Ilana Mushin

A Grammar of (Western) Garrwa

Pacific Linguistics

Volume 637

Ilana Mushin

A Grammar of (Western) Garrwa

DE GRUYTER
MOUTON

ISBN 978-1-61451-306-3
e-ISBN 978-1-61451-241-7
ISSN 1448-8310

Library of Congress Cataloging-in-Publication Data
A CIP catalog record for this book has been applied for at the Library of Congress.

Bibliographic information published by the Deutsche Nationalbibliothek
The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet at http://dnb.dnb.de.

Cover image: 'Sand Dreaming' by Stewart Hoosan, reprinted with the artist's permission
Typesetting: PTP-Berlin Protago-TEX-Production GmbH, Berlin
Printing and binding: Hubert & Co. GmbH & Co. KG, Göttingen
♾ Printed on acid-free paper
Printed in Germany

www.degruyter.com

Dedicated to:

Thelma Dixon
†Doreen George
Hazel Godfrey
†Don Rory
†Eileen Rory
†Dinny McDinny
†Kathleen Shadforth

Nayinda Garrwa jangkurr narringi

Preface and acknowledgements

My introduction to Garrwa began in 1999 when I embarked on the Australian Institute for Aboriginal and Torres Strait Islander Studies (AIATSIS) funded "Garrwa Language Project" in conjunction with members of the Borroloola Language Centre. In the first phase of the project, I conducted fieldwork in Borroloola in November 1999 and March-June 2000 to produce a 325-word picture dictionary and a non-technical grammatical sketch to facilitate the Garrwa language program. These materials were published *in house* to be available for developing teaching materials. A number of mostly narrative texts were also audio recorded at this time and compiled as an in-house text collection.

I was able to continue working on Garrwa in 2001 through a University of Sydney postdoctroral fellowship entitled "Language loss and the linguistics of storytelling in Aboriginal Australia". The focus of this project was on language use in narrative discourse. I conducted field trips in May 2001 and August-October 2003 that concentrated on the recording and transcription of narrative and conversational data with elicitation of particular linguistic features a secondary goal. Publications that emerged from this narrative-focused project include Mushin (2005a), Mushin (2005b), Mushin (2006), Simpson & Mushin (2008), and Mushin & Simpson (2008). More conversational data was collected and transcribed in field trips in November 2006 and June 2008, which was supported by AIATSIS "Garrwa Language Project, Phase 2" and a University of Queensland Staff grant.

In writing this grammar, I have tried to balance the interests of both Garrwa people and linguists. Garrwa people may want to use this book as a resource for how to say things in Garrwa or to provide tools for language maintenance and revitalisazation in the future. They may also like to have a document that demonstrates the uniqueness of their language. Linguists may be interested in the grammatical features of Garrwa for a range of theoretical issues.

My own interests have been in developing a description of the language as it is used by its speakers. Consequently, the focus of this grammar is on the kinds of utterances that speakers employ in actual discourse, and it takes advantage of the considerable corpus of Garrwa discourse recorded between 1999 and 2010, which is supplemented with field notes and recordings of other linguists and anthropologists who have worked on Garrwa. I focus less on structures that, though they may be elicited under certain conditions, are seldom used. Where possible, I try to link my description of the structural features of Garrwa to the ways in which such structures are used in discourse, especially ordinary conversation.

While many Garrwa speakers have contributed to this project, I have been fortunate to have had sustained language teaching, transcription, and translation assistance from †Doreen George, †Kathleen Shadforth, and Thelma Dixon.

These three women, all born and raised in Robinson River, have contributed the bulk of the discourse and grammatical data used for this description. Other significant contributors include Eileen and †Don Rory, †Dinny McDinny, Nancy McDinny, Myra McDinny, Hazel Godfrey, and Miriam Charlie.

A considerable number of other people have also helped with this project. I particularly want to thank Rebecca Green who first alerted me to the Garrwa people's interest in having a linguist work on their language. I am very grateful for the ongoing support of the original Borroloola Language Centre and particularly their director Maryanne Riley. Karan Hayward has adminstered the AIATSIS grant on behalf of Papalu-Apparr Kari Aboriginal Corporation in Tennant Creek. In Borroloola, I have also had the support of Peter Callinan, co-ordinator of the Waralungku Arts Centre, and Mike Longton. My trips to Robinson River were helped by the support of Council co-ordinator Bill South and Helen Webber, former principal of the Robinson River School. I also am grateful for the intellectual support, advice, and constructive criticism from Brett Baker, Rod Gardner, Mark Harvey, Mary Laughren, Rachel Nordlinger, Patrick McConvell, Felicity Meakins, Rob Pensalfini, Jane Simpson, and Robert Van Valin.

Thanks go to Adam LeBrocq, Ruby Rayner, and Paul Sidwell for editorial support. The Map was produced by the Cartographic section of Education and Multimedia Services, Australian National University.

My family, both near and extended, have been a constant source of love and support and are a major reason this book has been completed.

Contents

Preface and acknowledgements —— vii
List of glossing conventions —— xv

1 The Garrwa language and its speakers —— 1
1.1 Garrwa country and contact history —— **1**
1.2 Language status —— **4**
1.3 Linguistic affiliation —— **5**
1.4 Social organization —— **7**
1.5 Previous linguistic work on Garrwa —— **10**
1.6 A note on the referencing of examples —— **11**

2 Phonology —— 13
2.1 Consonants —— **14**
2.1.1 Segmental phonemes —— **14**
2.1.2 Palato-velar consonant —— **15**
2.1.3 Phonemic status of retroflex —— **16**
2.1.4 Lenition —— **18**
2.1.5 Consonant clusters —— **19**
2.2 Vowels —— **22**
2.3 Phonotactics —— **23**
2.3.1 Syllable structure —— **23**
2.3.2 Word-final /n/ —— **24**
2.4 Stress —— **26**
2.5 Morphophonemics —— **28**
2.5.1 Reduplication —— **29**
2.5.2 Loss of segments in connected speech —— **30**
2.6 English loanwords —— **31**

3 Grammatical overview —— 33
3.1 Morphosyntactic typology —— **33**
3.2 Word classes —— **37**
3.2.1 Nouns —— **37**
3.2.2 Verbs —— **38**
3.2.3 Closed classes: Pronouns, demonstratives, and directionals —— **39**
3.2.3.1 Pronouns —— **40**
3.2.3.2 Demonstratives —— **41**
3.2.3.3 Directionals —— **42**
3.2.4 Particles and clitics —— **42**

4 Nouns — 44
4.1 Common nouns — **44**
4.2 Kinship nouns — **45**
4.2.1 Single kin terms — **46**
4.2.2 Dyadic kin terms — **49**
4.2.3 Kinship morphology — **50**
4.3 Numerals and other quantity nouns — **53**
4.4 Nominal case-marking — **56**
4.4.1 Ergative -wanyi — **58**
4.4.2 Dative -nyi — **62**
4.4.3 Locative –(i)na — **68**
4.4.4 Allative –yurri — **72**
4.4.5 Ablative –nanyi — **73**
4.4.6 Translocative -yangka — **74**
4.5 Other mominal morphology — **74**
4.5.1 Yudi 'with' — **75**
4.5.2 -Mirra 'intensifier' — **76**
4.5.3 -Yurru 'deceased' — **77**
4.6 Number marking for human referents — **78**
4.6.1 -Wuya 'dual' — **79**
4.6.2 -Muku 'plural' — **79**
4.7 Possession — **81**

5 Pronouns — 84
5.1 Pronominal categories — **84**
5.2 Pronominal case marking — **86**
5.3 Variation in pronominal forms — **89**
5.3.1 Trisyllabic and disyllabic forms of pronouns — **89**
5.3.2 Reduction of first person singular pronouns — **93**
5.4 Compound pronouns — **93**
5.5 Reflexive/reciprocal pronouns — **99**
5.6 Co-occurrence of pronouns and nouns — **103**
5.7 Are Garrwa pronouns free, bound, or both? — **108**

6 Demonstratives, directionals, and interrogatives — 114
6.1 Demonstratives — **114**
6.1.1 Absolutive — **115**
6.1.2 Demonstrative case marking — **118**
6.1.2.1 Ergative (-(ngi)ni) — **118**
6.1.2.2 Dative (-n-kanyi) — **119**

6.1.2.3 Locative (-nyina) — **120**
6.1.2.4 Allative (-n-kurri) — **121**
6.1.2.5 Ablative (-nbu-nanyi / -mu-nanyi) — **122**
6.1.3 Adverbial demonstratives — **123**
6.1.3.1 Nayi-ba/ Nana-ba 'deictic demonstrative' — **123**
6.1.3.2 Nana-wa/nayi-wa 'directional demonstrative' — **125**
6.1.3.3 Nana-ma 'identifiable' — **126**
6.1.3.4 Nani 'like this/that' — **128**
6.2 Directionals — **130**
6.2.1 Compass directionals — **130**
6.2.2 Kingkarri 'up' and wayka 'down' — **136**
6.2.3 Location adverbials — **139**
6.3 Interrogative words — **143**
6.3.1 Wanya 'what/who' — **143**
6.3.2 Winjawa 'where' — **145**
6.3.3 Yangka 'which way' — **146**
6.4 Temporal orientation — **148**
6.4.1 Times of day — **148**
6.4.2 Relative time — **150**
6.4.2.1 Nanijba 'right now' — **150**
6.4.2.2 Wabula and wankala 'olden times' — **151**
6.4.2.3 Wujina 'a while ago' — **152**
6.4.2.4 Wulani 'day before' — **152**
6.4.2.5 Barrin 'earlier today' — **153**
6.4.2.6 Munganawa 'next day' — **154**
6.4.2.7 Baku 'later' — **154**
6.4.2.8 Winyurru 'soon' — **155**

7 Verbs — 156
7.1 'Basic' verbs — **157**
7.1.1 Conjugation class 1 (m-class) — **157**
7.1.2 Conjugation class 2 (j-class) — **160**
7.1.2.1 -Daba — **163**
7.1.3 Conjugation 3 (n-class) — **163**
7.1.4 Origins and ongoing changes to the system — **166**
7.2 Verbs derived from other word-class roots — **167**
7.2.1 Class 1 derived verbs — **168**
7.2.1.1 Class 1 verbs derived from descriptive nominals — **168**
7.2.1.2 Class 1 verbs derived from locationals — **169**
7.2.1.3 Class 1 verb derived from interrogative — **170**

7.2.1.4 Class 1 verbs derived from substantive nouns — **170**
7.2.1.5 Class 1 verbs derived from kin terms — **171**
7.2.1.6 Class 1 verbs derived from class 3 verbs — **172**
7.2.2 Class 2 derived verbs — **172**
7.2.2.1 Class 2 verbs derived from descriptive nominals — **173**
7.2.2.2 Class 2 verbs derived from locationals and temporals — **173**
7.2.2.3 Class 2 verbs derived from substantive nominals — **174**
7.2.2.4 Class 2B derivations — **175**
7.2.3 Productivity of verb derivation — **176**
7.3 Augmented verb stems — **177**
7.3.1 -Rri- 'cause state' — **178**
7.3.2 -Kunu- 'cause motion' — **179**
7.3.3 -Ngu- 'inchoative' — **179**
7.3.4 Reduplicated verb roots — **180**
7.4 Case frames and argument structure — **184**
7.5 Verb inflectional morphology — **190**
7.5.1 -Ji 'purpose' — **191**
7.5.2 -Jiwa 'subsequent' — **192**
7.5.3 -Kanyi 'irrealis' — **194**
7.5.4 Switch reference: -Jina 'same subject' and -kurri 'different subject' — **196**
7.6 Other verb morphology — **199**
7.6.1 -Wa "still" — **199**
7.6.2 -Warr 'characteristic' — **201**
7.7 Aspectual adverbs — **202**
7.7.1 Bukamba 'all' — **202**
7.7.2 Wananamba 'distributed' — **203**
7.7.3 Yurrngumba 'for good' — **203**

8 Clitics and particles — 204
8.1 Clitics — **204**
8.1.1 Tense/aspect clitics (TA) — **204**
8.1.1.1 =Yi 'past' — **204**
8.1.1.2 =(Y)ili 'habitual' — **208**
8.1.1.3 =(Ng)ka / =a 'present' — **214**
8.1.1.4 =Ja= 'future' — **221**
8.1.1.5 Durative aspect — **225**
8.1.2 Modal clitics — **226**
8.1.2.1 =Kiyi 'imperative' — **226**
8.1.2.2 =Kiya 'obligation' — **229**

8.1.2.3 =Nyi ‘hortative’ — **231**
8.1.2.4 =Wali ‘evidential’ — **232**
8.1.2.5 Kuna ‘question’ — **233**
8.2 Modifying particles — **234**
8.2.1 Ngawamba ‘only, just’ — **234**
8.2.2 Muningka ‘anyway, for no/some reason’ — **235**
8.2.3 Jabarri ‘again’ — **236**
8.2.4 Ngamungku ‘like’ — **237**
8.2.5 Junu ‘perhaps’ — **238**
8.3 Particles for clause combining — **239**
8.3.1 Baki ‘and’ — **239**
8.3.2 Mada ‘also’ — **242**
8.3.3 Ngala ‘contrast’ — **244**
8.3.4 Jala ‘relative’ — **249**
8.3.5 Minji ‘conditional’ — **252**

9 Syntax — 255
9.1 Nominal groups — **255**
9.1.1 Case marking in nominal groups — **255**
9.1.2 Ordering preferences in nominal groups — **256**
9.1.3 Discontinuous nominal groups — **259**
9.1.4 Restriction and elaboration of reference — **260**
9.2 Verbless sentences — **262**
9.3 Simple sentences — **263**
9.3.1 The clausal core — **264**
9.3.2 Status of second-position pronouns in the core — **267**
9.3.3 Ordering of arguments — **268**
9.3.4 Ordering of adjuncts — **270**
9.3.5 Increments — **271**
9.4 Non-canonical word orders — **272**
9.4.1 Grammatically determined non-canonical orders — **272**
9.4.2 Pragmatically determined non-canonical orders — **274**
9.5 Other sentence types — **280**
9.5.1 Negation — **280**
9.5.1.1 Miku=yaji ‘negative existential’ — **283**
9.5.2 Questions — **285**
9.5.2.1 Non-initial question words — **286**
9.6 Complex sentences — **288**
9.6.1 Dependent (participial) clauses — **288**
9.6.1.1 Subject shared between main and dependent clause — **290**

9.6.1.2 Different subject between main and dependent clause — **291**
9.6.2 Other means of clause combining — **294**
9.6.3 Clause chains — **296**

10 Discourse phenomena — 300
10.1 Information packaging and the marking of prominence — **300**
10.1.1 Prosody and word order — **301**
10.1.2 The 'prior information' particle barri — **303**
10.2 Discourse particles marking stance — **309**
10.2.1 Ngarri 'tag' — **309**
10.2.2 Barriwa 'finished' — **312**
10.2.3 Yu/miku 'affirmation and negation' — **316**
10.2.4 Yuku 'all right' — **318**
10.2.5 Mili 'intensifier' — **320**
10.3 Summary — **322**

11 References — 323
11.1 Published work on Garrwa — **326**
11.2 Unpublished work on Garrwa — **327**

12 Garrwa texts — 328
12.1 Text 1: Bushtucker (Munjimunjinyi Wadan) — **328**
12.2 Text 2: Early encounter with white people — **336**
12.3 Text 3: Father story — **345**
12.4 Text 4: Naniku Jangkurr (Nannygoat story: Station life personal history) — **364**
12.5 Text 5: Two Brothers (traditional story – Wankala Jangkurr) — **384**
12.6 Text 6: Yakal baki Nguwalili (traditional story: Moon and Curlew) — **392**
12.7 Text 7 Mali Jangkurr (Flood Story – the 2001 flood) — **398**
12.8 Text 8: Robinson River school office conversation (extracts) — **409**
12.8.1 Extract 1 — **410**
12.8.2 Extract 2 — **413**
12.8.3 Extract 3 — **418**

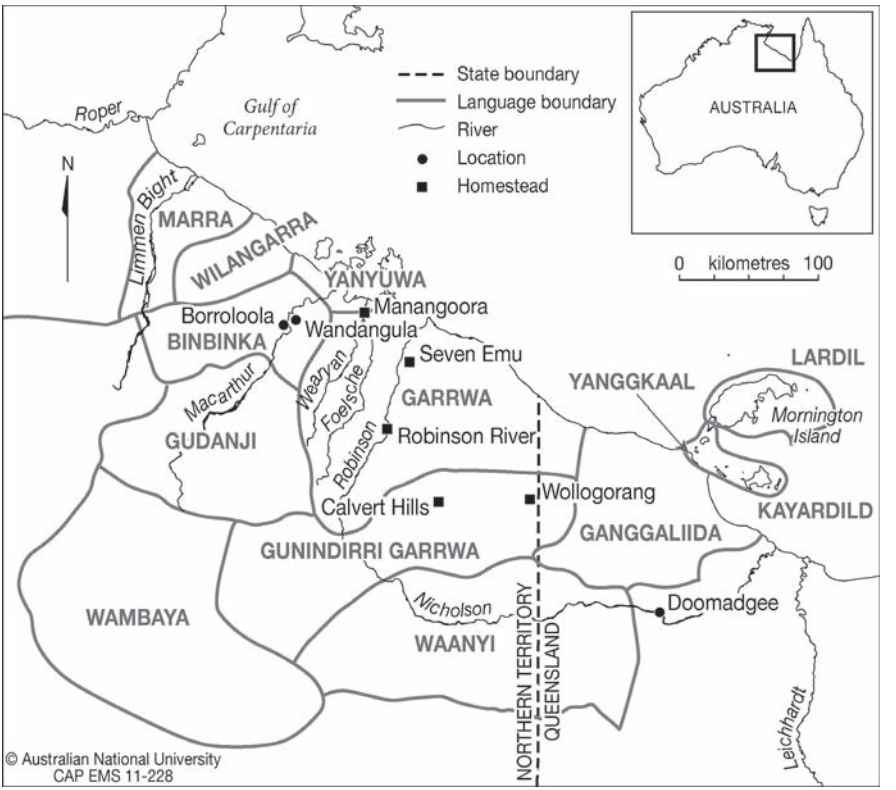
13 Word List — 427
13.1 Garrwa–English — **427**
13.2 English–Garrwa — **447**

Affix index — 469
Subject index — 471

List of glossing conventions

This list is based on the *Leipzig Glossing Rules* developed at the Max Planck Institute for Evolutionary Anthropology (revised as of Feb 2008).

1	first person		
2	second person		
3	third person		
ABL	ablative	OBLIG	obligation suffix
ACC	accusative	PAST	past
ALL	allative	PI	prior information (particle)
ANAPH	anaphoric (propositus)	PL	plural
CHAR	characteristic	PRES	present
COND	conditional	PURP	purposive
CONTR	contrastive (particle)	QUEST	question particle
DAT	dative	REDUP	reduplicated
DEC	deceased	REFL	reflexive/reciprocal
DEIC	deictic	REL	relative
DIR	directional	SG	singular
DM	discourse marker	SS	same subject
DS	different subject	SUBS	subsequent
DU	dual	TRANSLOC	translocative
DUR	durative		
ERG	ergative		
EXCL	exclusive		
EVID	sensory evidence (clitic)		
FUT	future		
HAB	habitual (past)		
HORT	hortative		
IDENT	identifiable		
IMP	imperative		
INCL	Inclusive		
INTENS	intensifier		
IRR	irrealis		
LOC	locative		
NEG	negative		
NOM	nominative		



Map of Garrwa and surrounding languages.

1 The Garrwa language and its speakers

1.1 Garrwa country and contact history

Garrwa language territory extends roughly from the eastern bank of the Macarthur River at Borroloola in the Northern Territory southeast to just over the Queensland Border towards the ex-mission settlement of Doomadgee and the Nicholson River. Traditionally, Garrwa country did not include the coastline along the Gulf of Carpentaria, although Garrwa people today do affiliate with the area at the mouths of the major rivers that extend south of the Gulf of Carpentaria: the Wearyan, Folsche, and Robinson rivers. Most maps that show Aboriginal language territory have Garrwa extending south as far as the ends of the rivers that flow from the Gulf of Carpentaria. The surviving surrounding language groups include Yanyuwa (a coastal group to the north and west), Waanyi (to the south), Gudanji (also to the south), and Ganggalida (to the east). Two other neighbouring groups, Binbinka and Wilangarra, had disappeared shortly after European settlement and there are no records of their languages. The approximate boundaries of these language areas are represented on the map, which is based on the maps in Harvey (2009).

Pickering (1992: 11), in his study of traditional Western Garrwa hunting practices, describes their environment as a "transitional zone between the northern subhumid to humid tropics and the southern central semi-arid to arid inland... centre[ing] on the major north-south running river and stream systems of the Gulf fall, with seasonal excursions into the hills of the Bukalara/Barkly Plateau, and onto the plains of the Gulf fall". These major *north-south* rivers include (from west to east), the Wearyan, Folsche, Robinson, and Calvert Rivers, as well as Settlement Creek (at Wollogorang). Additionally, there are many freshwater billabongs (or *lagoons*) that become expansive lakes in the wet season. Thus, Garrwa culture developed in an environment that was neither coastal nor arid between the Gulf of Carpentaria coastline and the vast Barkly Tableland to the south. Towards the coast, the rivers become esturine and open out into mangrove swamps, while inland the country becomes stony with sandstone gorges and escarpments. There are many caves in this area that were used as shelter in the wet season.

Garrwa people call themselves *freshwater people* who exploit the bounties of these river systems and billabongs: freshwater fish, crayfish, turtles, waterfowl, and waterlilies were staple parts of a diet that also consisted of land mammals (kangaroo, echidna, and possums), tubers, and fruit. Pickering (1989: 12) describes Garrwa land use as seasonal but traditionally people moved around in no more than a radius of about 15 kilometres to take advantage of the food avail-

able at different times of the year. The climate is governed by a tropical wet-dry cycle. The long wet season would result in a dispersal of population because there were many sources of water and food. As the land dried up over the dry season, people would cluster around the permanent water supplies of the major rivers. Trigger (1987b) shows how Garrwa material culture (including manufacture of spear throwers and stone tools) distinguishes them from their coastal *Saltwater* neighbours to the north and east.

The first Europeans to enter Garrwa country would most likely have been the exploratory parties headed by Ludwig Leichhardt in 1844 and 1845 that travelled from the east coast of Australia to approximately where Darwin is today, from the Great Dividing Range across the Gulf of Carpentariacoastline. While there is no specific reference to Garrwa people in the journals of this expedition, there is clear recognition of the presence of a people living in Garrwa country. Roberts (2005: 9), in his early contact history about the Gulf of Carpentaria region (including Garrwa country), relates what Leichhart recorded:

> In the vicinity of what is now the Robinson and Wearyan rivers he described emu traps around waterholes, fish traps and fishing weirs across rivers, well-used footpaths, major living areas with substantial dwellings, wells of clear water and a sophisticated method of detoxifying the otherwise extremely poisonous cycad nuts.

However, there is no clear story among today's Garrwa people about the response of those Garrwa who may have observed Leichhardt's expedition to these strange new people.

The expedition itself may not have impacted directly on the lives of Garrwa people, but, by opening up a land route across the Gulf, it created the opportunity for further European activity in the region. In particular, the development of the stockroute from Queensland to the Kimberly along the path trodden by Leichhardt had devastating consequences for all Aboriginal people in that region. Cattle was first driven from Queensland along the Gulf route around 1870, and cattle continued to be brought through this area until nearly the end of the 19th century, shortly after it peaked between 1886–1893 (Roberts 2005; Baker 1999). By the end of this period, Garrwa country had been subsumed into cattle stations, notably Calvert Downs (on Robinson River), Wollogorang (Settlement Creek), and Macarthur River Station.

A detailed history of this settlement period is provided by Roberts (2005) but will not be attempted here. To summarize, this 20-ish year period from 1870 to around 1893 marked the most dramatic and devastating shift in the lives of Garrwa people because their environment was polluted by large herds of cattle, they experienced a diminishing food supply, they were introduced to new dis-

eases, they were dispossessed from their country, and they were the victims of ongoing violence that included large-scale murder and abduction.

During this period, some language groups, such as the Binbinka- and Wilingarra-speaking people, appear to have been wiped out, possibly because the area with these languages were more amenable to pastoral development. The inhospitablity of the Garrwa stone country, where people could take refuge in caves, is one likely reason for the higher Garrwa survival rate and the relative resilience of their language during the 20th century. Nonetheless, at the time of this writing, elderly Garrwa people still report on this violent period from the direct accounts of their grandparents and even parents (articulated in Text 2 in the Appendix).

By the beginning of the 20th century, most Garrwa people lived on cattle stations where they worked for rations as station hands, drovers, and domestics. Others moved east into Queensland, with a significant number ending up at the Doomadgee Mission. For the Garrwa people living on cattle stations, it was possible to maintain many cultural practices, including ceremonies, hunting (as a supplement to rations), and language. This was in contrast to the Garrwa people who lived in Doomadgee, where the ethos of mission life proscribed traditional ceremonies and the use of their native language (Trigger 1992). Almost all of the Garrwa contributors to this book were born and raised on cattle stations (mostly Robinson River, Calvert Hills, and Wollogorang Stations), and spent their youth working for the White cattle station owners while receiving rations as part of the Australian Government's assimilation policy through welfare (Baker 1999: 95).[1]

At the time of this writing, people who identify as Garrwa live mostly in and around the Northern Territory town of Borroloola (population approximately 2000), a town which is itself nominally in Yanyuwa country, but which is close to traditional Garrwa country. The vast majority of Borroloola residents are Aboriginal. They mostly affiliate as Yanyuwa, Garrwa, Gudanji, or Mara people, though they frequently have mixed ancestry from these and other groups. There is also a smaller white resident population who mostly work in Government and community organizations, retail, and the small tourism industry.[2] Wandangula, an outstation some 26kms east of Borroloola, houses a small population who are of mostly mixed Garrwa and Yanyuwa heritage but who have strong Garrwa affiliations. The main population centre within Garrwa traditional territory is the com-

1 This policy continued until 1973.

2 The small tourism industry was historically based around fishing, but more recently Borroloola has become a part of the *Savannah Way*, a tourist route running from Cairns on the East Coast to Broome on the West Coast. This has resulted in larger number of tourists passing through the area over the last 20 years or so.

munity of Robinson River (approximately 300 people). There are also a number of Garrwa-identified families in the Queensland town of Doomadgee, a town considered to be Ganggalida territory (Trigger 1992), and some people of Garrwa ancestry live in other towns, predominantly in Queensland and the Northern Territory.

1.2 Language status

The 2006 Australian Bureau of Statistics Census reports 35 people in the Borroloola area who speak Garrwa at home (cf. 69 Yanyuwa speakers), and 24 in the wider Gulf region (a region which includes the country east of Borroloola to the Queensland border). While these numbers provide no reliable indication of how much or how proficiently Garrwa is spoken at home, it does provide clear evidence of the precarious state of the language.[3] Almost all of the people who contributed language material for this study were over 50, and most were over 65 at the time of this writing. Children have not been learning the language as a first language since at least the 1980s, so there are now at least two generations who have low or no proficiency in Garrwa.

While Garrwa has been a threatened language since European conquest, perhaps the most significant recent decline came as a result of the advent of television to Borroloola in the 1980s. Prior to this, there were many contexts in which children were exposed to Garrwa, and evenings were spent engaged in communal cultural activities around campfires. The introduction of television saw the immediate and rapid decline in these activities, and thus contexts in which Garrwa was spoken. At the time of this writing, while Garrwa is still spoken spontaneously in conversations between older people and some younger people who are active in cultural maintenance, it is not spoken between most people under the age of 50.

The Li-Kurlurluwa Language Centre (formerly Borroloola Language Centre) was set up in the late 1990s to support language and cultural maintenance for Yanyuwa, Garrwa, Gudanji, and Mara in Borroloola and surrounding communities (including Robinson River), but funding for the centre was discontinued in 2011. During the years of its operation, the Li-Kurlurluwa Language Centre facili-

3 It is notoriously difficult to accurately determine the number of speakers of any language let alone a severely endangered language such as Garrwa. People who report to be *speakers* may know some of the language, or may be historically affiliated with the language, but need not be fluent speakers. Many Garrwa people report that they can *hear* the language but not speak it. Various surveys of Northern Territory languages conducted in the last 20 years by the Institute for Aboriginal Development (IAD) and Katherine Language Centre have estimated about 150–200 Garrwa speakers. This figure almost certainly includes people who are *semi-speakers*.

tated some Garrwa language teaching in Borroloola and Robinson River schools and preschools. It also promoted language use and maintenance among proficient adults, including Yanyuwa people who also speak Garrwa.[4] These programs have been sporadic, however, and cannot replace the loss of Garrwa as a language of everyday conversation across generations in the communities. Garrwa is still used by older adults among themselves, although typically mixed with the local Kriol variety. Conversations between older and younger adults and children are almost exclusively conducted in Kriol. While efforts at language maintenance are ongoing, which includes the teaching of songs, dances, and vocabulary, they depend largely on the initiative of the older generations. It seems unlikely that there will be an increase in Garrwa usage in informal contexts unless there is a dramatic change in the social and linguistic environment.

1.3 Linguistic affiliation

Garrwa, along with neighbouring Waanyi, belongs to the *Garrwan* language family. Garrwa itself consists of at least two varieties: *Heavy Garrwa*, sometimes called *Gunindirri/Kunindirri* or *Eastern Garrwa*; and *Light Garrwa* or *Western Garrwa*. Harvey (2009: 195) considers the Garrwan language family to comprise three distinctive varieties – Garrwa *proper*, Gunindirri, and Waanyi. All of the Garrwa speakers surveyed for this study agree that Gunindirri is a variety of Garrwa and that Waanyi is a different language. Garrwa speakers also recognize the closer relationship between Garrwa and Waanyi, which are clearly genetically related, and the other surrounding languages (e.g., Yanyuwa, Wambaya, Gudanji, Ganggalida), which are not related.

Breen (2003: 430) provides a comparative list of 179 lexical items in both Eastern and Western Garrwa and Waanyi, and comparisons between Garrwa, Waanyi, and surrounding languages. His findings are summarized in terms of cognate percentages in Table 1.

The percentage of cognate vocabulary support speakers' perceptions that Eastern (Gunindirri) Garrwa and Western Garrwa are the same language but that Waanyi is a different, yet related, language. In addition to the relatively high percentage of cognate vocabulary, Garrwa and Waanyi also have similar grammars: they share most pronouns and word order patterns, case marking, and verb mor-

4 Many have told me that many Yanyuwa speakers also know Garrwa and can speak it because it is an *easier* language than Yanyuwa. Most of the Garrwa speakers I have worked with agree with this and few of them know much Yanyuwa despite living in close proximity.

Language	Percent
Eastern Garrwa/Western Garrwa	83%
Eastern Garrwa/Waanyi	66%
Garrwa/Yanyuwa	28%
Garrwa/Gudanji	25%
Garrwa/Wambaya	17%
Western Garrwa/Jingulu	15%
Garrwa/Ganggalida	4%

Table 1: Percentage of cognate vocabulary (Breen 2003: 430).

phology; moreover, they both lack noun classes and other agreement morphology.

The much smaller percentages of shared vocabulary between Garrwa and other languages of the region are also evidence that Garrwa and Waanyi should be classified together as one language family separate from neighbouring languages.

In recent years, there has been considerable debate concerning whether the genetic status the Garrwan language family as a whole is Pama-Nyungan (PN) or Non-Pama-Nyungan (NPN). This is the main distinction between Australian language families. Of key concern is the mixed-heritage of the free pronoun system, which appears to have both Pama-Nyungan and Non-Pama-Nyungan origins (e.g., 3sg *nyulu* and 3du *bula* are clearly PN in origin, whereas 2sg *ninji* and 2pl *narri* are not). On this basis, Blake (1990: 61–63) concludes that Garrwan is Non-Pama-Nyungan. He also cites the lack of cognate case markers with PN languages as further evidence of this classification. Evans (2005) also classifies Garrwan as Non-Pama-Nyungan, but, in his branching model, he classifies it as an immediate sister of PN, with Garrwan the last split before Pama-Nyungan. Harvey (2009), however, argues that Garrwa is typologically distinct because it displays many innovations not found in other Australian languages. He argues that the evidence from pronoun reconstruction and sound changes points to a genetic relationship with Pama-Nyungan.

Whether PN or NPN, the Garrwan languages are typologically distinctive among Australian languages. Examples of grammatical features that are distinctive of Garrwan languages (although not necessarily exclusively) include: verb-initial basic word order, a lack of nominal classes or classifiers, compound pronouns (Garrwa only, not Waanyi), tense/aspect positional clitics (Garrwa only, not Waanyi), and rudimentary phonemic status of retroflexion. Breen (2003), Mushin (2006), and Harvey (2009) note some shared features with the Yirram branch of the Mirndi family (especially Wambaya and Gudanji), which includes

second-position clitic clusters and elements of verb morphology. However, these are more likely to be the result of extensive contact rather than shared genetic heritage.

1.4 Social organization

Garrwan society is organized around an *Arandic* eight-subsection system of the kind that is widespread across the Central and Top End of Australia. On the father's side, the system is symmetrical: the subsection of one's father is also the subsection of one's son. On the mother's side, the system is asymmetrical and so the subsection of one's mother and the subsection of a maternal child are not the same. In these systems, men alternate back and forth across a pair of subsections, while women cycle through four different subsections. First-choice marriage partners are calculated according to subsection. The Garrwa system is represented in Figure 1 (from Trigger 1989: 8).

Figure 1. Garrwa subsection terms ("=" – marriage; male terms are in upper case, female terms are in lower case; arrows indicate the subsection to which a woman's child belongs).

Garrwa society is also divided into four semi-moieties on the basis of male descent lines (i.e., father's father, father's mother's brother, mother's father, and mother's mother's brother). Semi-moiety affiliation is what determines land custodianship because a man's entire male descent line will be the same semi-moiety, while his subsection will only be shared with even numbered generations (e.g., brother

A1 – D2	WUYALIYA	BURRALANGI/Nurrulama KAMARRANYI/Nimarrama
A2 – D1	WUDALIYA	KANGALA/Nangalama YAKIMARRI/Yakamarrina
B2 – C2	MAMBALIYA	BULANYI/Nulanyma BALYARINYI/Nulyarima
B1 – C1	RRUMBURRIYA	NGARIJBALANGI/Niwanama BANGARRINYI/Nungarima

Figure 2. Semi-moieties and subsections.

and father's father, but not father). The mapping of semi-moieties to subsections is given in Figure 2 (from Trigger 1989: 9).

In practice, Garrwa people talk about country in terms of semi-moiety (e.g., "That country is *Mambaliya* country", etc). For more on the relationships of subsection, semi-moiety, and land tenure see Trigger (1989).

Like many Aboriginal societies, certain relationships in Garrwa society require avoiding communication. In the case of relationships between a woman and her son- or daughter-in-law, the preference is to avoid contact altogether, with an intermediary used for necessary communication. Likewise, brothers and sisters avoid contact, as do sisters-in-law. However, where talk is necessary, a particular avoidance vocabulary is used. This involves replacing a regular Garrwa word with a word used only between people who are in an avoidance relationship. There does not seem to be any morphological relationship between the regular Garrwa term and the avoidance term. The few sentence examples of avoidance speech

in the corpus suggest that the vocabulary replacement applies to nouns, verbs, directionals, and perhaps some adverbials and conventional expressions such as greetings and leave-takings. Grammatical terms, including pronouns, do not seem to be replaced. Collection of these terms has been sporadic and the list in Table 2 below includes most of the terms that have been identified as part of the avoidance language. Therefore, it is difficult to determine the size of this vocabulary and whether it contains the kinds of semantic generalizations found in other Aboriginal avoidance vocabularies (e.g., Haviland 1979).

Regular Garrwa term	**Avoidance term**	**Meaning**
manikanyi	*wudumunguji*	'farewell'
munganawa	*wuwumunguji*	'next day'
najba	*mulungajba*	'see'
larrki	*mungku*	'ground oven'
dalyamba	*munyamba*	'break, tear'
muji	*murrungku*	'knee'
waydbala	*linjarr*	'white man'
kunda	*mijiburr*	'stick/log'
jilajba	*ngunyirrba*	'walk'
kamunyi	*kamurrinyi*	'until later (farewell)'
ngalanyi	*dinguji*	'wild fig (sp)'
	juwayuwa	'yam (sp)'
wundirri	*kaninyanyi*	'Australian Bustard'
?	*nanawuna*	'that mob'
ngarrkadaba	*jarrunba*	'spear'
karri	*kiwirri*	'east'

Table 2*:* Avoidance language.

Older Garrwa speakers who use the language regularly still spontaneously use avoidance terms. It is unclear, however, whether younger people use this language practice.

In general, there has been a decline in traditional marriage practices and an increase in *wrong-way* marriages (i.e., those between men and women whose subsections are not compatible according to the traditional rules of marriage) since cattle station days. This has profound consequences for all aspects of social organization because skin (subsection) and semi-moiety assignment becomes less clear. While Garrwa people still distinguish between people who have married *straight* and those who have married wrong way, there is an increasing acceptance of such marriages and the offspring of these unions. There is variation within the community in how the subsection system is understood and used

(e.g., some people find it difficult to remember their skin or to remember others' skin). Unlike some other North-Central Australian communities, skin terms are not used as terms of address and reference. Instead, kin terms are the preferred terms of address.

1.5 Previous linguistic work on Garrwa

Although Garrwa (also spelled Garawa, Karrwa, Karawa) people have been in contact with Europeans since the late 19th century, there appears to have been little linguistic interest in the Garrwa language until the mid 20th century. Garrwa people worked in and around the developing pastoral industry, but there appears to have been little interest in documenting the language until the 1960s. A linguistically distinct Garrwa people were identified by the beginning of the 20th century as part of anthropological surveys of the area (e.g., Basedow 1907; Mathews 1899; Tindale 1940).

The first substantial elicitation of Garrwa language comes from Ken Hale's survey in 1960–1961. Hale's data, recorded during the Brunette Downs races, largely consists of words and simple sentences designed to produce grammatical paradigms such as pronouns and case markers. Elicitations and transcriptions of Garrwa language were also made by Velma Leeding in Borroloola and Darwin in 1964, Charles Osborne in Doomadgee in 1966, Elywn Flint in 1968 in Doomadgee as part of the Queensland Speech Survey, and Nils Holmer in Westmoreland (QLD) in 1979. Most of these involved elicitation of words, pronoun paradigms, and simple sentence types. In many cases, it is unclear whether the Garrwa people consulted were speakers of Western or Eastern Garrwa. Data collected in Doomadgee is more likely to be Eastern Garrwa than data collected in and around Borroloola, but Osborne's informant was born in Robinson River and was clearly a Western Garrwa speaker.

The most substantial descriptive work on Western Garrwa in the 1960s was carried out by Edward and Christine Furby, both Summer Institute of Linguistics (SIL) linguists, during the period 1968–1970 in Borroloola. The Furbys compiled an extensive corpus, including a 3000+ wordlist, texts, and a series of publications on aspects of Garrwa grammar (including Furby 1972; Furby 1976; Furby and Furby 1977). Following the Furbys' work, a number of SIL texts were produced in Garrwa including children's readers and a translation of parts of the the New Testament. Further translation of Christian texts and songs into Garrwa is being continued by Alan and Lucy Rogers who resided in Robinson River in the late 1980s, and who are now based in Darwin. Gavin Breen conducted fieldwork in Doomadgee in the late 1980s and his comparative work on Garrwa and Waanyi

(originally produced in manuscript form in 1989) was published in 2003 in Evans' collection of Non-Pama-Nyungan languages (a continuing reminder of the contended status of Garrwan languages). Breen's work is the only published work that focuses on the Eastern Garrwa variety.

In 1992, Hugh Belfrage produced an honours thesis on aspects of Garrwa pronominal and verbal morphology, and a revision of his analysis of verb morphology was also published in 2003 in Evans' volume. While working for the Northern Territory Department of Education, Belfrage also compiled a draft dictionary in 1997 using the Furbys' corpus.[5]

Finally, the reader is directed to the Australian Institute for Aboriginal and Torres Strait Islander Studies (AIATSIS) catalogue for an up-to-date collection of Garrwa language materials (published and unpublished) – www.mura.aiatsis.gov.au. The lists in §11.1 and §11.2 are the published and unpublished Garrwa resources used in the current work.

1.6 A note on the referencing of examples

All of the above resources are deposited in AIATSIS. I have used all of these resources to supplement my own primary work with Garrwa people in the development of this descriptive grammar. Most of this work is available on open access. Christine Furby gave me permission to access the original Furby field notes.

Comparison of my own collected examples with previously recorded samples of the language show in general that, while there have been some grammatical changes and more lexical changes, the Western Garrwa recorded in the 1960s is very much the Western Garrwa I recorded throughout the first decade of the 21st century.

Since my principal goal is to describe the language as it was spoken during my period of work with Garrwa speakers, I endeavoured to find examples from my

5 While unpublished, this draft dictionary has been widely circulated. I began checking the words in this dictionary in 2006 and 2008 in Robinson River, and found many words considered by my consultants to be either archaic, what speakers call Heavy Garrwa, or a variety associated with the community of Wandangula, about 30kms from Borroloola. Wandangula is a community of mixed Garrwa and Yanyuwa heritage. Some words attributed to the old lady who had worked with Christine Furby (who my consultants remember) were considered idiosyncratic to that particular speaker. In many cases, Light Garrwa versions were given by my consultants as contemporary Garrwa words. The revision of the dictionary is an important project and is the focus of continuing work on the language. Some of this work is being conducted by Alan and Lucy Rogers.

own recordings to illustrate the features of the language described here. Therefore, most of the examples used in this work come from my own field recordings. Where possible, I take examples from conversation, narrative, or procedural texts rather than from elicitation sessions. I reference examples from my own text corpus by the date of recording, the text number from that particular day (usually a number between 1 and 4), and the speaker's initials. So the reference "1.9.01.2.DG" would be from the second text recorded on September 1, 2001 that was spoken by Doreen George. Data that comes from elicitation sessions are referenced as "Mushin (year) field notes".

In some cases, better examples were obtained from the earlier field notes and recordings, and I have referenced these as follows: data from Ken Hale's field notes are referenced as "Hale field notes", Osborne's as "Osborne field notes", Belfrage's as "Belfrage 1991 field notes", and David Trigger's list of kin terms is referenced as "Trigger's field notes". Data from Edward and Christine Furby's work was taken from publications and so is referenced according to the publication and the example number in that publication (e.g., Furby and Furby 1977: 3.1.2).

All examples are given using a generally accepted Garrwa orthography regardless of their original format. This orthography was already in regular use by the time I began work on the language and most likely developed to facilitate the Bible translation. The orthography was not used by the Furbys in their work, but is used in SIL publications from the 1980s onwards. Glossing follows the MPI Leipzig conventions, and I re-gloss examples from other work that was published prior to the adoption of these conventions.

2 Phonology

This chapter briefly overviews the main features of Garrwa segmental phonology, and revises and builds on Furby (1972), which is the only previously published work on Garrwa phonology. There are four clear places of articulation for consonants: bilabial, apico-alveolar, lamino-palatal, and dorso-velar. The status of retroflexed consonants is less clear because contrastive pairs have been virtually impossible, but not entirely impossible, to elicit. The status of retroflexed consonants is discussed in §2.1.3. There are stops and nasals for all places of articulation. Laterals are restricted to coronal places of articulation. There are two rhotic consonants: an approximant /r/ and trilled /rr/. Like many Australian languages, there are three vowel phonemes: /i/, /u/, and /a/. Vowel length does not appear to be contrastive, although some words are consistently pronounced with longer vowels.

The Furbys' published work from the late 1960s and early 1970s uses a transcription system based on IPA symbols, but Garrwa orthography has been well established since at least the 1970s. As noted in §1.5, the orthography was originally developed by SIL linguists in collaboration with Garrwa speakers as part of the translation of scripture into Garrwa. Biblical translations from 1976 show virtually the same writing conventions that are used in this grammar and other contemporary written Garrwa.[6] The orthography uses "b", "d", "j", and "k" for the stop consonants. The choice of "k" for the velar stop is to maximally distinguish from "ng" for the velar nasal. The name of the language has been spelled with either a "G" or a "K" (Garrwa/Karrwa), which reflects variations in writing the name since the 19th century. There still appears to be variation among speakers on the preferred spelling of the name. In 2000, the people I consulted appeared to prefer Karrwa, which is more consistent with the orthography, but, by 2003, the consensus had shifted to Garrwa. I have retained Garrwa in all publications about this language since 2001. The orthography uses "r" for the alveolar approximant and "rr" for the alveolar trill. Table 3 below represents other orthographic conventions.

6 The main difference in the orthography used in this publication is the lack of retroflex consonants, which are used in the biblical translations – see §2.1.3.

2.1 Consonants

2.1.1 Segmental phonemes

Table 3 illustrates the Garrwa consonant phonemes using standard Garrwa orthography. Table 3 also illustrates the main allophones.

	Bilabial	Apical-Alveolar	Lamino-palatal	Dorso-velar
Stop	b [p,b]	d [t,d]	j [c,ɟ,dʒ,ʒ]	k [k,g]
Nasal	m [m]	n [n]	ny [ɲ]	ng [ŋ]
Lateral		l [l]	(ly [ʎ])	
Approximant	(w) [w]	r [ɹ]	y [j]	
Trill		rr [r, ɾ]		

Table 3: Consonant phonemes.

Voicing is not contrastive. Stops are always voiced when they occur word medially. Bilabial and alveolar stops are also mostly voiced in initial position, while velar stops are often unvoiced in initial position.[7]

(2.1)	*/badibadi/*	[ˈbadɪˌbadɪ]	'old woman'
	/bikabajin/	[ˈbigaˌbadʒɪn]	'black plum (*Buchanania obovata*)'
	/daba/	[ˈdɐbɐ]	'fight'
	/jabaka/	[ˈcaːbʌˌgʌ]	'nest'
	/jangkurr/	[ˈdʒaŋgʊr]	'language'
	/kulkul/	[ˈkʊlgʊl]	'turtle'
	/karrwa/	[ˈgarwa]	'name of language'

The lamino-palatal stop /ɟ/ (written orthographically as "j") is frequently realized as an affricate [dʒ], and even a fricative [ʒ] in word-medial positions.

(2.2)	*/jalajarra/*	[ˈɟalaʲˌdʒæra]	'place name'
	/janjawala/	[ˈdʒænɟaˌwalʌ]	'wet season'
	/waliji/	[ˈwalɪˌdʒi]	'meat'
	/majikan/	[ˈmadʒɨˌgan]	'freshwater crayfish'
	/mikuyaji/	[ˈmegʊˌjadʒɪn]	'nothing'
		[ˈmigoˌjaʒɪ]	

7 I provide phonetic transcriptions for each of the examples in this chapter. These are transcriptions of one or more clearly recorded tokens of the word. There is some variation in the pronunciation of some words, especially with respect to vowels.

The two rhotics, trill and approximant, are often hard to distinguish in fast speech. There is some complementarity in distribution: the approximant occurs word initially and medially; the trill occurs word finally and medially and can participate in consonant clusters (see §2.1.5 below). The trill, which is very pronounced in careful speech, is often reduced to a tap in normal speech. The sub-minimal pairs below demonstrate the phonemic status of the two rhotics.

(2.3)	*/karri/*		‘east’
	/karu=yi/	[kaɹɪ]	‘tell=PAST’
	/barriwa/		‘finished’
	/barimba/		‘miss’

2.1.2 Palato-velar consonant

Furby (1972) analyses /jk/ and /nyk/ combinations as palato-velar stops (i.e., as a single consonant). This is a low-frequency combination (although the high-frequency word *wayk*a ‘down’ is one of the words exhibiting this combination). Breen (2003) analyses these combinations as sequences of glide+consonant in parallel with the more common /jb/ combination, a common part of verb-stem morphology. However, the /jb/ combination only occurs in verbs or words derived from verbs. As discussed in §7.1.2, many Garrwa verbs have a -j- stem-forming affix. This -j- is phonemically a palatal stop consonant, and, although it is typically realized as a glide (or a long [i:] when the preceding vowel is /i/), it is sometimes realized as an unreleased stop. This is usually followed by the suffix *-ba* to create a well-formed verbal word. Verb stems may also end in the palatal nasal /ny/, which results in a /nyb/ combination.

(2.4)	*/walajba/*	[ˈwalaʲj̃ˌba]	‘emerge, arrive’
		[ˈwalajˌba]	
	/bulbajbangka/	[ˈbʊlbaj̃ˌbaŋgʌ]	‘high tide’
	/yanyba/	[jaʲɲba]	‘talk’

While words cannot end in stop consonants in general, it is possible for this stem-forming affix to occur finally, albeit rarely. *Burrijburrij* ‘curly hair’ (see example 2.5) appears to be backformed from the verb *burrijburrijba* ‘tangle up’. The final palatal stop is clearly pronounced.

(2.5)	*/burrijburrij/*	[ˈbʊriˌbʊrɪtʃʰ]	‘curly hair’

Therefore, most /jk/ combinations are combinations of the stem-forming affix -j- and follow Garrwa verbal morphology.

(2.6)	*/wijba/*	[wi:ba]	'return'
		[wiʲba]	
	/wijkunumba/	[ˈwi:gʊˌnʊmba]	'bring back'
	/badajba/	[ˈbadaʲˌba]	'come'
	/badajkunumba/	[ˈbadaʲgʊˌnʊmba]	'bring and show'

There is, however, a small number of monomorphemic words that have a palatal+velar stop combination. Here, the palatal is always realized as a glide, so, unlike the verb stem examples above, there is no phonetic evidence that it is underlyingly a stop. For these cases, I have retained Breen's (2003) analysis of a glide+stop combination. There are also a small number of words with /nyk/ combination.

(2.7)	*/wayka/*	[ˈwaʲgʌ]	'down'
	/danyka/	[ˈdaʲŋga]	'be burned'

2.1.3 Phonemic status of retroflex

Furby (1972) has a phonemic retroflex series, while both Belfrage (1992) and Breen (2003), who acknowledge the existence of retroflex consonants phonetically, conclude that retroflex consonants have no phonemic status. Although I have been able to find a couple of condenders for minimal pairs, it appears that Garrwa retroflex consonants are not, or are no longer, contrastive. In those few cases, the auditory cue appears to be more on the length and quality of the preceding vowel, rather than on a clear retroflexed quality on the consonant.[8]

(2.8)	*/nga(r)lu/*	[ˈŋaɭʊ]	'chest'
	/ngalu/	[ˈŋalʊ]	'cloud'
	/ma(r)da/	[ˈmaɖʌ] ([ˈmadʌ])	'also, together'
	/madamada/	[ˈmʌdʌˌmʌdʌ]	'women's possum skirt'

8 An instrumental analysis may be able to show more here. It should be noted, however, that Rogers (2006) conducts an instrumental the status of Waanyi coronal consonants and finds it difficult to determine whether the retroflex was contrastive in that language and what the phonetic correlates of the retroflex might be.

In general, the use of retroflex consonants is highly variable between individual speakers. Furthermore, the same word uttered by the same speaker may vary based on whether the consonant appears as a retroflex or not.[9]

Audible retroflexed consonants only seem to occur in word-medial positions, possibly being neutralized in initial position. Almost all of the clear retroflexed examples are in the environment of low vowels /aCa/. However, many of the words transcribed with retroflexed consonants in the Furbys' data are not clearly retroflexed in my data. For example:

(2.9)	*/badibadi/*	[ˈbadɪˈbadɪ]	'old woman' (cf. /bardibardi/)
	/badajba/	[ˈbaːdeʲɟ̟ˌba]	'come' (cf. /bardajba/)
	/madumbarran/	[ˈmaːdʊmˈbaran]	'saltwater crocodile' (cf. /mardumbarra/)

In many other cases, there is variation in the elicited tokens. Some speakers appear to have more retroflexed examples than others, although there does not seem to be a clear pattern. For example, the following are phonetic transcriptions of words that are variably pronounced in the corpus.

(2.10)	*/banda/*[10]	[ˈbanda]	'camp'
		[ˈbaːɳɖa]	
		[ˈbaɳɖa]	
	/kudidi/	[ˈkʊɖɪˌdɪ]	'NEG' (Yanyuwa borrowing)
		[ˈkʊdɪˌdɪn]	
	/milidimba/	[ˈmɨlɪˈdɪmbɐ]	'teach'
		[ˈmɪlɪˈdɪmba]	
	/wadaran/	[ˈwaɖaɹɐn]	'humpy'

There are a few frequent words that appear to be consistently pronounced with retroflexed consonants (or with retroflex-coloured vowels) by different speakers, which include those in example (2.11).

9 The 1997 draft dictionary, a NISUS word list of more than 3000 items compiled by Belfrage from the Furbys' data, has many words that are listed more than once because there is variation in the spelling with or without retroflexion.

10 This word is cited by Breen (2003: 427) as an example of a Garrwa word that has phonetic retroflexion.

(2.11)	*/badada/*	[ˈbɐɖʌˌɖɐ]	‘baby’
	/ngada/	[ŋaɖɐ]	‘mother’

The presence of regularly retroflexed words suggests that a retroflex series has been a distinctive part of Garrwa phonology that has possibly become less distinctive over time. There seems to be little evidence, therefore, to analyse a separate phonemic retroflex series for contemporary Garrwa. Such a series does exist in the neighbouring language, Yanyuwa, and speakers seem to be aware of the difference (among others) in the sound inventory. For example, the Yanyuwa negative particle */kurdardi/* is commonly used in Garrwa (*/miku/* is the standard Garrwa negative form), but regularly without retroflexion. When discussing this form during an elicitation session, speakers debated whether the word could be considered a Garrwa word or not. One speaker claimed that /kurdardi/ was Yanyuwa but that /kudadi/ (i.e., without retroflex) was a true Garrwa word. This reinforces the (re)analysis of Garrwa as being without a phonemic retroflex series.

As it appears that retroflexion is at best minimally contrastive in contemporary Garrwa, I do not use it in my orthographic transcriptions of the language, even if consonants are phonetically retroflexed on a regular basis. I reserve retroflexion for phonetic transcription, where it occurs. There is too much variation to be certain of which words may have been historically retroflexed, even if they no longer exist. A more detailed phonetic study may reveal more systematicity than has been possible here.

2.1.4 Lenition

There is some lenition, although it is not very productive synchronically, nor is it regularly applied. Non-apical stop consonants may be lenited: /k(u)/ to /w/, and /j/ to /y/. There is a clear preference for /y/ lenition to occur when the syllable nucleus is /i/, and for /w/ lenition to occur when the syllable nucleus is /u/.

(2.12)	*/kulani/ ~ /wulani/*	‘yesterday’
	/kili/ ~ /yili/	‘=HABitual’

There are some monomorphemic words that are composed of reduplicated syllables, but which have a lenited first consonant in the reduplicated section. This lenition does not occur in productive reduplication processes.

(2.13)

/jadiyadimba/	'become strong'
/judiyudi/	'together'
/baruwaru/	'dive down'

There is variation across speakers between /w/ and /y/ in *wirrba ~ yirrba* 'fall down' and *diyurr ~ diwurr* 'broken', which seems also to be because the /i/ vowel (preceding or following) motivates a /y/ consonant rather than a /w/ consonant (but note that there are numbers of words with /wi/; for example, */wijba/* 'return' and */Winmirrina/* 'Calvert Hills').

2.1.5 Consonant clusters

Consonant clusters appear word medially, never word initially or finally. They may be morpheme initial as in the case of some suffixes (see below). Combinations tend to maximize differences between both place and manner of articulation. There are no geminate consonants and there is simplification of potential geminate consonants occurring over morpheme boundaries. An example of this is when class 2 verb stems that end in /j/ combine with verb inflectional morphemes that begin with /j/; for example, the purposive suffix *-ji*.

(2.14)

verb stem	**suffix**	**word**
badaj-	-ji	*badaji* (*badajji) 'come-PURP'

There are clear restrictions on combinations involving coronal consonants (alveolar and palatal) – they may combine with bilabial and velar consonants but not with each other. There are also no combinations of labial and velar consonants (e.g., */mk/, */ngb/, and */wk/). The trill and alveolar lateral appear to pattern together as liquids in combinations. Possible clusters are consistent with the sonority hierarchy, with more or equally sonorous consonants preceding less sonorous consonants (i.e., glides then liquids then nasals then stops). This rules out stop-glide and nasal-glide combinations, although liquid-glide combinations are possible.

The following examples illustrate the possible clusters.

a) *Homo-organic nasal-stop*
All places of articulation allow for a homo-organic nasal-stop combination.

(2.15)	/mb/	/ngambala/	'1plInclNOM'
	/nd/	/bundal/	'river'
	/nyj/	/mukunyjana/	'dinner'
	/ngk/	/yangka/	'how many, which'

b) *Hetero-organic nasal stop*
This cluster type only applies to coronal nasals /n/ and /ny/. There are no examples of /nyd/ as a cluster, which reflects a general avoidance of palatal-alveolar consonant combinations.

(2.16)	/nb/	*/nyinbu/*	'echidna'
	/nj/	*/banjarrba/*	'swim'
	/nk/	*/janki/*	'back of neck'
	/nyb/	*/yanyba/*	'say'
	/nyk/	*/yanyka/*	'steady or purposeful walk'

c) *Nasal-nasal*
There is no clear example of a /nyng/ combination, although it is theoretically possible. The restriction on palatal+alveolar combinations results in no possible */nyn/ or */nny/ clusters.

(2.17)	/nm/	*/dinmanjan/*	'black ant'
	/nym/	*/nganymarrkijba/*	'be dying of thirst'
	/ngm/	*/bunaringma/*	'Northern Wild Orange (*Capparis umbonata*)'
	/nng/	*/banngarru/*	'be dry (clothes)'

Most combinations involving a liquid + consonant are restricted to combinations with bilabial and velar consonants in the second slot.

d) *Liquid-stop*

(2.18)	/rrb/	*/jarrba/*	'eat'
	/rrd/	*/larrdu/*	'white ochre'
	/rrk/	*/larrki/*	'ground oven'
	/lb/	*/balba/*	'go'
	/lk/	*/balki/*	'bad'

e) *Liquid-nasal*

(2.19)			
	/rrm/	*/karrmurr/*	‘fishing spear’
	/rrng/	*/warrnguna/*	‘goanna (sp)’
	/lm/	*/dalmurra/*	‘kookaburra’
	/lng/	*/walngurr/*	‘goanna (sp)’

f) *Liquid-glide*

This is the only consonant cluster type that appears to violate the sonority hierarchy. Only trill+labiovelar glides occur within word stems. The trill+ palatal glide only occurs across morpheme boundaries. Without more detailed phonetic analysis, it is difficult to tell whether the /ly/ combination is a single consonant (palatal lateral) or a combination of an alveolar lateral and a glide. I analyse */dalyamba/* ‘break’ as a word with a lateral+glide cluster because the initial /a/ vowel does not have a palatal offglide, which usually anticipates a forthcoming palatal consonant (i.e., the word is pronounced [ˈdalˌjamba], not [ˈdaʲˌʎamba]).[11]

(2.20)			
	/rrw/	*/karrwa/*	‘Garrwa’ (language name)
	/rry/	*/yundurryurri/*	‘wind-ALL’
	/lw/	*/jilwa/*	‘bush tobacco’
	/ly/	*/dalyamba/*	‘break’

Consonant clusters tend to be syllabified across syllables. Some suffixes and enclitics begin with consonant clusters, but these are resyllabified when attached to roots.

(2.21)					
	/ngka/	*=ngka*	‘present tense’	*/ba.daj.bang.ka/*	‘come=PRES’
	/ndu/	*-ndu*	‘LOCative’ (for pronouns)	*/nga.kin.du/*	‘with me’
	/nbana/	*-nbana*	‘SIDE’ (for directionals)	*/ba.ya.rrin.bana/*	‘west side’

The presence of the *-mba* verb-stem forming affix results in some three consonant combinations. Such clusters are never found within roots.

11 A reviewer points out that Waanyi has the dependent verb *-ramba* ‘break’ (seen in *rami-ramba* ‘break into little pieces’), and that there are other /ra/ ~ /ya/ correspondences between Garrwa and Waanyi (e.g., *yami* (G) / *rami* (W) ‘eye’). Therefore, it is possible to analyse *dalyamba* as a multi-morphemic verb, at least historically. This supports the cluster analysis over a single consonant analysis.

(2.22)	/rrmb/	*/ka.burr.m.ba/*	‘initiate, circumcise’
	/lmb/	*/bul.bul.m.ba/*	‘boil’

2.2 Vowels

Garrwa has three vowel phonemes: /i/, /u/, and /a/. Vowel length is not phonemic, although vowels are sometimes lengthened phonetically in initial-stressed syllables, and, as discussed in §2.1.3 above, they may be lengthened when followed by a phonetically realized retroflex consonant. While there is a considerable range of allophones associated with each vowel, in most cases, the high vowels /i/ and /u/ are realized a little lower and further away from the periphery than the cardinal [i] and [u], most commonly [ɪ] and [ʊ]. The low /a/ vowel is mostly realized as a low central or low back vowel [a], [ɐ], or [ʌ]. The realization of vowel allophones seems partially dependent on speaker and partially on position within the word, but a more detailed phonetic analysis is required to fully understand the distribution of vowel allomorphs. Occasionally, more central vowel allophones are found, but there is no evidence of systematic vowel reduction. While there are no vowel clusters, /a/ and /u/ vowels that precede a palatal consonant (/j/, /ny/, /ly/, and /y/) are regularly palatalized themselves, such as [aʲ] and [uʲ]. When /i/ is followed by a palatal, it is often realized as [i] and lengthened to [iː]. There is a tendency for vowels to be slightly lower preceding /rr/ or /w/, although this is clearly variable.

The following are examples of vowel allophony.

(2.23)	*/miku/*	[ˈmegʊ]	‘negative’
		[ˈmego]	
		[ˈmigʊ]	
	/maju/	[ˈmaʲdʒu]	‘OlSi’
	/marrala/	[ˈmʌrʌˌla]	‘be frightened’
	/munyba=yi/	[ˈmoʲɲbajɪ]	‘cover=past’
		[ˈmʊʲɲbaj]	
	/najba=yi/	[ˈnaʲbaji]	‘see=past’
		[ˈnaʲbaj]	
	/malin/	[ˈmaːlɪn]	‘floodwater’
	/mawil/	[ˈmawel]	‘cooked’

The combination /iyi/ is usually realized as a long vowel, but can be made clearly disyllabic in careful speech.

(2.24) /najba=kiyi/ [ˈnaʲbaˌgi:] [ˈnaʲbaˌgiji] ‘Look!’

/larrkimba=kiyi/ [ˈlargɪmbaˌgi:] [ˈlargɪmbaˌgiji] ‘Cook (it) in a ground oven’

2.3 Phonotactics

2.3.1 Syllable structure

Garrwa syllables must have a consonant onset and a nucleus that comprises a single vowel. A consonantal syllable coda is optional: CV(C). All consonants can occur syllable initially. All consonants except the palatal lateral and the trill also occur word initially. More detailed phonetic work is needed to determine if these liquids are neutralized word initially or simply not possible word initially. Vowels never occur syllable initially. Almost all words consist of two or more syllables. The only clear monosyllabic word in the corpus is */jal/* ‘flower (generic)’. Tables 4 and 5 provide examples of consonants in initial and medial positions, respectively.

There is a clear restriction on syllable final consonants: only /n/, /ny/, /rr/, /j/, and /l/ can occur syllable finally, and /ny/ cannot occur word finally. Syllable-final /j/ and /ny/ are only found in verbs and are the result of morphological processes of verb-stem formation, which example (2.25) illustrates.

	Bilabial	**Apical-Alveolar**	**Palatal**	**Velar**
Stop	*banja* ‘ant’	*danyal* ‘charcoal’	*janja* ‘rain’	*kanja* ‘sea’
Nasal	*manja* ‘Wild Passionfruit‘ (*Passiflora foetida*)	*nanjarrnanjarr* ‘soft’	*nyanyalu* ‘tea’	*nganjal* ‘tongue’
Lateral		*lanjurr* ‘Snappy Gum (*Eucalyptus leucophloia)*’		
Approximant / glide	*wanjarra* ‘flesh, meat’	*rankarrmba* ‘lift up’	*yanjarriba* ‘give birth’	

Table 4: Phonemes in word-initial, syllable-initial position.

	Bilabial	Apical-Alveolar	Palatal	Velar
Stop	*ma.bu.lu.ma* 'belly-button' *ba.ba* 'older brother or sister'	*ma.duj.ba* 'be cold'	*ma.ju* 'older sister' *ba.ja* 'play, dance'	*ma.ku.lu* 'egg' *ba.ka.nyi* 'Coolibah tree (*Eucalyptus tectifica*)'
Nasal	*ba.ma.da.nyi* 'white ant'	*ma.nu* 'unmarried'	*ba.nya.na* 'behind'	*ma.nga.yi* 'dreaming' *Ba.nga.rri.nyi* 'skinname'
Lateral		*ma.lu.ka.rra* 'good hunter' *bala* 'dry creek'	*ba.lya.rri.nyi* 'skin name' *bala* 'dry creek'	
Approximant	*ma.wu* 'maggot' *bawakanya* 'father'		*ba.ya.ka.da* 'small'	
Trill		*ma.rrum.ba* 'stick on' *ba.rral* 'sulphur-crested cockatoo'		

Table 5: Phonemes in word-medial, syllable-initial position.

(2.25)	/n/	*/bun.bu.ka/*	'possum'
		/ji.ba.rrin/	'woman'
	/ny/	*/bi.nany.ba/*	'sneak up'
	/j/	*/ba.daj.ba/*	'come'
	/l/	*/du.lul/*	'light (in weight)'
		/wal.ngurr/	'goanna (sp)'
	/rr/	*/ju.lurr/*	'ashes'
		/larr.ngun.du/	'wild plum (sp)'

2.3.2 Word-final /n/

Like retroflex, the (morpho)phonemic status of word-final /n/ is unclear. The 1997 draft dictionary, compiled by Belfrage from the Furbys' concordance files, has 31 forms that are listed as ending in /n/. These are all common nominals. Osborne's 1966 field notes of elicited data, obtained from a woman from Robinson River, have more nominals with a final /n/ than the Furbys' collection. Breen (2003:

435) describes the final /n/ as an *absolutive suffix*[12], but this does not explain the absence of /n/ for many common nominals in all environments. It is possible, however, that an -n nominal suffix was originally a more meaningful regular nominal morpheme that has become highly variable and even lost altogether among some speakers.

In my data, the final /n/, where it occurs, only occurs in common nominal words and never in kin-term nominals, locationals, or pronouns. Verbal words are always vowel final. Some examples of nominals that commonly (but not exclusively) end in /n/ in my own data include:

(2.26)	*jibarri ~ jibarrin*	'woman'
	nyinbu ~ nyinbun	'echidna'
	wada ~ wadan	'food'
	kunda ~ kundan	'tree, branch (generic)'
	wabuda ~ wabudan	'water'
	balki ~ balkin	'bad'
	kunyba ~ kunyban	'good'

Other words appear never to occur with the final /n/.

(2.27)	*malbu*	'old man'
	balubalu	'pelican'
	banda	'camp'
	*birak*i	'(black) ant'

There are also some minimal pairs:

(2.28)	*jilbi* 'wet'	*jilbin* 'termite mound'
	barri 'DM'	*barrin* 'this morning'

Clearly, this final /n/ does not have the status of the other word-final consonants because it is only found in citation forms and never when there is additional morphology. Indeed, all the case allomorphs for these words correspond with those used for vowel-final forms.

(2.29) *kundan* 'tree' but *kunda-na* 'tree-LOC'
(Cf. *bundal* 'river' ~ *bundal-ina* 'river-LOC')

12 Alan Rogers (pc) also considers the *-n* to be a *nominative suffix*.

The loss of the final /n/ occurs regardless of the morpheme's form, which includes whether or not the morpheme has a nasal consonant (e.g., *jibarrin* 'woman' ~ *jibarri-wanyi* 'woman-erg').

(2.30) *kunyban* *wabudan*
good water
'good water'

(2.31) *kunyba-yudi* *jangkurr-yudi*
good-with language-with
'with good language' (11.5.01.1.KS)

All of this is good evidence that the final /n/, at least historically, functioned as a suffix, and that this suffix was perhaps associated with unmarked case. Some speakers associated the pronunciation of final /n/ with dialect variation, which suggests that it has ceased to function as a meaningful unit.[13]

2.4 Stress

The description of stress assignment is based on listening rather than on instrumental phonetic analysis. The phonetic correlates of stress appear to be pitch, intensity, and amplitude rather than length (although stressed syllables may be longer, they are not regularly longer than unstressed syllables). Vowel quality is not affected by stress. Although there are regularities in stress assignment, there is also undoubted variation. Some variation appears due to the environments of connected speech, and an account of this should be the subject of a more detailed study. This section is based on elicited and carefully articulated words. Primary

13 When asked, some speakers from Borroloola have indicated that the final /n/ is associated with Heavy Garrwa, although the speakers who use word-final /n/ are all born around Robinson River and claim to be speakers of Light Garrwa. Data collected by Charles Osborne in 1966 is transcribed with most nominals ending in /n/. This data was collected in Doomadgee (where one might expect Eastern Garrwa, or Heavy Garrwa, to be spoken), but the informant he used was born in Robinson River, where Light Garrwa is the dominant variety and likely the variety spoken by this informant. One possibility is that the final /n/ is not (or no longer) a feature of the variety spoken around Borroloola and the close-by community of Wandangula. Speakers from Robinson River have claimed that this variety is mixed up with Yanyuwa and that it may have developed its own forms, which includes the loss of this final /n/.

stress is usually assigned word initially, regardless of the length or morphological complexity of the word.

(2.32)	*/karrwa/*	[ˈgarwa]	‘language name’
	/bukamba/	[ˈbʊgʌmˌba]	‘whole’
	/bikabaji/	[ˈbɪgaˌbadʒɪ]	‘green plum (from *Buchanania obovata*)’
	/mukunyjana/	[ˈmuguɲˌɟæna]	‘dinner’
	/narriyalaman/	[ˈnariˌjalamʌn]	‘tree sugarbag’

For some four-syllable words, I find variation in the primary stress placement between the first and third syllables.

(2.33)	*/jubadirri/*	[ˈɟʊbaˌderɪ]	‘black berry (from *Antidesma ghaesembilla*)’
		[ˌɟʊbaˈdɪrɪ]	

There is some variation in the assignment of stress following the primary stress. In most three-syllable words, the final two syllables are more or less equally less stressed than the first syllable (i.e., in a SWW pattern).

(2.34)	*/badadan/*	[ˈbadadan]	‘baby’
	/bayungu/	[ˈbajʊŋu]	‘west’
	/dilbuyin/	[ˈdelbojɪn]	‘sugarbag’
	/mukawun/	[ˈmʊgawun]	‘cow’
	/ngakuya/	[ˈŋaguja]	‘cycad damper’
	/yarrama/	[ˈjærama]	‘horse’
	/kujarra/	[ˈkʊdʒara]	‘two’

It is possible for the final syllable to receive more stress than the second syllable (a SWS pattern). This may be in variation with SWW, which the following examples illustrate. There does seem to be a relationship between a SWS pattern and nominals with final /n/; however, see (2.34) for examples with the final /n/ that do not follow SWS. Trisyllabic verbs regularly appear to have a SWS stress pattern.

(2.35)	*/barrawun/*	[ˈbaraˌwʊn]	‘hut’
	/bunbukan/	[ˈbʊnbʊˌgan]	‘possum (sp)’
	/warrngunan/	[ˈwarŋʊna]	‘goanna (sp)’
		[ˈwarŋʊˌnan]	
	/bukamba/	[ˈbʊgʌmˌba]	‘whole’

/yabimba/	[ˈjabɪmˌba]	'do, make'
/badajba/	[ˈbadaʲˌba]	'come'

The majority of four-syllable words have primary stress on the first syllable and secondary stress on the third syllable, but, in some cases, there is variation in the primary stress placement between the first and third syllables.

(2.36)			
	/kujarramba/	[ˈkʊdʒaˌramba]	'halve'
	/wijkunumba/	[ˈwiːgʊˌnʊmba]	'bring back'
	/jubadirri/	[ˈɟʊbaˌderɪ]	'black berry (from *Antidesma ghaesembilla*)'
		[ˌɟʊbaˈdɪrɪ]	
	/kujarra-ka/	[ˈkʊdʒaˌraga],	'two nights'
		[ˌkʊdʒaˈraga]	

The addition of case suffixes does not seem to affect the overall stress pattern of initial primary stress, with secondary stress occurring on the third syllable (and optionally the fifth syllable) regardless of whether a morpheme boundary is crossed.

(2.37)			
	/banda/	[ˈbanda]	'camp'
	/banda-na/	[ˈbandaˌna]	'camp-LOC'
	/banda-yurri/	[ˈbandaˌjʊɾi]	'camp-ALL'
	/kingkarri/	[ˈgiŋgaˌrɪ]	'up'
	/kingkarri-ji/	[ˈgiŋgaˌridʒɪ]	'up-DIR'
	/kingkarri-nbana/	[ˈgiŋgaˌrinbaˌna]	'up-SIDE'
	/bujuwa-nyi/	[ˈbʊdʒoˌwaɲɪ]	'waterlily root-DAT'
	/kalki-wanyi/	[ˈkalgɪˌwaɲɪ]	'lizard (sp)-ERG'
	/madumbarran/	[ˈmadʊmˌbaran]	'saltwater crocodile'
	/madumbarra-wanyi/	[ˈmadʊmˌbaraˌwaʲɲi]	'saltwater crocodile-ERG'

2.5 Morphophonemics

Morphological variation in Garrwa is in part phonologically based and in part morphologically based. For example, allomorphs of case suffixes are sometimes phonologically determined (e.g., whether a nominal is consonant final or vowel final; locative case is *-ina* for consonant-final nominals but *-na* for vowel-final

nominals). But case morphology is also morphologically determined in part by the word class to which the suffix attaches (e.g., the locative case suffix for pronouns is *-ndu*). I provide details of morphological variation in the relevant sections describing case morphemes on nominals, pronouns, and directional/locational suffixes.

Vowel harmony is neither regular nor productive in Garrwa, which is unlike its closely related language Waanyi.

2.5.1 Reduplication

Apart from suffixation, reduplication is the only other productive morphological process in Garrwa. It seems that all common nominal and verbal words have the potential to be reduplicated. Verb reduplication is discussed in more detail in §7.3.4. Here, I focus on reduplication of nominals and adverbials. The general rule, regardless of word class, is that two-syllable roots totally reduplicate the first syllable and three-syllable roots and higher reduplicate the second syllable only. Sometimes, the final syllable is reduplicated in three-syllable roots (as with *bankulu ~ bankululu* below).

Examples (2.38) and (2.39) illustrate some two-syllable roots.

(2.38)	*/burrku/*	'tail'	*/burrkuburrkun/*	'tail feather of emu (big tail)'
	/larrwa/	'pipe'	*/larrbalarrba/*	'pipe' (alternative form)
	/malbu/	'old man'	*/malbumalbu/*	'old men'

As §2.1.4 above notes, some reduplicated two-syllable words show lenition in the first consonant of the reduplicated form.

(2.39)	*/bala/*	'forked stick'	*/balawala/*	'forked sticks'
	/kaburr/	'uninitiated boy'	*/kaburrwaburr/*	'uninitiated boys'
	/kamu/	'later'	*/kamuwamu/*	'much later'

Examples (2.40) to (2.43) illustrate some three-syllable and higher roots.

(2.40)	*/bankulu/*	'stone axe'	*/bankululu/*	'stone axes'
	/bajangu/	'dog'	*/bajajangu/*	'dogs'
	/badibadi/	'old woman'	*/badidibadi/*	'old women'

Partial reduplication of dyadic kin terms is productively used to indicate more than one member of the dyad is present in the group. For example:

(2.41)

/bawakula/	‘two brothers (of the same parents)’
/bawawakula/	‘a group of brothers’
/kawuju/	‘woman and her brother’s daughter’
/kawuwuju/	‘a group of three or more people in the relationship of woman and her brother’s daughter’

In most cases, reduplicated nominals indicate plurality, whereas reduplicated adverbials are intensified. In all of the examples above, there is no change in word class between the reduplicated and unreduplicated forms. However, there are some examples of reduplicated nominals that appear to derive from unreduplicated verb roots. For example:

(2.42)

/ngarra-j-ba/	‘be hot’	*/ngarrangarra/*	‘hot (one)’
/ngundurr-ba/	‘snore’	*/ngundurrngundurr/*	‘windpipe’

There are also many nouns that have the form of reduplications but which lack unreduplicated counterparts, at least in contemporary Garrwa.

(2.43)

/bududabududa/	‘swollen’
/bunyulbunyul/	‘soft, rotten’
/kalirrkalirr/	‘boney’
/kijirrikijirri/	‘Willy Wagtail’
/mulyamulya/	‘sack’
/munjimunji/	‘bush’
/ridiridi/	‘walking stick’
/wakadawakada/	‘cattle’

2.5.2 Loss of segments in connected speech

In connected speech, speakers commonly omit final-/i/ vowels, especially when they follow a velar, a palatal nasal, or a palatal guide. This is especially common in allomorphs of the dative case /-nyi/ for nouns and/-ngi/ for pronouns.

(2.44)

/nanga-ngi/	[ˈnaŋaŋɪ] ~ [ˈnaŋaŋ]	‘3sg-DAT’
/wawarra-nyi/	[ˈwawaˌraɲɪ] ~ [ˈwawaˌraɲ]	‘child-DAT’
/jila=nyi/	[jilaʲɲ]	‘walk=HORT’

There is a tendency for the first syllable to be omitted (i.e., the last syllable on the first word) when syllables with at least the same onset (if not the same form altogether) are adjacent.

(2.45) */wanya nyulu/* [wanjʊlʊ] 'what's that'

2.6 English loanwords

Garrwa has borrowed many words from English, some perhaps indirectly through Kriol. Regular phonological changes include the regular use of /j/ for English /s/ /z/, /sh/ (e.g., *jimuku* 'smoke', *yujimba* 'use', and *jadanyi* 'shirt'), /b/ for /f/ and /v/ (e.g., *bilawa* 'flour', *babulun* 'buffalo', and *kabikabi* 'calf'), and the splitting up of English consonant clusters with the vowel /i/ (e.g., *jiwayiki* 'swag' and *birijin* 'prison').

Loan verbs inflect as Garrwa verbs and behave as class 1 stems (§7.1.1). This seems to be a productive process because some of the forms in the corpus have not even phonologically adapted to Garrwa (e.g., *waystimba* 'waste' and *raydimba* 'ride').

(2.46)

yadimba	'corral' (from 'yard')
albimba	'help'
kilinimba	'clean'
majirrimba	'muster'
lanimba	'learn'
midimba	'meet'
raydimba	'ride'
yujimba	'use'
wajumba	'wash'
wandimba	'want'
waystimba	'waste'

Nominal loans are regularly, but not exclusively, vowel final.

(2.47)

babulu	'buffalo'
bambun	'bamboo'
barrikin	'fence'
bilawa	'flour'
bilika	'billycan'
birijin	'prison'

bujili	‘bottle’
buluki	‘bullock’
bunibuni	‘pony’
diraji	‘dress’
jimuku	‘smoko’
jiwayiki	‘swag’
kawuna	‘cow’
kurijimiji	‘Christmas’
mudika	‘car’
nanikun	‘nannygoat’
nayibi	‘knife’

There are Garrwa equivalents to some of these loanwords, but it is the loanword that occurs more frequently in discourse.

(2.48)	*bilika ~ yukururu*	‘billycan’
	yarrama ~ nakarra	‘horse’
	nanikun ~ yukulyarri	‘goat’
	raydimba ~ ngabangabala	‘ride (horse)’