **pundu**  
 rainbird **mar'u**  
 rainbow *min-a-ra, wootha*  
 rat, bush **arndanyu**  
 rat, kangaroo **wiruu**  
 raw **nguyu**  
 red **marniwidi**  
 red ochre **wilgi**  
 reeds **yuda**  
 reflection **malu**  
 regardless **aatiku**  
 rest, to **inyja-, ngadi-**  
 return, to **thartiyatka-**  
 ribs **indaji**  
 ripe **cangga**  
 river **wilu**  
 river red gum tree **kurlayhi**  
 road *wajjoo*  
 roar along, to **wurtkati-**  
 rock **wur'a**  
 rotten **puga**  
 rub, to **atka-**  
 rug **mirla, pirlinggati, thartpirlu**  
 run away, to **parladangga**  
 runners **wirdinyu**  
 running away **wudiyadi**  
 saliva **wigi**  
 salt *nar-rin-yu*  
 saltflats **bidida**  
 salve **atkajadi**  
 sand **pirlurda, uthudu**  
 sandbar **pirlurda**  
 sandlark **jibi**  
 sap **imba**  
 scavenger **walaka-**  
 scissors **cijici**  
 scorpion *wathoo*  
 scrub **yutu**  
 sea **wilu**  
 seagull **wilyawilya**  
 see, to **nha-**  
 seed **witu**  
 send, to **ijanatpa-**

- separate **pititijadi**  
 sew, to **yanda-**  
 sex, to have **ngadici-, wabayadi-**  
 shade **malu**  
 shadow **malu**  
 shag **wanamalu**  
 shame **ciiga**  
 sheep **ciipu**  
 shell **wilya**  
 sheoak **yajuwada**  
 shield **wurnda**  
 shiny **pitkili**  
 shoe **yinabuka**  
 shoot, to **wur'a-**  
 short **purtku**  
 short-cut **ardathada**  
 shoulder **pididi**  
 shout, to **mida-**  
 shove, to **anyjati-**  
 show one's hand, to **maraga-**  
 shrike, black-faced cuckoo **mar'u**  
 shut, to **inyi-**  
 sick **matharda**  
 sinew **thiyinu**  
 sing, to **wada-**  
 sing out, to **mida-**  
 sister, older **nhadumba**  
 sister, younger **malyu**  
 sister-in-law **candi**  
 sit, to **inyja-, nyina-**  
 skin **wurtpi**  
 skinny **buraada, wajinya**  
 sky **kaju**  
 slap, to **uma-, warlida-**  
 sleep, to **ngadi-**  
 sleep with, to **ngadici-**  
 sleepy **pudhabudha-**  
 slide **thardalangga-**  
 slip **thardalangga-**  
 slyly **kada-**  
 smack, to **warlida-**  
 small **pudi**  
 smell, to **arndi-**  
 smoke **yugurdu**  
 smother, to **yarda-**  
 snake (generic) **thayidi**  
 snake, harmless **idiwirdi**  
 snake, water **bimarda**  
 snapper **wabirda**  
 snatch something from s.o., to **adamatka-**  
 sneak, to **wumba-**  
 sneak away, to **kadayatka-**  
 sneak up on, to **ujica-**  
 sneaky **kada-**  
 sneeze, to **acalu-, acalacalu**  
 snore, to **wurtka-**  
 snot **ngundinu**  
 soap **coopu**  
 soft *kakkoo*, **thayicaa(??)**, *ty-ca*  
 someone **ngana**  
 something **nhaa**  
 somewhere **wandha**  
 son **wurdu**  
 son-in-law **ajadi**  
 song **thurdadu**  
 soon **thunu, urdaa**  
 sorcerer **pulhabarta**  
 sorcery **bulya**  
 sore **madi**  
 sorry **piyarda-, wacidu**  
 south **i'u**  
 spank, to **warlida-**  
 speak, to **wangga-**  
 spear (generic) **widaa**  
 spear, to **widaa-**  
 spear, fighting **bilhida**  
 spear-thrower **uraga**  
 speech **wangganhaa**  
 spider **athu, ganbar**

LEXICON

- spirit **inna**  
 spit **wigi**  
 splinter **ngarnnga**  
 spoil s.o., to **warlanda-**  
 spot, white **wirlaka**  
 spotted **wirlakawaa**  
 spouse **ardu**  
 spread, to **atka-**  
 stand, to **igada-**  
 star **indiya**  
 stay, to **inyja-, nyina-**  
 steal, to **wumba-**  
 stick **ngarnnga**  
 stick, digging **wana**  
 stick, fighting **kurndi, warlanu**  
 stick, nose-hole *oona moorka*  
 sticky **thalha**  
 stinking **puga**  
 stoke up (a fire), to **awu-, a'u-**  
 stomach **wiku, witku**  
 stomach, internal **karlu**  
 stomach (whole) **curdu**  
 stone **wur'a**  
 stop, to **nyina-**  
 storm **pindadi**  
 straight *woorthoo*  
 stranger **wujanu**  
 straw **uudu**  
 stripe **walga-**  
 striped **walgawaa**  
 stubborn **thumbirlidi**  
 stump **yani**  
 suck, to **bunyja-**  
 sugar **kaadu**  
 sun **thuri, war'u**  
 supper **capa, ngalungga**  
 surf **wubirlu**  
 swag **panggi, panggibarta**  
 swan **wanaw**  
 sweat **wirtpa**  
 sweat, to **wirtpa-**  
 sweaty **paacpalyu**  
 sweetheart **ardu**  
 swimming **ngutijada**  
 tail **nhurndi**  
 tailor **wilhilya**  
 take, to **atkada-, matka-, warnda-**  
 take sth away (V) **ada-, uudada-**  
 talk, to **wangga-**  
 talk about s.o., to **wiginda-**  
 tall **wadula**  
 taste, to **bunyja-**  
 tawny frogmouth **innabalayi**  
 tear, to **pada-**  
 teeth **idaji**  
 tell, to **wuta-**  
 tell sth to s.o., to **wurtka-**  
 tell stories, to **nganggarda-**  
 testicles **kucawarla, kuca**  
 that, that one **ala**  
 that, that one (far away) **anha**  
 thicket **yutu**  
 thigh **yurnda**  
 thin **buraada, wajinya**  
 thirsty **wajilu**  
 this, this one **inya**  
 three **marnngurdu**  
 throat **ngarnmanu, warndu**  
 throw, to **wanyja-**  
 throw away, to **wanyjayitpa-**  
 thunder **pindadi**  
 thunderstorm **walajadi**  
 tie, to **atpi-**  
 tired **panda-, pudhabudha-**  
 tired, to be **pandaba-,  
 pudhabudhaba-**  
 tobacco **ajajadi**  
 tobacco, plug **mutha, thurtpa**  
 tomorrow **induga**  
 tongue **thalanyu**  
 tooth **idaji**  
 torment s.o., to **inba-**

- torn **padaka**  
touch, to **pidi-**  
track **yina**  
track, to **uundama-**  
tree (generic) *yanga*  
tree, ko **kundugati, kayili, mayali, wanyamatkaw, warduwardu, witu, yajuwada, yandi, yarlinyubacu**  
trick s.o., to **thaapirli-**  
tripe **curdu**  
trouble-maker **mayamaya**  
trousers **thardaji**  
true **kanangga**  
tunnel **wuja**  
turkey, bush **parduda**  
turtle *balyokurra, kadarra, yangajarra*  
twisted **kardagali**  
two **wuthada**  
uncle **pi'i**  
underarm **kalya**  
understand, to **wanyjida-**  
up, to be **ida-**  
up, to go **ida-**  
urine **wumbu**  
urinate, to **wumbura-**  
vagina **cici**  
vomit **kujidu**  
wail, to **kuya-**  
wait, to **wirda-**  
wait for, to **ngutpa-**  
wake s.o. up, to **kan.garti-, nganggati-**  
wake up, to **wurkatpa-**  
walk, to **yatka-**  
wallaby, ko **wiruu**  
want, to **pitu-**  
wash, to **ngutijada, waca-**  
water **apa**  
water serpent **ididibarndi**  
water snake **bimarda**  
water snake, mythical **ididibarndi**  
wattle tree, ko **adumba**  
wattle tree, silver **thadilyi**  
wave **wubirlu**  
weep, to **wula-**  
well **ku'arlu**  
west **wacu**  
wet **wirna**  
wet, to **nguuti-**  
what **nhaa**  
when **wandhagacadi**  
where **wandha**  
whip **wiipu**  
whirlywind **wardumba**  
whiskers **ngarn.ga**  
whistle, to **wunyba-**  
white **wilidi**  
white person **ngundamini**  
whitefella **wutpalaa, wucpalaa**  
who **ngana**  
why **nhaabarndi, nhaawu**  
widow *mooreeburndee*  
widower *mooreeburndee*  
wife **ardu**  
wild **urda**  
willy-wagtail **cidijidi**  
willy-willy **wardumba**  
wind **uudinu**  
wind, whirly- **wardumba**  
winded **wudilu-**  
wing **nyimi**  
wink, to **milutpa-**  
wipe, to **thadatpa-**  
witchety grub **bardi**  
withered up **cangga**  
woman **nyarlu**  
woman, white **mijiji**  
woman, young **wudinyu**  
woman's privates **buli, cici, wardaga**  
wonder, to **wathadi-**  
woomera **uraga**  
words **wangganhaa**

LEXICON

work **waka**  
work, to **wakanda-**  
worthless **caalu**  
wound **madi**  
write, to **walganyja-**  
wrong **war'a**  
yabbie **kurnaaku**

yam, bush **agurda, ajuga**  
yell at, to **yami-**  
yellowtail **thidaa**  
yes **'e'e**  
yesterday **yugangga**  
York gum **yandi**  
you **nyini**

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